

## ABSTRACTS

The Gerontological Society of America  
65th Annual Scientific Meeting  
November 14–18, 2012  
San Diego, CA

Abstracts are arranged numerically by session and in the order of presentation within each session.

### SESSION 5 (SYMPOSIUM)

#### AGING AND MIXED EMOTIONS: NUANCES, COMPLEXITY, AND METHODS

Chair: *T.L. Queen, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Co-Chair: *L.H. Ryan, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Discussant: *D. Isaacowitz, Northeastern University, Boston, Massachusetts*

Emotional complexity is an important topic in research on aging, however, studies to date reveal inconsistent findings. This may be because researchers examine emotional complexity with a variety of methodological approaches, such as day reconstruction, momentary assessments, diaries, and self-administered questionnaires. The purpose of the symposium is to highlight existing and newly developed methods for measuring mixed emotions, as well as to promote discussion about the construct and meaning of emotional complexity. Daniel Grün will compare different conceptualizations of emotional complexity from experience-sampling data. His findings demonstrate that measures of complexity are not consistently indicative of positive personality and adaptation profiles in older adulthood. Tara Queen and Lindsay Ryan will examine mixed emotions within the context of a day reconstruction. They will compare age and cognitive differences in emotional complexity in reported affective states across and within a day. Jacqui Smith contrasts several indices of emotional experiences linked to activities. She asks if these measures are differentially sensitive to individual differences in health and life circumstances among participants in the Health and Retirement Study. Richard Gonzalez will present a novel index for measuring mixed emotions. His model stems from an economic approach, but offers a means to integrate valence and intensity of emotional experiences. He will explore how this measure differentiates individuals and subgroups within the population. As the discussant, Derek Isaacowitz will explore how process may explain the findings presented and suggest possibilities for future research to advance our understanding of aging and emotion.

#### HOW COMPLEX IS EMOTIONAL COMPLEXITY?

D. Grün<sup>1</sup>, M.K. Diehl<sup>2</sup>, *1. Psychology, NC State University, Raleigh, North Carolina, 2. Colorado State University, Fort Collins, Colorado*

Emotional complexity has been regarded as one correlate of adaptive emotion regulation in adulthood and old age. One approach of operationalizing emotional complexity is based on the assumption that variation in affect over time is informative about the complexity of the underlying emotional representations. This approach assesses affective reports over time in an experience-sampling or daily-diary design and computes different scores, that we call time-based indices of emotional complexity. It is not known, however, how such time-based indicators of emotional complexity are related to each other or to other indicators of adaptive functioning. We report findings from two studies, an

experience-sampling study with adults ranging from 23 to 90 years and a 30-day diary study with adults age 18 to 89. Findings show a complex pattern of interrelations suggestive of distinct components of emotional complexity. Findings are discussed in relation to a differentiated approach to emotional complexity.

#### EMOTIONAL COMPLEXITY WITHIN A DAY: PROVIDING A CONTEXT FOR AFFECTIVE REPORTS

*T.L. Queen, L.H. Ryan, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Affective reports may differ depending on the frame of reference, with general evaluations perhaps resulting in less granular reports of emotions. In the present study, we explore differences in emotional complexity in affective states across and within a day. Participants aged 50–96 reported on overall emotions yesterday and subsequently rated the emotions they experienced within specific activities. The experience of mixed emotions is evaluated within yesterday and activity-linked reports of emotions. Age differences in mixed versus positive emotions were observed overall yesterday, with older adults tending to report more positive emotional experiences. In contrast, there were no age differences in mixed emotions within activities. There was, however, an interaction between cognitive ability and age, suggesting that higher functioning older adults were more likely to report mixed emotions within activities. The implications of frame of reference and sample characteristics for evaluations of affective experiences will be discussed.

#### MIXED EMOTIONS YESTERDAY: LIFESTYLE AND HEALTH CORRELATES OF DIFFERENT EMOTION CONSTRUCTS

*J. Smith, S. Becker, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Indicators of the positive and negative experiences associated with activities in a day complement global measures of life satisfaction. The Health and Retirement Study surveyed a representative subsample of the longitudinal panel (N = 5200; Age 50–97) about participation yesterday in eight activities and feeling intensity during these activities (e.g., happy, interested, calm, frustrated, bored, sad). We examined the differential associations of health (e.g., functional limitations, pain) and lifestyle (e.g., employment and socioeconomic status) with four constructs of the valence of emotional experience: affect balance, two ordinal rankings of feeling intensity, and frequency of peak intensity. Mixed emotional experience was minimal for socializing (i.e. majority only positive). However, the rank ordering of other activities and aggregate experience for the day differed by emotion construct and the constructs were differentially associated with health and lifestyle indicators. Our findings highlight measurement issues in understanding the complexity of emotional experience in older adults.

## ACTIVITY-BASED WELL-BEING: DEVELOPING A PSYCHOLOGICAL MODEL AND DERIVING INDICES

R. Gonzalez, L.H. Ryan, *Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Researchers assess evaluative-based and experience-based well-being. Evaluative measures require the participant to combine cues, features, and attributes of past events into a judgment. Such an evaluation process is complicated; it relies on memory-based processing, evokes standards of comparison, requires combining activities/experiences into a single number, etc. Some well-being elicitation procedures purport to bypass these problems by providing memory cues and having participants report their emotional experiences during specific activities. While these experienced-based well-being measures may improve the fidelity of data, they also lead to a more complex data structure involving multiple reports on multiple activities. This leads naturally into judgment models for these complex set of judgments. We present several new indices and compare them to existing indices. The indices are illustrated with a data set of over 900 older adults reporting on two days. Implications for the psychological modeling of well-being as a judgment process are discussed.

## SESSION 10 (SYMPOSIUM)

### AGING IN THE WORK CONTEXT: INTERDISCIPLINARY AND INTERNATIONAL PERSPECTIVES

Chair: *S. Scheibe, University of Groningen, Groningen, Netherlands*

Co-Chair: *H. Zacher, The University of Queensland, St Lucia, Queensland, Australia*

Discussant: *L. Carstensen, Stanford University, Palo Alto, California*

The symposium presents state-of-the-art, interdisciplinary and international research on aging in work and organizational contexts. In times of rapid demographic changes and workforce aging, researchers and practitioners from various disciplines have become increasingly interested in ways to motivate and retain both younger and older employees. The four presentations included in this symposium investigate interactive effects between employee or supervisor age and work-related characteristics on important work outcomes. Specifically, Stamov Rossnagel and Scheibe present the results of a weekly diary study showing that the work motivation of younger and older employees depends on the fit between their current work tasks and their task preferences. In the second presentation, the experimental research discussed by Scheibe indicates that emotion regulation skills are particularly important for work role functioning of older employees in jobs that require high levels of emotional labor. Bowen and Staudinger provide an age-sensitive account of the relationship between job satisfaction and work performance. Using a large, multilevel dataset, these researchers show that job satisfaction is a more important predictor of older employees' performance than younger employees' performance. Finally, Zacher examines how age and age-related attitudes of organizational leaders interact in predicting shared positive organizational age cultures for younger and older employees. After attending this symposium, participants will have gained new insight into different approaches to motivate and retain younger and older employees. In addition, the symposium aims to provide participants with current knowledge on theories and methodologies to investigate aging in the work context.

### LINKING EMOTION REGULATION TO WORK ROLE FUNCTIONING IN YOUNGER AND OLDER NURSES

*S. Scheibe, University of Groningen, Groningen, Netherlands*

The call for extending work life is ubiquitous in Western countries, yet little is known about the factors that allow employees to maintain productivity until the end of their career. Longer work lives pose particular challenges in emotionally demanding jobs, such as the nursing profession. A study with 65 nurses (22-62 years; 85% females) was conducted to investigate the role of emotion regulation for effective work

functioning. Participants completed a laboratory task of emotion regulation, in which they saw highly arousing negative pictures under different emotion regulation instructions (reappraisal, distraction, view). Age interacted with emotion regulation to predict work functioning. For nurses with higher emotion regulation skills, age was positively associated with work role functioning, but no relationship was found between age and work role functioning in nurses with lower emotion regulation skills. Thus, emotion regulation skills may help aging workers in emotional labor-type jobs remain productive over time.

### ORGANIZATIONAL AGE CULTURES: THE INTERPLAY OF CHIEF EXECUTIVE OFFICERS' AGE AND ATTITUDES TOWARD YOUNGER AND OLDER EMPLOYEES

*H. Zacher, The University of Queensland, Brisbane, Queensland, Australia*

In the context of an aging workforce, employees and organizations may benefit from favorable shared assumptions about younger and older employees. In this study, the authors investigated interactive effects of chief executive officer (CEO) age and attitudes toward younger and older employees on positive organizational age cultures for younger and older employees. Data came from 68 CEOs of small businesses and 281 employees. Results were consistent with expectations based on organizational culture and upper echelons theories. The relationship between CEO age and organizational age culture for younger employees was negative for CEOs with a less positive attitude toward younger employees and positive for CEOs with a more positive attitude toward younger employees. In addition, the relationship between CEO age and organizational age culture for older employees was positive for CEOs with a more positive attitude toward older employees and non-significant for CEOs with a less positive attitude toward older employees.

### FIT FOR MOTIVATION? A TASK-LEVEL VIEW ON AGE DIFFERENCES IN WORK MOTIVATION

*C. Stamov Rossnagel<sup>1</sup>, S. Scheibe<sup>2</sup>, 1. Jacobs Centre on Lifelong Learning, Jacobs University, Bremen, Germany, 2. University of Groningen, Groningen, Netherlands*

We tested the notion that age differences in work motivation arise from shifts in work preferences at task level, rather than from changes in overall motivation. Employees of a German city council (N=164, age M=45.86 ± 8.92 years) rated their preferences for six categories of work tasks as classified by the Work Design Questionnaire (Humphrey & Morgeson, 2006). Over five consecutive weeks, participants indicated for each week their actual work tasks, which we used to calculate task fit, i.e. the extent to which actual task demands matched desired task demands. Across task domains, task fit predicted work effort in that week. Tasks affording high information processing demands and task variety were the strongest predictors of effort. Older employees reported higher actual decision making authority and task significance than younger employees. On tasks placing high problem solving demands, task fit decreased with age. We discuss implications for age-differentiated personnel development strategies.

### AGE MODERATES THE RELATIONSHIP BETWEEN JOB SATISFACTION AND PERFORMANCE

*C. Bowen, U.M. Staudinger, Jacobs Center on Lifelong Learning and Institutional Development, Bremen, Germany*

The happy worker hypothesis postulates that employees who are more satisfied with their job perform better. Specifically, satisfied employees are thought to be more motivated to invest effort in doing their job well, resulting in better performance. Developmental research has illustrated that the relationship between motivation and performance tends to be stronger at older ages. We therefore hypothesized that the relationship between job satisfaction and job performance should be stronger among older workers. Results from multi-level regression analysis of cross-sectional data from 1032 employees aged 19-66 years

nested in 119 work teams and five companies confirmed that age moderated the relationship between job satisfaction and supervisor-rated performance in the hypothesized direction. For employees above 50, the relationship between job satisfaction and performance was partially mediated by the desire to retire. Results support the notion that motivational variables are especially important for older workers' job performance.

## SESSION 15 (SYMPOSIUM)

### INTERVENTIONS THAT SPAN THE CAREGIVING CAREER: A HEALTH CONTINUUM APPROACH

Chair: *C.W. Sherman, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Discussant: *K. Hepburn, Emory University, Atlanta, Georgia*

Caregiving research experts have noted that interventions need to be tailored to address the evolving needs of chronically ill care recipients and their family caregivers. As chronic diseases, such as dementia or cancer progress, family caregivers must adapt their interactions with the care recipient as well as with larger systems, such as health professionals. Interventions must strive to offer an optimal 'fit' of curriculum content and format to meet caregivers' needs. The papers in this symposium represent innovative intervention approaches that span the arc of caregiving and reflect distinct stages of disease. Blieszner and colleagues will present outcomes findings from a novel intervention for caregivers of persons with Mild Cognitive Impairment. Sherman's paper examines how caregiver characteristics (e.g., gender, age, relationship) and disease duration influence caregiver outcomes in a community-wide implementation of the evidence-based dementia intervention, Savvy Caregiver Program. Samia documents caregiver well-being outcomes from a unique "Savvy II" program that focuses on caregiving issues in the later stages, while McDonald examines end-of-life care scenarios between care recipient, family and doctors to highlight key implications for end-of-life caregiver and family interventions. Finally, Hepburn, an expert in translational and caregiver research, will serve as discussant to synthesize findings and chart future directions for research on intervention development and implementation. After attending this symposium, participants will gain knowledge about the development and effectiveness of novel caregiver interventions and will gain insight into how future interventions can optimally serve the distinct and progressive needs of care dyads across the health continuum.

### SUPPORTING FAMILIES IN EARLY STAGES OF MEMORY LOSS

R. Blieszner, K.A. Roberto, *Virginia Tech - Center for Gerontology, Blacksburg, Virginia*

Relatives of persons diagnosed with mild cognitive impairment (MCI) do not find interventions aimed at families coping with advanced memory loss helpful or useful. In fact, our research with 125 families dealing with MCI showed that attending Alzheimer's support groups was frustrating and upsetting to them. Instead, relatives and friends of persons with MCI need basic information on brain changes and associated symptoms of cognitive deficits, help with recognizing signs of early memory loss, guidance on when and why to seek a medical diagnosis, assistance in dealing with the diagnosed person's reactions as well as those of family and friends, suggestions of strategies to compensate for early memory loss, help with managing their own emotional responses, and direction related to planning for potential future care needs. We present evidence-based recommendations for public education and interventions targeting individuals and families facing MCI.

### CREATING CONFIDENT CAREGIVERS: FINDINGS FROM A COMMUNITY-BASED IMPLEMENTATION OF SAVVY CAREGIVER

C.W. Sherman<sup>1</sup>, S.C. Steiner<sup>2</sup>, *1. Institute for Social Research, University of Michigan, Ann Arbor, Michigan, 2. Michigan Office of Services for the Aging, Lansing, Michigan*

This paper will present findings from a community-based implementation of the evidence-based dementia caregiver intervention, the Savvy Caregiver Program (SCP). The SCP is a six session, group-format psychoeducation program that seeks to enhance family caregiver knowledge, skills and outlook to enable high quality care for the person with dementia and caregiver self-care. Survey data is collected at baseline and six-months post-program. Participant evaluation data is collected in the final session. Preliminary analyses (n=500) reveal that caregivers evaluate the SCP highly and report they better understand the effects of dementia on their family member and feel more confident and less distress in the caregiving role. Associations between caregiver characteristics (age, gender, relationship), disease stage with caregiver outcomes will be presented. Discussion will highlight the value of teaching strategies and skills that can be adapted across the caregiving career to meet the evolving needs of the person with dementia.

### THE BENEFITS OF AN ADVANCED CAREGIVER PROGRAM FOR SAVVY CAREGIVERS

L. Samia<sup>1</sup>, A. O'Sullivan<sup>2</sup>, K. Cole Fallon<sup>2</sup>, L. Nichols<sup>1</sup>, *1. University of Southern Maine, Portland, Maine, 2. Southern Maine Agency on Aging, Scarborough, Maine*

We tested the implementation of an advanced Savvy Caregiver Program (SCP-II) with previously trained community dwelling family caregivers in the later stages of their caregiving trajectory (N= 62). The SCP-II is a 4-week group psychoeducation intervention designed to strengthen caregivers' knowledge, skills, and outlook. The program emphasizes problem-solving current challenges and planning for the future. Survey data was collected at baseline and 5 months after the completion of the SCP-II. Analyses reveal that 42% of SCP-II participants have been caregiving for six or more years (n=26). Caregivers are more confident in their role, they have strengthened their support team, and they have fewer negative reactions to behavior. Study findings support the benefit of progressive interventions to address the changing circumstances of the caregiving dyad and transitions within the caregiver role.

### DEATH IN THREE MOVEMENTS: EFFECTS OF PROGNOSIS DELIVERY TIMING AND STYLE ON END-OF-LIFE AND BEREAVEMENT EXPERIENCES

C. Macdonald, *Sociology, Univ of Wisconsin, Madison, Wisconsin*

Existing research suggests (e.g. Christakis 1999) that physicians are often unable or unwilling to accurately predict terminal status. Yet little is known about how this problem unfolds over time or affects patients and their families. Based on a longitudinal study of thirty cancer patients and their primary caregivers (n=64), this paper closely analyzes the process of disclosing a terminal diagnosis in three distinct, yet representative cases. The vignettes, based on tape-recorded office visits, home and hospital visits with the patient and family and fieldnotes of observations, unfold over time, from the moment the physician disclosed to the researcher that the patient was not likely to live, to the post-mortem interview with surviving family. The paper demonstrates show how each physician's approach dictates a more or less negative outcome for the patient and survivors, and proposes interventions at the point of terminal diagnosis and disclosure of prognosis.

## SESSION 20 (SYMPOSIUM)

### LIVING APART TOGETHER IN LATER LIFE: QUALITATIVE RESEARCH FINDINGS FROM NORTH AMERICA AND EUROPE

Chair: *D. Brothers, Miami University, Oxford, Ohio*

Discussant: *D. Carr, Rutgers University, New Brunswick, New Jersey*

Living apart together (LAT), an arrangement where a couple is in a committed and romantic relationship while maintaining separate households, is quickly becoming a relationship option in many countries. Changing demographic composition of family and households and increasing longevity of men and women help to set the stage for the occurrence of LAT relationships in later life. Living apart together provides many older adults with an alternative to marriage, cohabitation, or remaining unpartnered. An established area of research in many European countries, North American scholars are now beginning to study these relationships in earnest. This symposium brings together researchers from the United States, Canada, and the Netherlands to explore in-depth the topic of LAT in later life based on data from four qualitative studies. The first presentation considers life-stage and cohort factors to theorize how and why men and women form and maintain LAT relationships in the United States. The second presentation presents the strategies U.S. couples utilize in LAT relationships to sustain independence and minimize obligations by developing and maintaining boundaries surrounding their time, space, and emotions. The third presentation provides a gender analysis of the reasons why Canadian women live apart together by discussing the ways this type of relationship provides protection from possible emotional, financial, or other harms. The final presentation, based on data from the Netherlands, explores the topic of caregiving, and how couples plan for and negotiate giving and receiving care within the unique relationship context of living apart together.

### NOT ALL RELATIONSHIPS ARE SHAPED THE SAME: THEORIZING FORMATION AND MAINTENANCE OF LAT RELATIONSHIPS

*D. Brothers, Miami University, Oxford, Ohio*

The aim of this presentation is to describe a theoretical framework highlighting the different patterns of formation and maintenance of LAT relationships in later life, and to discuss the implications of this framework for the future study of living apart together. Data for this research come from semi-structured in-person interviews in the Midwest with 13 women and 7 men (age 59 to 89) conducted in 2010 and 2011. Grounded theory analyses is used to understand how the motivation for pursuing a relationship and the desire to continue in a LAT relationship (as opposed to the alternatives of marriage and cohabitation) vary in ways related to gender, life-stage, and cohort. Participants' gender, life-stage, and cohort membership play a role in different aspects of the relationship including: their desire for and level of physical intimacy, openness to cohabitation and/or marriage, likelihood of cohabiting or marrying, and expectations about giving and receiving care.

### OLDER ADULTS MAINTAINING INDEPENDENCE WITHIN THE CONTEXT OF A LIVING-APART-TOGETHER RELATIONSHIP

*J.J. Benson, Human Development and Family Studies, University of Missouri, Columbia, Missouri*

This study explores living-apart-together (LAT) relationships among Midwestern men and women between the ages of 59 and 85. Twenty-one men and women, (8 couples, 3 women), completed genograms and unstructured interviews addressing decision-making processes leading to living apart together, and strategies for maintaining LAT relationships. Preliminary grounded theory analyses suggest that the goals of LAT relationships are to maintain freedom of choice and independence, and minimize feelings of obligation for self and partner. Participants

reported varying strategies for meeting these goals: for some, independence was upheld by developing and adhering to routine visitation schedules and activities; others reported the need to create emotional boundaries, disallowing themselves from developing expectations of their partner or the relationship itself. Overall, most participants reported being satisfied with their current relationship status, and preferred a living-apart-together relationship to marriage or cohabitation.

### “PROTECTING WHERE I LIVE AND WHAT I HAVE”: A GENDER FRAMEWORK FOR THE ANALYSIS OF LIVING APART TOGETHER (LAT) RELATIONSHIPS

*K. Kobayashi<sup>1</sup>, L. Funk<sup>2,1</sup>, 1. University of Victoria, Victoria, British Columbia, Canada, 2. University of Manitoba, Winnipeg, Manitoba, Canada*

In this paper, we use a gender lens to analyze data from a study of LAT (Living Apart Together) relationships: in which partners in a long-term, committed romantic relationship make a conscious decision to live in separate households. Thirty-one couples from Vancouver or Victoria, Canada, were interviewed separately, in-person. Findings indicate that women in particular become involved in LATs to protect themselves (and sometimes their children) from emotional, financial or other harms they may have experienced in past relationships or break-ups. LATs made it easier for them to avoid replicating patterns of always putting someone else's needs first or feeling guilty when they did not do so. Women spoke of not wanting to replicate “dependent” roles, or to be responsible for yet another person (e.g., in addition to work and childcare responsibilities). We discuss the personal advantages yet broader structural limitations of individual responses to gendered relationship experiences.

### THE PARADOX OF COMBINING INDEPENDENCE AND LONG-TERM CARE ARRANGEMENTS IN THE CONTEXT OF LAT PARTNER RELATIONSHIPS

*J. Gierveld, Social Demography, NIDI, The Hague, Netherlands*

Older adults involved in LAT relationships intend to live independently for as long as possible. They are satisfied with the realization of a LAT intimate partner relationship, in which both partners have their one person household and share living quarters for less than 7 days per week. In case of serious illnesses and being in need of daily care, how do LAT partners arrange their lives? In this study results of qualitative interviews with 23 older adults in LAT relationships are presented (Netherlands Kinship Panel Study, mini panel). Many of the interviewee's mentioned that they expect their LAT partners to take care of them, but a not negligible minority insists on not accepting care from their partners. However, nearly all of the LAT interviewees expect to support their partners. The interpretation of the paradoxical association between giving and receiving care is the aim of this study.

## SESSION 25 (SYMPOSIUM)

### PUBLIC HEALTH IMPLICATIONS OF HEALTHY & SUCCESSFUL AGING: LOOKING BACK AND THINKING FORWARD

Chair: *L. Poon, Inst. of Gerontology, Athens, Georgia*

Discussant: *R.A. Pruchno, Univ. of Med & Den of New Jersey,*

*Stratford, New Jersey* Discussant: *A. Jette, Boston University, Boston, Massachusetts*

Healthy and successful aging is possibly the most important research outcome and policy decision related to aging and the aging population. It was 23 years ago that Jack Rowe and Robert Kahn (1987) revitalized research and discussion on the concept of usual and successful aging. This effort through the MacArthur Foundation and other research networks created one of the most sustained and energetic research enterprises in the history of aging and the National Institute on Aging. Owing to the overwhelming public health implications of healthy and successful

aging, recent research has made significant advances on definitions, approaches, and methodologies. We propose that the time is ripe to examine, evaluate, and consolidate these findings toward new directions to focus on implementing the public health mandate to improve individual and population health and successful aging. We have assembled a nine-member interdisciplinary gerontology team who had collectively contributed to significant thinking in the field and capable of implementing new directions. This symposium will highlight this effort with the goal of soliciting peer input. The first paper (Poon) summarizes the current effort and procedure. The second paper (Martin) provides a brief history of successful aging research. The third paper (Fry) focuses on the role of contexts, the fourth (Kahana) on intervention research, and the final paper (Willcox) summarizes the application of findings in geriatrics and nursing. Three discussants (Morrow-Howell, Jette, and Pruchno) critique and extend the review and ideas in this project.

### THE HEALTHY AND SUCCESSFUL AGING PROJECT

L. Poon<sup>1</sup>, N. Morrow-Howell<sup>2</sup>, 1. *UGA Institute of Gerontology, Athens, Georgia*, 2. *Washington University in St Louis, St. Louis, Missouri*

Owing to the overwhelming public health implications of healthy and successful aging, recent research has made significant advances on definitions, approaches, and methodologies. We propose that the time is ripe to examine, evaluate, and consolidate these findings toward new directions to focus on implementing the public health mandate to improve individual and population health and successful aging. We have assembled a nine-member interdisciplinary gerontology team who had collectively contributed to significant thinking in the field and capable of implementing new directions. This paper will provide a short update of the project as well as comments on the current progress.

### REVITALIZING SOCIAL STRUCTURE

C.L. Fry, *Loyola University Chicago, Chicago, Illinois*

Investigations into the experiences of growing old and successful aging have resulted in a bifurcation of perspectives: that of the individual and that of the society in which they are aging. Although clearly not mutually exclusive, a need is apparent in bridging the contrasting points of view. The intent of this paper is to revitalize conceptualizations of social structure. Social engagement means connections to a social world of interdependency. With advanced age integration into that world is seen as opposing processes of “aging-in” and “aging-out.” Aging-in consists of the pathways used by individuals to learn about and use a cultural context and participate in the interdependencies of social life. Threats to participation in a context brought on by disabilities and illness; initiate a process of aging-out. Diversity in contexts to which individuals are balancing aging-in and aging-out increases the meanings of successful aging.

### THE PAST, PRESENT AND FUTURE OF INTERVENTIONS TO PROMOTE SUCCESSFUL AGING

E. Kahana<sup>1</sup>, B. Kahana<sup>2</sup>, 1. *Case Western Reserve University, Cleveland, Ohio*, 2. *Cleveland State University, Cleveland, Ohio*

Gerontologists generally consider successful aging as referring to individual achievements, reflecting positive outcomes, adaptive processes or self-appraisals. Provocative questions thus arise about need for and value of interventions to help elders achieve success in the face of personal, environmental and social challenges. We argue that targeted interventions can facilitate successful aging by reducing stress exposure, enhancing coping resources and promoting proactive adaptations. Older adults are eager to participate in diverse intervention programs implemented by professionals, service organizations and through community efforts. Such desire to seek help in the face of stressors attests to resilience among elderly persons, as they cope with stressful life situations. Existing interventions will be discussed based on their goals, approaches and congruence with alternative models of successful aging.

Limited evidence base for current interventions reflects methodological challenges, but this field also holds great promise for practice and policy.

### DEFINING SUCCESSFUL AGING: AN ELUSIVE OR TANGIBLE CONCEPT?

P. Martin<sup>1</sup>, N. Kelly<sup>1</sup>, E. Kahana<sup>2</sup>, B. Kahana<sup>2</sup>, L. Poon<sup>3</sup>, 1. *Iowa State University, Ames, Iowa*, 2. *Case Western University, Cleveland, Ohio*, 3. *University of Georgia, Athens, Georgia*

The term “successful aging” has been used in the gerontological literature to cover processes of aging throughout the life span and implies positive aging processes for some while provoking criticisms of failing to either be not comprehensive enough or too over-arching for others. Sometimes successful aging is called “vital aging” or “active aging” with the implication that later life can be a tie of sustained health and vitality. The emphasis for many may be on maintaining positive functioning as long as possible but others have suggested that successful aging can also be discussed under more adverse health conditions. This paper will highlight those who have popularized the topic of successful aging, present some of these definitions and outline their commonalities and differences.

### BIOGERONTOLOGICAL, GERIATRICS AND NURSING PERSPECTIVES ON SUCCESSFUL AGING

D.C. Willcox<sup>1,2,3</sup>, M. Wykle<sup>4</sup>, B. Willcox<sup>2,4,5</sup>, 1. *Okinawa International University, Ginowan, Okinawa, Japan*, 2. *Department of Research, Kuakini Medical Center, Honolulu, Hawaii*, 3. *Okinawa Research Center for Longevity Science, Urasoe, Okinawa, Japan*, 4. *Case Western Reserve University, Cleveland, Ohio*, 5. *Department of Geriatric Medicine, University of Hawaii, Honolulu, Hawaii*

The biogerontological literature suggests that there is much that we can do to slow age-related decline in physical and mental function. Much of the decline experienced by older adults is caused by lack of attention to primary and secondary prevention rather than aging itself. However, as we achieve longer survival, and modern medicine keeps ever more frail individuals alive, at some point the Rowe and Kahn criteria for successful aging will be untenable for the majority of older persons. This presentation will explore what human populations might realistically achieve in terms of healthy aging given current biomedical knowledge and present some geriatrics and nursing perspectives on how to help our elders cope with challenges and find their own definitions of success as they age. Data from studies on healthy aging and longevity, such as the Kuakini Hawaii Lifespan/Healthspan Studies and the Okinawa Centenarian Study, will be highlighted and examples of “successful-agers” provided.

## SESSION 30 (SYMPOSIUM)

### RELIGION, SPIRITUALITY, AND FLOURISHING: LIVING WELL OR LIVING A GOOD LIFE?

Chair: *J.H. Patrick, Psychology, West Virginia University, Morgantown, West Virginia*

Discussant: *C. Fahey, Millbank, New York, New York*

Over the past few decades, a large body of empirical and theoretical work has examined the religion — illness link. This collection of papers focuses on the role religion and spirituality in living the good life, or at least in living a good life. Thus, from a variety of perspectives, these papers ask: Whether and in what ways religion and spirituality help one to live better. Henrie and colleagues present data examining the associations among religiousness, spirituality, and a variety of virtues, drawn from across the world’s major religious traditions. Glicksman and Glicksman address these questions from a non-theistic perspective. Bengtson and colleagues draw on rich, multi-generational data. Finally, Moody discusses the idea of gero-transcendence. Together, these

papers move the field toward a richer, deeper understanding of the roles of religiousness and spirituality in the lived lives of older adults.

### **RELIGION & SPIRITUALITY: ONE, BUT NOT THE ONLY, PATH TO THE “GOOD” LIFE**

J. Henrie, A.S. Graf, J.H. Patrick, *West Virginia University, Morgantown, West Virginia*

In the U.S., being religious is often equated with being “good” or leading a virtuous life. However, whether religion or spirituality truly inspires people to do and/or be “good” is empirically testable. Data from 117 adults (71.9% female, M age = 36.98 years, S.D. = 14.33 years, range = 18 to 71) were used to investigate religious/spiritual differences in several virtues. A series of MANOVAs revealed that there were few differences. Religious individuals reported higher levels of prudence ( $F(3, 75) = 3.24, p = .027$ ), curiosity ( $F(3, 75) = 5.06, p = .003$ ), and forgiving ( $F(3, 75) = 4.78, p = .004$ ), but not virtues like generosity ( $F(3, 75) = 1.14, p = .340$ ) or compassion ( $F(3, 75) = 0.28, p = .837$ ). Results are discussed in terms of religion having a positive influence, but not a monopoly, on promoting virtuous behavior.

### **GODLESS RELIGION AND ATHEISTIC SPIRITUALITY AS FORMS OF JEWISH IDENTITY AMONG OLDER ADULTS**

A. Glicksman<sup>1</sup>, G. Glicksman<sup>2</sup>, 1. *Research, Phila Corporation for Aging, Philadelphia, Pennsylvania*, 2. *Temple University, Philadelphia, Pennsylvania*

Surveys show that up to half of American Jews consider themselves to be secular in some sense of the term, which can mean not believing in God, not having an active involvement in the Jewish community, or identifying as Jewish through cultural, ethnic or national identity rather than through traditional, religious belief. This is also true for older American Jews, who are much less likely than most other Americans to attend regular, religious services or to report believing in God. At the same time, many of these secular Jews report that their Jewishness is important to them and shapes their values and worldview. Using memoirs and other sources we will explore the ways in which these identities are formed and expressed in old age by using religious forms for a non-theistic faith system, through cultural expression of Jewish identity, and by using Jewish values to participate in the wider world.

### **CONTINUITY AND DISCONTINUITY IN SPIRITUAL CAPITAL ACROSS GENERATIONS**

V. Bengtson, *Roybal Center on Aging, School of Social Work, University of Southern California, Los Angeles, California*

It appears that there have been remarkable changes in the American religious landscape recently, over the lifespans of those becoming elderly, which would suggest that spiritual and religious capital is being shared across generations with decreasing frequency. In this presentation I draw on 35 years of longitudinal data from some 2,500 individuals to look at variations in intergenerational transmission of spirituality. That parents do influence their young adult children religiously, and that grandparents are independently influential, is documented by survey data from 1970 to 2005. Even more intriguing are the styles or mechanisms of such influence, which can be observed in the qualitative data.

### **DISILLUSIONMENT AND WISDOM: THE GOOD LIFE IN OLD AGE**

H. Moody, *AARP, Washington, District of Columbia*

W. B. Yeats once said, “Life is a long preparation for something that never happens.” Does his aphorism express wisdom or disillusionment? What is the relationship between the two? One image of the “good life” in old conjures up images of contentment (“life-satisfaction”) and positive life-review (“ego integrity”). Seemingly, the opposite of this attainment would be disillusionment or, perhaps, existential depression. Yet disillusionment and wisdom may be dialectically related. Buddha could not begin his search for wisdom until he had experi-

enced radical disappointment with what ordinary life could offer. Along with the Stoic ideal of detachment (apatheia), the Buddhist goal nirvana represents “seeing through” the illusions of life. Something similar is the message of Ebenezer Scrooge in Dicken’s Christmas Carol. This presentation builds on the argument offered in my book, *The Five Stages of the Soul*, and seeks to understand late-life wisdom as an achievement of “positive disillusionment.”

## **SESSION 35 (SYMPOSIUM)**

### **WISDOM AND MEANING IN AGING: EXPLORING AN ANCIENT FRONTIER THROUGH CONTEMPORARY PARADIGMS**

Chair: *H. Nelson-Becker, School of Social Work, Loyola University Chicago, Chicago, Illinois*

Discussant: *A. Achenbaum, University of Houston, Houston, Texas*

Classical views of wisdom held it to be knowledge or “sophia” accumulated throughout history. Modern views have focused on exploring expert knowledge (Baltes & Staudinger, 2000), while more recent literature is beginning to investigate everyday wisdom and the role of meaning for older adults. These latter two perspectives emphasizes “techne” or skill leading to just acts and well-reasoned practices that achieve the best outcomes for all. This session will present practical and professional views of wisdom expressed by and about older adults. The papers included here discuss varying perspectives of wisdom and meaning and thus seek to inform each other. Two papers explore parallel conceptions of applied wisdom in US and Hong Kong contexts using focus group methodology with older adults. The first paper discusses findings from five focus groups (US) that define wisdom across multiple dimensions. The second paper presents data from three focus groups (Hong Kong) that highlight individual and collective distinctions about wisdom. Both underscore the value of lived experience in leading to a satisfying life. The third paper considers life meaning as it is expressed in four cases detailing different spiritual and cultural considerations of illness. A value dimension of wisdom is emphasized in finding a course of action that both conforms to client desires and balances family and professional perspectives. The fourth paper returns to a philosophical approach to discuss wisdom and meaning in the work of Viktor Frankl as recognition of the need to solve existential anxiety and accept the limits of finitude.

### **WISDOM IN THE SECOND PART OF LIFE: DESCRIBING THE PRAGMATICS**

H. Nelson-Becker, *School of Social Work, Loyola University Chicago, Chicago, Illinois*

Examination of wisdom in everyday life can identify behavior leading to a satisfying life quality for older adults. Although expert wisdom has been investigated (Baltes, 1993), implicit or lay wisdom is an under-explored area (Sternberg & Jordan, 2005). This qualitative focus group study used a semi-structured interview guide to explore perceptions of wisdom across cognitive, biological, social, practical, and spiritual dimensions. Participants from senior nutrition sites and Area Agency on Aging programs in one diverse metropolitan area were solicited. Five focus groups with a total of 44 adults over age 60 participated. Although focus groups were ethnically diverse, four of the five were homogeneous. Analysis involved a constant comparative method. Findings included practical understandings of wisdom developed through life experience, and family members and mentors who modeled a wisdom approach. Applying patience, respect, gratitude, learning from mistakes, and care for others were all viewed as markers of wisdom.

## MANIFESTATION OF WISDOM IN HONG KONG CHINESE OLDER ADULTS

E.O. Chow, *Applied Social Studies, The University of Hong Kong, Kowloon, China*

The study aims to explore conceptions of wisdom in elderly and the characteristics of wise elders in a Hong Kong context. Three focus groups of 26 Hong Kong Chinese elders were conducted. In contrast to the Berlin model (Baltes & Staudinger, 2000), the findings showed that wisdom was not viewed as exceptional human excellence that requires a high intellectual level. Chinese wisdom conceptions focus on the personality characteristics of wise elders, with an emphasis on a 'lived wisdom' manifested in elders' own life. Accumulation of life experiences, including both favorable and unfavorable life circumstances, is viewed as a dominant determinant of elderly wisdom. Furthermore, the findings showed a distinction between individual wisdom and collective wisdom. The former concerns wisdom in one's own life, while the latter impacts and contributes to the entire race. Understanding of elderly wisdom has implications for social work practice to promote a supportive and age-friendly society.

## LIFE MEANING AMONG PERSONS WITH SERIOUS ILLNESS AND THEIR CAREGIVERS

F.P. Hopp<sup>1</sup>, H. Nelson-Becker<sup>2</sup>, T.R. McCormick<sup>3</sup>, A.L. Ai<sup>4</sup>, 1. *Social Work, Wayne State University, Detroit, Michigan*, 2. *Loyola University, Chicago, Illinois*, 3. *University of Washington, Seattle, Washington*, 4. *Florida State University, Tallahassee, Florida*

Issues related to life's meaning are central for persons facing life-limiting illness and their caregivers. We present three composite case studies involving spiritual issues derived from our clinical experiences and from qualitative interviews. These cases include: 1) an older Caucasian man hospitalized with a serious illness; 2) an older Korean woman whose children had conflicting end-of-life religious views; and 3) an older African American woman with heart failure. Through these case studies, we show how life meaning is expressed differently depending on racial and cultural background, family dynamics, and illness trajectory. We will also discuss similarities across cultures and illnesses, the way in which common experiences of meaning impact the illness experience, and implications for health care providers.

## WISDOM AS KNOWLEDGE PLUS

J.W. Ellor, *Baylor University School of Social Work, Waco, Texas*

Viktor Frankl notes, "Wisdom is knowledge plus: knowledge – and the knowledge of its own limits." (Unconscious God, p. 142) In the context of existential approaches to counseling the work of Viktor Frankl is a critical witness to both our basic human nature as well as our relationships with the world around us and even to God. In the writing of Viktor Frankl the concept of wisdom is an important reflection of the existential issue of finite being. Existential anxiety is that stress one feels whenever confronted with an existential context, beginnings and endings of things that are important. Yet, where older adults are very aware of death as the ultimate ending, not all are able to grasp and accept the world in which we live to be finite in nature. When one has accepted our finite nature then she or he has found the wisdom of the heart.

## SESSION 40 (PAPER)

### ACTIVITY & COGNITIVE FUNCTIONING

#### OBJECTIVELY MEASURED PHYSICAL ACTIVITY IS RELATED TO COGNITIVE FUNCTION IN OLDER ADULTS

J. Kerr<sup>1</sup>, S. Marshall<sup>1</sup>, D.E. Rosenberg<sup>2</sup>, 1. *UCSD, San Diego, California*, 2. *Group Health, Seattle, Washington*

Background Previous studies have demonstrated a significant relationship between physical activity (PA) and cognitive functioning among older adults, but relationships are based on self-reports of PA which are

likely to co-vary with cognitive function. No studies have assessed relationships between objectively measured PA intensity using hip worn accelerometers and cognitive function. Methods Older adults (n=112; mean age = 83; 69% female) wore a hip-mounted ActiGraph 3TX+ accelerometer for 7 days. Data were aggregated to 60 second epochs and non-wear time was determined as 90 consecutive minutes of zero counts. Accelerometer counts were converted into min.dy-1 of light and moderate intensity PA using validated thresholds. Participants also completed Trails A and B tests, measures of executive function. Results Participants engaged in 203.4 (±62.8), and 31.2 (±26.1) min.dy-1 of light and moderate intensity PA, respectively. Mean time to complete Trails A and B was 55.4 (±23.6) and 150.0 (±77.8) seconds, respectively. Min.dy-1 of light intensity PA was negatively correlated with time to complete Trails B (r = -.22, p<.02), whereas min.dy-1 of moderate intensity PA was negatively correlated with time to complete Trails A (r = -.26, p<.005) and Trails B (r = -.25, p<.008). Conclusion Previous studies have related aerobic activity to executive functioning. This study found that older adults who participate in both light and moderate intensity activity complete Trails B tests more quickly. Light activity may be a feasible lifestyle activity for older adults to adopt to improve their cognitive functioning.

#### EFFECTS OF TAI CHI ON HEALTH OUTCOMES IN ELDERLY WITH COGNITIVE IMPAIRMENT AND OSTEOARTHRITIC KNEE

J.Y. Chang<sup>1</sup>, P. Tsai<sup>1</sup>, C. Beck<sup>1</sup>, Y. Kuo<sup>2</sup>, F. Keefe<sup>3</sup>, 1. *University of Arkansas for Medical Sciences, Little Rock, Arkansas*, 2. *University of Texas Medical Branch, Galveston, Texas*, 3. *Duke University, Durham, North Carolina*

This pilot randomized trial tested the efficacy of a Tai Chi (TC) program in improving health outcomes in community-dwelling elders with knee osteoarthritis (OA) and cognitive impairment (CI). Eight sites participated in either the TC group (4 sites, 28 participants) or the Control group (4 sites, 27 participants). Measures included the Western Ontario and McMaster (WOMAC) OA pain, physical function and stiffness subscales, the "Get up and Go" test, the "Sit and Stand" test and the Mini Mental State Exam (MMSE), administered at baseline, every 4 weeks during the intervention and at the end of the study (posttest). The WOMAC pain (p= 0.006) and stiffness scores (p= 0.010) differed significantly between the two groups at posttest while differences between the two groups in the WOMAC physical function score (p= 0.071) and the MMSE (p=0.096) showed borderline significance at the posttest. WOMAC pain (p= 0.001), physical function (p= 0.021) and stiffness (p< 0.001) scores improved significantly more over time in the TC group than in controls. No adverse events were found in either group. In conclusion, practicing TC can be efficacious in reducing pain and stiffness in elders with knee OA and CI.

#### A 20-WEEK SUN STYLE TAI CHI FOR OSTEOARTHRITIC KNEE PAIN IN ELDERLY WITH COGNITIVE IMPAIRMENT

P. Tsai<sup>1</sup>, J.Y. Chang<sup>1</sup>, C. Beck<sup>1</sup>, Y. Kuo<sup>2</sup>, F. Keefe<sup>3</sup>, 1. *University of Arkansas for Medical Sciences, Little Rock, Arkansas*, 2. *The University of Texas Medical Branch, Galveston, Texas*, 3. *Duke University, Durham, North Carolina*

This pilot cluster-randomized clinical trial with two arms tested the efficacy of a 20-week Sun style Tai Chi (TC) program in reducing knee osteoarthritis (OA) pain in community-dwelling elders with cognitive impairment (CI) and tested whether elders' cognitive function affects the efficacy of TC on pain relief. Each site was randomly assigned to participate either in a TC program (4 sites, N=28) or a Control program (4 sites, N=27). Pain was measured by the Western Ontario and McMaster (WOMAC) OA Index pain subscale, Verbal Descriptor Scale (VDS), and observed pain behaviors. Analgesics intake during the study period was also determined. Results indicated that WOMAC pain subscale, VDS, and observed pain behaviors were significantly different at posttest

between groups ( $p=.004-.048$ ). Analgesics intake showed a marginal trend of reducing use over time in TC group when compared to controls ( $p=.062$ ). The results further indicated that the beneficial effects of TC were not affected by the cognitive ability in this study population. These results suggest that TC could be used as an adjunct to pharmacological intervention to relieve osteoarthritis pain in elders with CI.

### PHYSICAL HEALTH PREDICTS VARIANCE IN LATE-LIFE COGNITIVE, MOOD AND FUNCTIONAL OUTCOMES BEYOND DEMOGRAPHICS

A. Rahman<sup>1</sup>, J.L. Woodard<sup>1</sup>, L. Miller<sup>2</sup>, P. Martin<sup>3</sup>, A. Davey<sup>4</sup>, L. Poon<sup>2</sup>, 1. *Psychology, Wayne State University, Redford, Michigan*, 2. *University of Georgia, Athens, Georgia*, 3. *Iowa State University, Ames, Iowa*, 4. *Temple University, Philadelphia, Pennsylvania*

**Introduction:** Demographic variables are commonly used to predict cognitive and functional outcomes across the lifespan. Research suggests that late life is characterized by a decline in physical abilities, increased risk of malnutrition and higher BMI, but the contribution of these health indicators to cognitive, mood, and functional status changes in late-life is not well-researched. **Methods:** Eighty octogenarians and 244 centenarians from the Georgia Centenarian Study completed measures of cognitive, mood, and functional status, demographics, and health factors. Hierarchical regressions were performed to examine the incremental predictive value of physical health factors beyond demographic variables. Age, gender, race, and years of education were entered on the first step. Probabilistic Physical Performance Mobility Exam (PPME), Mini-Nutritional Assessment (MNA) score and Body Mass Index (BMI) were entered on the second step. Outcome measures included the Mini Mental State Examination (MMSE), Fuld Object Memory Evaluation Retention Estimate (FOME), Geriatric Depression Scale (GDS), and the Direct Assessment of Functional Status (DAFS) Instrumental and Basic Activities of Daily Living (IADLs, BADLs). **Results:** The inclusion of PPME, MNA and BMI to the prediction equation including only demographic predictors accounted for significantly more variance in global cognitive, memory, mood and functional status measures. Physical health measures accounted for more variance in GDS score than did demographic factors. **Conclusions:** Inclusion of physical health predictors allows for more accurate prediction of late-life cognitive functioning, mood symptoms, and basic and instrumental functional abilities. Physical health factors may be better predictors of late-life mood functioning than demographic predictors.

## SESSION 45 (PAPER)

### AGE BIAS AND DISCRIMINATION

#### PERCEIVED DISCRIMINATION IN EUROPE: RESULTS FROM THE EUROPEAN SOCIAL STUDY

L. Ayalon, *Bar Ilan University, Ramat Gan, Israel*

The present study evaluated the role of individual level variables (e.g., age, gender, ethnicity) and contextual level variables that represent the numeric size of the minority vs. majority group (e.g., the percent of individuals over the age of 60, male to female ratio, and the percent of the ethnic majority group) as predictors of perceived age, gender, and ethnic discrimination in Europe. Analysis was based on the fourth round of the European Social Survey (ESS). The present analysis is based on data from 54,988 respondents from 28 countries. Hierarchical linear modeling was conducted. In most countries, there was a general trend towards a higher incidence rate of perceived age discrimination (mean incidence rate across countries=34.5%; SE=.002), followed by gender (mean incidence rate across countries= 24.9%; SE=.002), and ethnic discrimination (mean incidence rate across countries=17.3%; SE=.002). In countries of low percent of individuals over 60, both the youngest and the oldest age groups were more likely to report perceived age discrimination. In countries of medium and high

percent of individuals over 60, younger respondents were more likely to report perceived age discrimination. Younger respondents were also more likely to report perceived gender and ethnic discrimination. Ethnic minorities were more likely to report perceived gender and ethnic discrimination and women were more likely to report gender discrimination. Countries with a lower percentage of a numeric ethnic majority group were more likely to report perceived ethnic discrimination. The most notable findings of the present study concern the relatively moderate incidence rates of perceived discrimination in light of low to medium cross-country variations. The role that younger age plays in all three types of perceived discrimination is another important finding of the present study. Results provide limited support to the social threat theory and to the social contact theory.

#### AGEISM: A META-ANALYSIS

P. Nash<sup>1</sup>, I. Stuart-Hamilton<sup>2</sup>, P. Mayer<sup>2</sup>, 1. *Centre for Innovative Ageing, Swansea University, Swansea, Wales, United Kingdom*, 2. *University of Glamorgan, Cardiff, Wales, United Kingdom*

Steffens, Schulze & Konig (2006) demonstrated that the Implicit Association Test (IAT) is a stable predictor of spontaneous behaviour where explicit measures predict only planned. Pervasive, ingrained implicit ageism is found in the general (Levy & Banaji, 2002) and professional medical (James and Haley, 1995) populations, negatively affecting older peoples health care (Duerson, Thomas, Chang & Stevens, 1992; Filipp & Schmitt, 1995). A bespoke ageing IAT (Greenwald, McGhee & Schwartz, 1998) and the Fraboni Scale of Ageism (Fraboni, Saltstone & Hughes, 1990) measured implicit and explicit attitudes. Data from 203 participants over six study populations demonstrated consistently negative implicit attitudes, where explicit attitudes were largely positive. Spanning each population, there were significant differences reported on both implicit ( $F(7,162)=8.352$ ,  $p<0.001$ ) and explicit ( $F(7,162)$ ,  $p<0.05$ ) measures illustrating the measurement of distinct constructs. Further, results demonstrated a negative societal ageist bias, increased self-presentational bias in-line with educational level and internalisation of negative attitudes. By 2051 it is estimated that 17% (115.4 Million) of the global population will be living with, and requiring some form of support for dementia (US Census, 2010). As a large and ever growing cause of contact between the medical professional and older people, dementia care should be prioritised. The negative attitudes and consequential prejudicial behaviour need to be addressed to ensure proper treatment and dignity in care. Westmoreland et al. (2009) demonstrated that through well structured training based on psychological principles, attitudes towards older people can be changed.

#### AGE RELATED ATTRIBUTION BIASES IN ERRORS INVOLVING INSTRUMENTAL ACTIVITIES OF DAILY LIVING

K.J. Kimbler, A.N. Harris, *Social & Behavioral Sciences, Florida Gulf Coast University, Fort Myers, Florida*

A growing body of research has examined how age may relate to causal attributions, suggesting that older age is associated with an increased likelihood to exhibit the correspondence bias (e.g., Horhota & Blanchard-Fields, 2006). Research, however, indicates that the domain of the behavior being examined can be predictive of these age differences (e.g., Blanchard-Fields, Baldi, & Stein, 1999). Previous studies have also experimentally manipulated the age of the target by describing different aged individuals in vignettes (e.g., Erber, Szuchman, & Rothberg, 1990). This research suggests that in certain domains, individuals tend to judge older adults as more cognitively impaired compared to younger individuals. Although the previously mentioned research has somewhat consistently found evidence of age differences (related to both participants' and targets' age) in causal attributions, studies also suggest that these findings are dependent on the domain of the task being studied as some domains tend to demonstrate larger age dif-



ferences in causal attributions (e.g., Blanchard-Fields, Baldi, and Stein, 1999). The current study extended this research to domains involving instrumental activities of daily living (i.e., health, finances, cooking, housekeeping / home maintenance, and transportation). The target age used in the vignettes was experimentally manipulated and the sample consists of young (18-39), middle aged (40-64), and older (65+) adults. Preliminary analyses suggest that errors committed by older adults were attributed more to mental difficulty ( $p < .05$ ) while participants were more likely to judge mistakes made by younger adults as being due to lack of effort ( $p < .05$ ).

### RELATIVE AGE BIAS IN THE WORKPLACE

E. Besen<sup>1</sup>, N. Sarkisian<sup>1</sup>, M. Pitt-Catsouphes<sup>1</sup>, M. Kidahashi<sup>2</sup>, 1. Boston College, Chestnut Hill, Massachusetts, 2. Institute of Economic Research, Tokyo, Japan

It is well known that age-based stereotypes exist in the workplace for both younger and older workers. However, research has often focused solely on perceptions made based on absolute age, such as what are your perceptions of 25 year olds, compared to relative age, such as what are your perceptions of workers that are younger than you. Further researcher is needed to understand whether perceptions are dependent on absolute or relative age. The purpose of this study is to assess whether there are age-based stereotypes about both younger and older workers at the workplace from the viewpoint of relative age and to examine how these stereotypes may vary based on the perceiver's age. In a sample of over 500 workers, ages 31-59, from two worksites in the U.S., we examine stereotypes about relatively younger, relatively older, and relatively same age workers. Results indicate that there are certain attributes that relatively older workers are perceived to be lower on than relatively younger or same age workers and that there are certain attributes that relatively younger workers are perceived to be lower on than the other two groups. These perceptions are found to remain stable with age suggesting that stereotypes are based more on relative than absolute age. After attending this presentation, participants will have a clearer understanding of the attributes younger and older workers are thought to be lower on, respectively. Additionally, participants will be able to define the differences between absolute and relative age in regards to age-based stereotypes.

## SESSION 50 (PAPER)

### HISPANIC AND LATINO AGING

#### DIFFERENCES IN PHYSIOLOGICAL STATUS BETWEEN MEXICANS AND THE MEXICAN-ORIGIN POPULATION IN THE U.S

H. Beltrán-Sánchez<sup>1</sup>, E. Crimmins<sup>2</sup>, L.F. Berkman<sup>1</sup>, 1. Harvard University, Cambridge, Massachusetts, 2. Ethel Percy Andrus Gerontology Center, USC, Los Angeles, California

There is ample evidence in the U.S. suggesting that the health status of the Mexican-origin population is better than expected for their low socioeconomic status (the Hispanic health paradox). The evidence strongly suggests a health advantage of the Mexican-origin population in a variety of outcomes including health behaviors and mortality, but few studies have addressed life course associations in the general Mexican population. This research uses the National Health and Nutrition Examination Survey (NHANES 2005-2006) in the U.S. and the National Health and Nutrition Survey (ENSANUT 2006) in Mexico to investigate how age-specific patterns in physiological status (e.g., C-reactive protein and glycosylated hemoglobin) differ between Mexicans living in Mexico and their counterparts living in the U.S. We use different statistical techniques to adjust our prevalence estimates of physiological status by age, early life factors and adult socioeconomic status, and further stratify our analyses by sex and age at migration into the U.S. in the NHANES data. Preliminary results show that Mex-

icans have higher prevalence in a number of risk factors (e.g., hypertension, obesity and high risk waist circumference) than the Mexican-origin population in the U.S. This research provides additional evidence for understanding the health status of the Hispanic population in the U.S.

### DETERMINANTS OF DISPARITIES IN SELF-RATED HEALTH AMONG NON-HISPANIC WHITE, HISPANIC, AND ASIAN AMERICAN OLDER ADULTS

J. Min<sup>2</sup>, S. Rhee<sup>1</sup>, 1. School of Social Work, California State University, Los Angeles, Los Angeles, California, 2. San Diego State University, San Diego, California

The main purpose of this study is to investigate disparities in self-rated health among non-Hispanic White, Hispanic, and Asian groups of older Californians aged 65 and older. This study is based on House's (2002) model of social inequality in health and aging. This study utilized secondary data drawn from the 2005 California Health Interview Survey (CHIS). The factors that either mediate or moderate the relationship between ethnicity and self-rated health were examined by developing five multivariate analytical models. Major findings include that there were remarkable differences in self-rated health among three groups of older adults. Hispanics and Asians reported poorer health than non-Hispanic Whites in general. Results showed that socioeconomic status, acculturation, health access, and health behavioral factors significantly accounted for an association between ethnicity and self-rated health. However, the magnitudes of their effects on self-rated health varied depending on a series of factors and ethnicity.

### CONSEQUENCES OF UNHEALTHY ALCOHOL USE IN AGING LATINO DAY LABORERS AND THE IMPACT OF FAMILY VALUES TO MOTIVATE BEHAVIOR CHANGE

H.E. del Pino<sup>1,2</sup>, G. Bostean<sup>3</sup>, K. Ramirez<sup>2</sup>, C. Mendez-Luck<sup>4</sup>, A.A. Moore<sup>2</sup>, 1. Charles R. Drew University of Medicine and Science, Los Angeles, California, 2. University of California, Los Angeles, Los Angeles, California, 3. University of California, Los Angeles, Los Angeles, California, 4. Oregon State University, Corvallis, Oregon

**PURPOSE:** A study of Los Angeles day laborers showed that 20% reported ever being an excessive drinker; 15% reported drinking more than 7 drinks daily; and 26% reported drinking a fifth of liquor in one day. Rates of heavy drinking do not decline in Latinos until they are in their 60s, yet there have been no studies testing interventions to reduce drinking among aging Latino day laborers. The purpose of this study was to plan an intervention to address unhealthy alcohol use in this population. **METHODS:** Using a non-probability purposive sample design, we recruited 14 Latino day laborers aged 50 and older from a community-based organization in Los Angeles. We used the Comorbidity-Alcohol Risk Evaluation Tool (CARET) to identify participants' unhealthy alcohol use and comorbidities and conducted semi-structured interviews. **RESULTS:** The study found high levels of social disadvantage, alcohol use, and symptoms and conditions exacerbated by alcohol use, e.g., depression, gastrointestinal problems. All were concerned with the consequences of alcohol use on their health, the impact on their family relationships, and reported that family members and health educators who treated them like family could motivate behavior change. **CONCLUSION:** Interventions should (1) leverage family values to motivate behavior change, even for men who are separated from their families, by integrating participants' family values into staff training, and (2) increase knowledge of unhealthy alcohol use and comorbidities. Further studies are needed to elucidate how family relationships facilitate or hinder decision-making and motivational processes of aging Latino day laborers who wish to reduce or stop their alcohol consumption.

## SMOKING IN THE US AND LATIN AMERICA: HOW DIFFERENT ARE SMOKERS' SURVIVAL EXPECTATIONS FROM OBSERVED MORTALITY?

B. Novak, A. Palloni, *UW-Madison, Madison, Wisconsin*

Context: Since 1980s increases in life expectancy at age 50 have slowed down in the US, primarily due to the contribution of lung cancer and COPD. Smoking is the most likely explanation for the observed deceleration of life expectancy increases. With nearly thirty years of delay, low income countries are going through the same stages as high income countries did before them. Future mortality trends will depend on whether smoking behavior is accompanied by appraisals about its impact on individual survival that are similar to those in place in high income. Objectives: For the US, Mexico and Chile: (a) To compute and compare estimates of potential survival losses after age 50 and (b) To contrast objective losses in survival with those expected from subjective survival expectation in the population of smokers and non smokers. Data: 2004 Health and Retirement Study (N=5498), 2005 Mexican Family Life Study (N=3036) and 2004 Chilean study Social Protection Survey (N=2695). Subjects: Individuals aged 50-60. Method: We use standard estimation procedures to assess potential life expectancy losses at ages above 50 and accelerated failure time models to parameterize subjective survival expectations. Results: Preliminary results for the US show that, unlike Black females, White females, both smokers and non-smokers, are pessimistic regarding their future survival though non-smokers are much more so. Male smokers are optimistic and Black males that are obese and current smokers are the most optimistic of all: they expect to live around 7 years more than observed mortality for smokers predicts.

## IMPLEMENTATION AND EVALUATION OF AN EVIDENCE-BASED INTERVENTION FOR LATINO DEMENTIA CAREGIVERS

D. Gallagher-Thompson<sup>1</sup>, R. Velasquez<sup>3</sup>, K. Buske<sup>3</sup>, V. Cardenas<sup>2</sup>, M. Crane<sup>2</sup>, L. Van Tilberg<sup>3</sup>, 1. *Psychiatry & Behavioral Sciences, Stanford University, Stanford, California*, 2. *University of California San Diego, San Diego, California*, 3. *Southern Caregiver Resource Center, San Diego, California*

Through funding from the California Mental Health Services Act (MHSA), San Diego County enlisted Southern Caregiver Resource Center (SCRC) to implement the evidence based intervention, Resources for Enhancing Alzheimer's Caregiver Health (REACH). This multi-component, personalized intervention teaches Latino dementia caregivers techniques aimed at decreasing caregiver depressive symptoms and improving overall quality of life and decreasing patient problem behaviors and delaying institutional placement. Most of the caregivers seeking services are monolingual Spanish speaking transient females, of low socioeconomic status with urgent survival needs (e.g., housing, unemployment). These challenges made it difficult for many clients to access traditional support services which led to adaptations to the REACH model. These adaptations included offering two distinct versions of the REACH model, utilizing Promotoras (community health workers) for recruitment and psychoeducation and developing an accelerated one month program. A total of 168 clients completed the pre- and post-assessments. Results indicate that caregiver burden was significantly reduced as measured by the Zarit caregiver burden index ( $t=12.038$ ,  $p<.001$ ) as were depressive symptoms as measured by the CES-D depression scale ( $t=12.974$ ,  $p<.001$ ). In addition, there were significant reductions in patient problem behaviors (the frequency of each of the 24 behaviors was reduced; 19 of 24 with  $p<.05$ ), and an improvement in self-reported caregiver health ( $t=-4.338$ ,  $p<.001$ ). Overall, over 99% of participants reported that they were satisfied with the services they received. After attending this session, participants will be able to identify methods of implementing an evidence-based program to meet the needs of ethnically diverse caregivers.

## SESSION 55 (SYMPOSIUM)

### ADVANCES IN NURSING SCIENCE FOR DELIRIUM CARE

Chair: *A.M. Kolanowski, Penn State University, University Park, Pennsylvania*

Discussant: *D.M. Fick, Penn State University, University Park, Pennsylvania*

Delirium is common and deadly in older adults. Those with dementia are at greatest risk: 89% experience delirium when hospitalized and studies report that between 24 and 76% die within one year of the index episode. Delirium is not easily recognized because its clinical manifestations are commonly attributed to aging or cognitive impairment. Interventions that treat delirium are not well-developed because we are just beginning to understand the mechanisms involved in its etiology. This symposium brings together preliminary findings from NIH-funded clinical trials and other studies conducted by leading nurse scientists on innovative approaches for improving clinical recognition and interventions for delirium. The Canadian team, headed by Philippe Voyer, describes the development and psychometric properties of RADAR, a new instrument for the recognition of delirium by bedside nurses. Andrea Yevchak and colleagues present data from the ongoing END- DSD trial that illustrate barriers and facilitators to staff rounding with unit champions in three diverse acute care settings. Pam Cacchione presents data that demonstrate an association between sensory impairments and delirium in residents of long-term-care facilities, and recommends interventions for practice. Nikki Hill and colleagues use data from year one of the RESERVE For DSD trial to describe the pattern of indicators of cognitive reserve across the life span in persons who experience delirium in post-acute care settings, and compare these data to those obtained in cognitively intact populations. The discussant, Donna Fick, will reflect on the work presented and suggest directions for future research in the area of delirium care.

### RADAR : A NEW SCREENING TOOL TO IMPROVE THE RECOGNITION OF DELIRIUM SYMPTOMS AMONG OLDER PERSONS

P. Voyer<sup>1,5</sup>, J. Desrosiers<sup>2</sup>, P. Landreville<sup>1,5</sup>, J. McCusker<sup>3</sup>, N. Champoux<sup>4</sup>, J. Monette<sup>3</sup>, S. Richard<sup>5</sup>, P. Carmichael<sup>5</sup>, 1. *Laval University, Quebec City, Quebec, Canada*, 2. *Sherbrooke University, Sherbrooke, Quebec, Canada*, 3. *McGill University, Montreal, Quebec, Canada*, 4. *Montreal University, Montreal, Quebec, Canada*, 5. *Centre for Excellence in Aging-Research Unit, Quebec City, Quebec, Canada*

The RADAR was developed to facilitate recognition of delirium symptoms based on nursing observations made during distribution of medication. The 5-items RADAR was tested among 105 patients with and without dementia in an acute care setting. Percentage of agreement between the items of the RADAR administered by bedside nurses and those administered by research assistants varied from 87 to 99%. The combination of the best 3 items to predict a CAM+ for delirium has yielded a sensitivity of 69% and a specificity of 75%. The tool was very well received ( $\geq 94\%$ ) by the participating nursing staff. The tool is now being tested among residents in long-term care (LTC) settings. At the end of this first cycle, the best items to predict a CAM positive for delirium will be selected and further tested in a second cycle involving both acute and LTC settings.

### DELIRIUM IN SENSORY IMPAIRED LTC ELDERS IMPLICATIONS FOR PRACTICE

P. Cacchione<sup>1,2</sup>, K. Culp<sup>3</sup>, A.L. Hanlon<sup>1</sup>, 1. *University of Pennsylvania School of Nursing, Philadelphia, Pennsylvania*, 2. *Saint Louis University School of Nursing, St. Louis, Missouri*, 3. *University of Iowa College of Nursing, Iowa City, Iowa*

Sensory impaired long-term care elders are at risk for delirium. Preliminary data from 135 visually and/or hearing impaired LTC elders participating in the attention control arm of an Intervention study eval-

uating the efficacy of a nursing intervention for sensory impaired LTC elders (I-SEE Study) [NR 008777] were evaluated for delirium using the NEECHAM Confusion Scale and the Confusion Assessment Method three times a week for 16 weeks. The participants were primarily female (73%) and Caucasian (95%), with a mean age of 86.4. They had mean baseline MMSE scores of 23.3 and mean GDS scores of 8.5 out of 30. Delirium episodes were defined as NEECHAM Confusion Scale scores of 24 or less and/or a positive Confusion Assessment Method score. The merits of the two delirium assessment instruments will be discussed as well as interventions for sensory impaired LTC elders to decrease the risk of delirium.

### **BARRIERS AND FACILITATORS TO IMPLEMENTING UNIT CHAMPION ROUNDS IN A CLINICAL TRIAL ACROSS THREE DIVERSE HOSPITAL SETTINGS**

A. Yevchak<sup>1</sup>, D.M. Fick<sup>1</sup>, L. Mion<sup>2</sup>, J. McDowell<sup>1</sup>, L. Grove<sup>1</sup>, T. Monroe<sup>2</sup>, K.N. May<sup>2</sup>, S.K. Inouye<sup>3</sup>, *1. School of Nursing, The Pennsylvania State University, University Park, Pennsylvania, 2. Vanderbilt University, Nashville, Tennessee, 3. Aging Brain Center, Boston, Massachusetts*

Delirium occurs in over half of hospitalized older adults with dementia, substantially worsening outcomes. The use of multiple strategies and a local opinion leader, unit champion, have cumulative and lasting effective compared to single-strategy interventions. The purpose of this paper is to describe the early barriers and facilitators to rounding with unit champions in a cluster randomized clinical trial in year two of a 5 year trial (5R01NR011042-02). Advance practice nurses from three diverse hospital sites round at least once per week across all shifts. Descriptive and comparative statistics were analyzed on n=192 nursing rounds. On average rounds lasted 25.24 minutes (SD=13.18) and were conducted with the unit champion 64% of the time. Additional quantitative and qualitative data will be discussed. Clinical trials for delirium in dementia have the potential for significant health and economic benefits. Understanding the barriers and facilitators to interventions is critical to advancing nursing science.

### **LIFETIME PATTERN OF COGNITIVE RESERVE IN PERSONS WITH DELIRIUM AND DEMENTIA**

N.L. Hill<sup>1</sup>, A.M. Kolanowski<sup>1</sup>, M. Litaker<sup>2</sup>, D.M. Fick<sup>1</sup>, *1. School of Nursing, Penn State University, University Park, Pennsylvania, 2. University of Alabama, Birmingham, Alabama*

Cognitive reserve, the concept that individuals with more effective or compensatory neural processing are better able to cope with brain damage, has been linked to risk for dementia and, recently, to delirium in older adults. Educational attainment, occupation, and leisure activity engagement have been associated with increased cognitive reserve and are often utilized as proxy measures. Using data from an ongoing clinical trial, we measured engagement in complex cognitive activities over the lifetime of individuals (N= 50) who developed both dementia and delirium using informant reports for the Lifetime of Experiences Questionnaire (LEQ). Compared to healthy older adult samples, participants in this trial had considerably lower total scores on the LEQ (48.9±13.8 vs. 75.5±20.0; Valenzuela & Sachdev, 2007). The pattern of reserve scores from young adulthood (14.7±5.8), middle age (16.4±7.2), through late life (17.8±5.4) are discussed for their potential impact on the expression of cognitive impairment in older adults.

## **SESSION 60 (SYMPOSIUM)**

### **HARTFORD INSTITUTE FOR GERIATRIC NURSING HIGHLIGHTS EMERGING GERIATRIC NURSING SCHOLARS**

Chair: *T.A. Cortes, Nursing, NYU, New York, New York*

Discussant: *M. Mezey, Nursing, NYU, New York, New York*

Since 1996, the Hartford Institute for Geriatric Nursing, NYU College of Nursing, has set a national agenda for improving care of older

adults by promoting the significant role that nurses can play in the care of older adults. The Hartford Institute has sought to initiate, sustain and expand activities in the four areas of Education, Practice, Research, and Policy. The Hartford Institute's primary objective in research has been to foster innovative clinical geriatric nursing research and to recognize the contribution of geriatric nurse researchers. One initiative has been a week-long Hartford Institute Geriatric Nursing Scholars Program, an intensive mentoring workshop. In addition, the Hartford Institute works to engage and facilitate the work of emerging scholars in geriatric nursing research. In this symposium, the Hartford Institute highlights the work of emerging geriatric nursing research scholars looking at risk factors for hospitalization and inpatient mortality of home healthcare patients; hospitalization and cancer diagnosis and comorbidity patterns in long term care services and supports; and risks factors for glucose metabolism alterations in cancer patients.

### **HOME HEALTHCARE PATIENT CHARACTERISTICS ASSOCIATED WITH INCREASED RISK OF HOSPITALIZATION AND INPATIENT MORTALITY: A NATIONWIDE SAMPLE**

A. Brody, M. Rosenberg, A. Bacic, *Nursing, NYU, New York, New York*

The increase in the population of older adults is expected to overwhelm the healthcare system; the supply of hospital and long term care beds are not expected to keep pace with the demand. Thus, these complex patients will be forced to return to the community in sicker condition than currently seen, after shorter lengths of stay in the hospital, which will place a great strain on home healthcare agencies. However, few studies have examined the characteristics of older adults receiving home healthcare, nor how those characteristics effect hospitalization. This study uses data from the Outcome and Assessment Information Set and MEDPAR from 2006-2008 to examine those characteristics that are most associated with hospitalization and inpatient mortality. It also examines whether there are certain characteristics within subgroups (dementia, cancer, heart failure, COPD) that place the patient at greater risks for hospitalization and inpatient mortality.

### **CANCER DIAGNOSIS, COMORBIDITY PATTERNS, AND NUMBER OF HOSPITALIZATIONS AMONG OLDER ADULTS RECEIVING LONG-TERM SERVICES AND SUPPORTS**

J.H. Van Cleave<sup>1</sup>, B.L. Egleston<sup>2</sup>, K. Abbott<sup>3</sup>, A. Rao<sup>3</sup>, M.D. Naylor<sup>3</sup>, *1. New York University College of Nursing, New York, New York, 2. Fox Chase Cancer Center, Biostatistics Facility, Philadelphia, Pennsylvania, 3. University of Pennsylvania School of Nursing, Philadelphia, Pennsylvania*

We explored association of cancer diagnosis, comorbidity patterns, and hospitalizations over one year among older adults receiving long-term services and supports using data from Health Related Quality of Life: Elders in Long Term Care study, MD Naylor, PI (n=470). Using latent class analysis and regressions, we found cancer diagnosis was not associated with hospitalizations. However, three classes of comorbidity patterns were identified. Sixty-seven percent of participants had low comorbidity burden with dementia (31.4%) most prevalent major condition. Fifteen percent had moderate comorbidity burden with cerebrovascular disease (72.1%) most prevalent. Eighteen percent had high comorbidity burden with congestive heart failure (90.6%) most prevalent. Participants with high comorbidity burden had 1.06 greater number of hospitalizations per 10% increase in probability of class membership than those with low comorbidity burden (p=0.002). Findings suggest comorbidity pattern rather than cancer diagnosis influences number of hospitalizations by older adults receiving long-term services and supports.

## GLUCOSE METABOLISM IN OLDER ADULTS WITH CANCER

M.J. Hammer, *Nursing, NYU, New York, New York*

Individuals 65 years and older account for over 50% of cancer incidence. Additionally, >26% of older adults have diabetes (unregulated hyperglycemia) compared to 8.2% in the general population, and up to 18% of patients with cancer have pre-existing diabetes. Furthermore, diabetes is a known risk factor for certain types of cancer. Hyperglycemia also occurs in cancer environments independent of diabetic history. Hyperglycemia impairs immune function, preventing immune cells from being able to effectively detect and arrest aberrant cell formation and eliminate foreign microorganisms. The immunosuppression increases the risk for infections and related complications including non-malignancy-related death. Older adults with cancer are at particular risk for alterations in glucose metabolism due to nutritional imbalances and decreased physical activity, medications, and stress. Understanding these events can lead to enhanced protocols for better glycemic control and in turn, reduced rates of both cancer onset and adverse outcomes in older adults with cancer.

## SESSION 70 (SYMPOSIUM)

### UNDERSTANDING DECISION-MAKING IN DEMENTIA

Chair: *L.P. Gwyther, Duke University Medical Center, Durham, North Carolina*

Co-Chair: *K. Samsi, Social Care Workforce Research Unit, King's College London, London, United Kingdom*

Discussant: *J. Manthorpe, Social Care Workforce Research Unit, King's College London, London, United Kingdom*

Understanding how and when people with dementia make decisions is becoming a crucial to health care systems and practice, as this can inform everyday care as well as long-term care needs. Although decision-making is seen as part of providing routine care, the impact of making decisions can be tremendous – on individual autonomy of the person with dementia and levels of strain experienced by carer. Long-term future care needs can also be impacted by perceived level of autonomy and dependency. The focus of this symposium is to explore this new thinking by looking at decision-making at various stages of dementia. Buron starts by presenting the theoretical context to decision-making by examining the difference between emotional and intellectual decision-making. Samsi and Manthorpe use qualitative methodology to explore everyday independent and shared decision-making between people with dementia and caregivers. Menne and Whitlatch look at how everyday decision-making can change over time and the implications of this for long-term care needs. Morhardt and Spira's study focuses on training staff to recognise dementia and equip them with skills to make everyday decisions. Hirschman and Hanlon look at the implications of medical decision-making on caregiver burden and strategies to engage the person with dementia in order to manage this better.

### BALANCING RESPECT FOR AUTONOMY WITH SAFETY: CONSIDERING EMOTIONAL DECISION-MAKING WHEN CARING FOR PEOPLE WITH PROGRESSING DEMENTIA

*B. Buron, University of Arkansas for Medical Sciences Northwest Campus, Fayetteville, Arkansas*

Personal decision-making is a fundamental human right that must be nurtured and respected prior to and throughout the progression of dementia. While it is well established that progressing dementia is associated with depression, anxiety, frustration/anger, and suspicion, it is unknown how emotions, combined with memory loss, might impact decision-making as dementia progresses. Emotional decision-making is particularly important in relation to personal decisions that can negatively impact future quality of life. A case study is used to explore the potential effects of emotions, combined with memory loss on some negative consequences of decision-making. Suggestions for healthcare

providers, including ideas about how to 1) differentiate emotional from intellectual decision-making and 2) prevent and respond to highly emotional decision-making will be discussed. The implications of future research may include the development of practice protocols and policy changes to protect persons with progressing dementia from the potentially negative consequences of emotional decision-making.

### EVERYDAY DECISION-MAKING AMONG PEOPLE WITH DEMENTIA AND CARERS

*K. Samsi, J. Manthorpe, Social Care Workforce Research Unit, King's College London, London, United Kingdom*

Qualitative interviews with 12 dyads of people with dementia and caregivers were conducted over 10 months to understand everyday independent and shared decision-making in England. We explored relevance of new legal frameworks in England, the Mental Capacity Act 2005, for people making everyday decisions. Findings revealed that everyone valued decision-making autonomy, and everyday conversations contextualised decision-making. Some caregivers described using cues to assist relatives with dementia, such as presenting fewer options. Caregivers found proxy decision-making frustrating, but lifelong preferences, habits, and dislikes of their relatives were used as schema to help. Principles of 'best-interests' underlay many decisions, although challenges remain in understanding how these can be best weighed up, especially if the well-being of one depends on the well-being of the other. We explore these and other challenges faced by people with dementia and caregivers and report on ways in which some conceptualised their decision-making by reference to legal principles.

### DECISION-MAKING INVOLVEMENT OF PERSONS WITH DEMENTIA: CAREGIVER PERCEPTIONS AND CHANGE OVER TIME

*H.L. Menne, C.J. Whitlatch, Margaret Blenkner Research Institute, Benjamin Rose Institute on Aging, Cleveland, Ohio*

It is important to engage a person with dementia (PWD) in decision making about daily care while he/she is still able to communicate his/her wishes. This study analyzes data from 81 PWDs and their family caregivers to explore the everyday decision-making involvement of PWDs, and the family caregiver's perceptions of the person's decision-making involvement over 1 year. Results demonstrate that persons with mild to moderate dementia can participate in making decisions about their daily care. The doubly repeated-measures ANOVA results indicate that the Person X Time interaction for decision-making involvement trended toward significance ( $p=.064$ ). Significant effects by Person and by Time were found ( $p=.000$ ) with PWDs reporting significantly more decision-making involvement at T1 (38.29) and T2 (36.28) compared to caregivers' perceptions (T1=31.87, T2=27.41). These findings add to the growing research documenting that care partners do not share the same perceptions about the PWD's daily care involvement and preferences.

### DEMENTIA TRAINING: ENHANCING EVERY DAY DECISION-MAKING OF STAFF WHO WORK WITH THE COGNITIVELY IMPAIRED

*D.J. Morhardt<sup>1</sup>, M. Spira<sup>2</sup>, 1. Northwestern University Feinberg School of Medicine, Chicago, Illinois, 2. Loyola University Chicago, Chicago, Illinois*

Focus groups conducted with multilevel staff in a low-income housing consortium revealed that staff had little knowledge about dementia. Consequently concerns were raised about older people in low-income housing who may demonstrate changes in behavioral and cognitive function, yet go undiagnosed, ignored or responded to with insensitivity. An educational director of a NIA-designated Alzheimer's disease center and a university professor combined resources to create training modules for staff, working in low-income housing units. Preliminary reports from administrators, social service workers and maintenance/security personnel reported increased levels of knowledge following the train-

ing and intentions to respond more sensitively to the changes observed in residents. An anticipated result of the training is to increase the options for support of residents, including referrals to medical treatments, social supports and other options to enhance day-to-day decisions regarding care.

### **RELATIONSHIPS BETWEEN DEMENTIA SEVERITY AND PATIENT PARTICIPATION IN MEDICAL CARE DECISIONS DURING A HOSPITALIZATION**

K.B. Hirschman, A.L. Hanlon, *School of Nursing, University of Pennsylvania School of Nursing, Philadelphia, Pennsylvania*

The goal of this study was to explore the relationship between patient participation in medical decisions and dementia severity. Caregivers (n=78) rated the degree to which their hospitalized relative with dementia is involved in medical decisions. The majority of caregivers reported that they make the final decisions (n=41, 53.9%), 31.6% (n=24) collaboratively make decisions, and 14.5% (n=11) said their relative makes final medical decisions. Caregiver burden was lowest for caregivers who reported their relative is involved in medical decision-making either independently or collaboratively. Only 12 (16%) caregivers' of hospitalized dementia patients in the normal-to-mild range (Mini Mental State Examination >19) indicated their relative is involved in medical decision making either independently or collaboratively. Using multivariate ordinal logistic regression, dementia severity and caregiver burden were the most significant predictors of patient involvement in medical decision-making during a hospitalization. Implications of these findings will be discussed.

## **SESSION 75 (SYMPOSIUM)**

### **EMERGING ISSUES IN AGING AND DISABILITY: INTERSECTING PRACTICE AND POLICY**

Chair: *N. Ruggiano, School of Social Work, Florida International University, Miami, Florida*

Co-Chair: *M. Putnam, Simmons College, Boston, Massachusetts*

Discussant: *A. Horowitz, Fordham University, New York, New York*

Over the past several decades, policies and service systems have evolved to address disability and aging separately. Within the disability system, policies and services for non-elderly individuals with disabilities have traditionally emphasized autonomy, social integration, and person-centeredness. Contrary to gerontological research findings, policymakers and practitioners within the aging service system have historically viewed older adults as vulnerable service users, focusing primarily on avoiding institutionalization, only recently embracing more consumer-driven service models. Within the next several decades, the population of older adults with disabilities will be comprised of both individuals who experienced their disability during later life and individuals whose onset of disability occurred at an earlier age, raising questions about these separate systems. Scholars, practitioners, and policymakers alike have questioned if and how the disability and aging systems should be integrated, which would require parity in treatment for all individuals with disabilities and chronic conditions who receive ongoing care and support in home and community-based settings. This dialogue has particularly centered on the growing number of non-elderly individuals with disabilities who are moving from the disability system into the aging system. This session highlights current dialogue on aging and disability. Individual presentations will focus on policy and practice implications of providing disability-related services to older adults in the community that emphasize person-centeredness, independence, and social-integration, similar to those that have become commonplace for non-elderly individuals with disabilities. The discussion will also present recommendations for practitioners and policymakers in addressing the needs of adults with disabilities as they age.

### **POLICY IMPLICATIONS OF DIFFERENCES IN ASSISTIVE DEVICE PREFERENCES IN MEXICAN AMERICAN AND NON-HISPANIC WHITE WOMEN WITH MOBILITY IMPAIRMENT**

T. Harrison<sup>1</sup>, S. Blozis<sup>2</sup>, B. LeGarde<sup>1</sup>, *1. The University of TX at Austin, Austin, Texas, 2. University of California, Davis, Davis, California*

The purpose of this two phase mixed-method study was to explore preferences for assistive device (AD) use among Mexican American (MA) and Non-Hispanic White (NHW) women with mobility impairments and to discuss implications for home and community based service providers implementing person centered planning (PCP). The sample consisted of 122 MA and NHW women, ages 55 to 75, with mobility impairments. First, the women completed questionnaires and were interviewed multiple times (n=464). Content analysis and descriptive statistics were performed. Second, the women completed a newly developed questionnaire on the frequency and meaning of AD use (Cronbach's alpha = .82). The MA women's attitude toward AD use was significantly lower [t (83) = 2.00, p < .05], and they reported higher levels of disability [t (108) = 3.62, p < .00] than did the NHW women. Recommendations are provided to improve PCP with culturally varied aging groups.

### **AGING SERVICE PROVIDER CAPACITY TO SERVE OLDER ADULTS AGING WITH INTELLECTUAL DISABILITIES: CASE STUDY REPORT**

*M. Putnam, School of Social Work, Simmons College, Boston, Massachusetts*

Case study findings are presented from a study of aging service providers in one county in Missouri aimed at understanding current capacity and existing professional training and development needs and interests to serve older adults with developmental/intellectual disabilities. Three study components including an inventory of service providers, mail survey, and best practices review identifying replicable models programs are presented along with discussion of the aims of the local study funder to build capacity within the county's aging network. Study outcomes find more than 500 aging service providers, but limited interest in responding to survey inquiry building professional and organizational capacity. Survey data suggests a modest pool of professionals may be available to engage in capacity building activities. Model programs are described and are reviewed against potential for adoption. Successes and limitations of the study are discussed in relation to next steps for building aging service provider capacity in this county.

### **INTEGRATING PERSON-CENTEREDNESS INTO HOME CARE: CONCEPTUAL, PRACTICAL, AND METHODOLOGICAL ISSUES**

*N. Ruggiano, School of Social Work, Florida International University, Miami, Florida*

Person-centered care has become increasingly emphasized in health and institutionalized long-term care systems, though its adoption in home care for older adults has lagged. The aim of this presentation is twofold. First, it provides an analysis of the conceptual, practical, and methodological issues that stem from integrating dimensions of person-centeredness into home care services for older adults. Then, it will present preliminary findings from a study that examined home care case managers' (N=10) and service recipients' (N=40) perspectives of person-centeredness in home care. The methodology for this study involves in-depth interviews where participants identified aspects of home care that reflect dimensions of person-centeredness as well as unmet needs in person-centered home care. Content analysis was performed to identify themes. Findings from this study provide a framework for conceptualizing and developing best-practices in person-centered home care. Implications and recommendations for policymakers, practitioners, and researchers are provided.

## **BUILDING CARE INTELLIGENCE SYSTEMS TO DRIVE PERSON-CENTERED AND COST EFFECTIVE SERVICE DELIVERY FOR PEOPLE WITH INTELLECTUAL DISABILITIES AS THEY AGE**

P. McCallion, *University at Albany, SUNY, Albany, New York*

There is a sizeable and growing population of older persons with ID but we know little about their ageing and there are concerns that mortality is higher, health problems are greater, access to services and health promotion is poorer and quality of life is often compromised. For some this is likely to mean the potential to be returned to more restrictive living situations or the provision in community setting of levels of support that are costly and/or mean that people are maintained in the community rather than living there. An approach will be described in one state of utilizing emerging electronic health record strategies to support better care, better health and lower costs through the use of predictive models, analytics, data driven alerts and reporting to create a proactive, evidence-based approach to driving quality of care, managing costs, and fundamentally reorganizing service delivery, monitoring, management and outcomes. Data will be presented on several high use/high cost and low person driven planning cases where both cost and person-centeredness have been improved. Implications for larger systems change will be discussed as well as implications for care for other aging populations.

## **SESSION 80 (SYMPOSIUM)**

### **LONG-TERM CARE SERVICE USE IN ASIAN COUNTRIES: INFLUENCE OF CULTURE ON SERVICE UTILIZATION AND HEALTHCARE OUTCOMES**

Chair: *F. Ejaz, Benjamin Rose Institute, Cleveland, Ohio*

Discussant: *K. Chee, Texas State University, San Marcos, Texas*

This symposium addresses various issues and challenges related to long-term care service use in Asian countries using data from three different research projects. The types of long-term care settings ranged from adult day care centers, "old-age" homes, and home and community-based service agencies. The methodologies used to collect data in these studies ranged from participant observations and/or in-person interviews with residents/clients, staff and available records. Dr. Balaswamy will discuss how residents of 20 "old age" homes in India perceived their health and utilized healthcare services. Residents overwhelmingly reported that access and affordability of healthcare services were major barriers. Despite these similarities, perceptions of health problems (physical/mental illnesses, disability) and quality of life differed by demographic characteristics and type of home. Dr. Liou will demonstrate how an ecological systems approach best explained how an adult day care center in Taiwan was designed and managed. Taiwanese culture and the agency's mission influenced how residents were treated, how staff dealt with them and how these influenced clients' perceived health and quality of life. Drs. Lou and Kwan will discuss the healthcare status of clients using integrated and enhanced home and community-based, and adult day care services in Hong-Kong. The study suggests that clients' healthcare needs are complex, indicating the need for on-going assessment and staff training to monitor changing needs. Drs. Ejaz and Chee will generate a discussion on the similarities and differences between the studies and how the findings can be used to influence practice and policy in Asian countries.

### **HOW A DEMENTIA CARE SETTING OPERATES AND INFLUENCES A VARIETY OF CLIENTS AND STAFF OUTCOMES IN TAIWAN**

C. Liou, *Virginia Tech, Blacksburg, Virginia*

Studies on the development, management and evaluation of care settings for clients with dementia in the United States use a holistic approach to ensure environmental safety, promote independence and address behavioral issues. However, current evaluations of dementia care settings in Taiwan have predominately focused on the physical environ-

ment and ignored using a holistic approach. This study used an ecological systems (Bronfenbrenner, 1977) approach and the concept of place (Moore, 2004) to examine one dementia adult day care center in Taiwan. Data collection methods involved participant observation, client and staff interviews, and existing records. Findings showed that the social context of Taiwanese culture, the agency's mission and the local community influenced how the center was designed and managed. These processes, in turn influenced staff attitudes and clients' perceived quality of life. Findings are useful to guide the design and development of care settings for people with dementia in Taiwan.

### **HEALTH STATUS OF COMMUNITY LONG-TERM CARE SERVICE USERS IN HONG KONG**

V. Lou<sup>1,2</sup>, C. Kwan<sup>3</sup>, *1. Department of Social Work & Social Administration, The University of Hong Kong, Hong Kong, Hong Kong, 2. Sau Po Centre on Ageing, The University of Hong Kong, Hong Kong, Hong Kong, 3. Department of Statistics and Actuarial Science, The University of Hong Kong, Hong Kong, Hong Kong*

Objective: The study examined the health status of community long-term care service users in Hong Kong. Method: A cross-sectional survey design using a structured questionnaire was utilized to collect data. The sample was recruited from three types of long-term care settings, i.e., Adult-day Care Centers, Integrated Home Care, and Enhanced Home and Community Services. A total of 808 service users participated. The mean age of the sample was 79 years old; 37% were male, 43% were widowed, and 21% were receiving social security assistance. Findings: In terms of health status, 73% had ADL impairments, 71% visual impairments, 87% cognitive deterioration, 22% depressive symptoms, 55% had oral health concern, 56% had pain experiences, and 35% medication management difficulties. Implications: The findings suggest that the healthcare needs of community long-term care service users are complex and complicated, indicating the need for on-going assessment, monitoring, and staff training to address changing needs. Acknowledgement: This study was supported by The Hong Kong Council of Social Services.

### **HEALTH AND HEALTH SERVICE UTILIZATION OF RESIDENTS IN OLD-AGE HOMES IN INDIA**

S. Balaswamy<sup>1</sup>, S. Diwan<sup>1,2</sup>, *1. Ohio State University, College of Social Work, Columbus, Ohio, 2. San Jose State University, San Jose, California*

Health problems of older persons are of major concern to society from the perspective of cost and healthcare quality of life. This cross-sectional study used mixed methods to assess the health and healthcare service utilization of residents of old-age homes in two southern cities in India. Using a list of existing old age homes, 20 old age homes were randomly selected. Between 10-20 men and women were interviewed from each selected facility to discuss their health status and healthcare utilization. Findings indicate access and affordability to healthcare are dilemmas for all residents irrespective of living in a governmental or paid old-age home. Perceptions of health problems (physical/mental illnesses, disability) differed by gender, education, religion, and type of residential facility and influenced perceived quality of life. Implications of the findings in terms of developing practical and policy-level solutions to healthcare issues will be discussed for old-age homes and governmental action.

## **SESSION 85 (SYMPOSIUM)**

### **MEDICARE-MEDICAID ENROLLEES: AN EXAMINATION OF NEW MARYLAND ENROLLEES AND PATHWAYS TO COVERAGE**

Chair: *D.C. Folkemer, The Hilltop Institute, Baltimore, Maryland*  
Discussant: *C.J. Milligan, Department of Health and Mental Hygiene, Baltimore, Maryland*

Medicare-Medicaid enrollees are more likely to be frail, have disabilities, or have multiple chronic conditions, including cognitive impair-

ments, than persons enrolled in either Medicare or Medicaid alone. Enrollees generate a disproportionate share of costs for both the Medicare and Medicaid programs. While sharing a likelihood of high health needs, they are a heterogeneous group. To better understand their diversity, this research examined the experience of Maryland enrollees before their eligibility for both programs. The research identified and cataloged significant differences between those persons who first enroll in Medicaid and then in Medicare and those who first enroll in Medicare and then in Medicaid. To gather data, researchers matched records from Maryland's MMA State File with Medicaid Eligibility and Claims files and used these records to identify demographic and programmatic characteristics of 15,654 new Medicare-Medicaid enrollees in Maryland for 2008. The researchers then applied existing Chronic Condition Data Warehouse algorithms to Medicare and Medicaid administrative files to identify chronic conditions and analyzed Medicare and Medicaid expenditures for the enrollees during the year before they became enrollees in both programs. Researchers will share the results of their analyses along with findings from a background paper about pathways to eligibility for both programs. The Centers for Medicare and Medicaid Services will offer context and background for the research presentations through an overview of their current initiatives focused on persons eligible for both programs. Maryland's Deputy Secretary for Health Care Financing will talk about the federal and state policy implications of the research.

#### **MEDICARE-MEDICAID COORDINATION OFFICE OVERVIEW**

S. Donovan, *Centers for Medicare & Medicaid Services, Baltimore, Maryland*

The Medicare-Medicaid Coordination Office, established by the Affordable Care Act, will describe its current efforts to ensure full access to seamless, high quality health care and to make the system as cost-effective as possible. The office works with the Medicaid and Medicare programs, across Federal agencies, and with States and stakeholders to align and coordinate benefits between the two programs effectively and efficiently. It partners with States to develop new care models and improve the way Medicare-Medicaid enrollees receive health care. The office will describe its work on a variety of initiatives to improve access, coordination and cost of care for Medicare-Medicaid enrollees in the following areas: program alignment, data and analytics, and models and demonstrations.

#### **PATHWAYS TO MEDICARE-MEDICAID ELIGIBILITY: A LITERATURE REVIEW**

C.H. Woodcock<sup>1</sup>, S. Cannon-Jones<sup>2</sup>, A.M. Tripp<sup>2</sup>, B.J. Holt<sup>2</sup>, *1. Impaq International, LLC, Columbia, Maryland, 2. The Hilltop Institute, Baltimore, Maryland*

The Hilltop Institute conducted a literature review to identify pathways to Medicare-Medicaid eligibility. The review described the various pathways; presented examples of programs aimed at delaying functional decline and/or poverty, and reviewed enrollment barriers faced by individuals who need both Medicare and Medicaid coverage. The review found pathways to Medicare-Medicaid eligibility are dependent on a complex interplay of age, health, disability, and socioeconomic status, as well as an intricate web of eligibility requirements, application procedures, and waiting periods. The review includes recommendations for policy changes.

#### **NEW MEDICARE-MEDICAID ENROLLEES IN MARYLAND: DEMOGRAPHIC AND PROGRAMMATIC CHARACTERISTICS**

A.M. Tripp<sup>1</sup>, K.E. Johnson<sup>2</sup>, D.C. Folkemer<sup>1</sup>, I. Stockwell<sup>1</sup>, *1. The Hilltop Institute, Baltimore, Maryland, 2. National Quality Forum, Washington, District of Columbia*

This study focused on persons in Maryland who became Medicare-Medicaid enrollees in 2008. The research compared and contrasted char-

acteristics of enrollees in both programs with particular attention to identifying differences among various groups. Using matched Medicare and Medicaid records, this research provides detailed demographic and programmatic information about 15,654 persons who acquired dual status in 2008. Approximately 42 percent of these individuals were enrolled in Medicaid first, nearly 56 percent were initially enrolled in Medicare, and 2 percent enrolled in both programs at the same time. Persons initially enrolled in Medicaid are younger and more likely to be non-white and have incomes below poverty than those first enrolled in Medicare. Institutional residence is an important characteristic of persons who first enroll in Medicare and then become eligible for both programs. The study suggests highly individualized interventions will be necessary to manage conditions and circumstances associated with dual status.

#### **NEW MEDICARE-MEDICAID ENROLLEES IN MARYLAND: PRIOR MEDICARE AND MEDICAID RESOURCE USE**

I. Stockwell, *The Hilltop Institute, Baltimore, Maryland*

Researchers examined chronic disease patterns and prior health care expenditures of persons who in 2008 began to receive coverage from both Medicare and Medicaid. The study identified disease characteristics or spending patterns predating enrollment in both programs that could inform service use after enrollment in both programs. Findings identified chronic conditions based on existing condition flags. The three most common were diabetes, ischemic heart disease, and depression. Per member per month costs for persons first on Medicaid and persons first on Medicare were fairly similar, with the Medicare-to-Medicaid group having a \$2,228 PMPM and the Medicaid-to-Medicare group having a \$2,820 PMPM. There were differences in covered services and the distribution of spending between the two groups. This review of health status and Medicare or Medicaid expenditures of individuals before their enrollment in both programs can inform studies of spending patterns and health status for persons subsequently enrolled in both programs.

### **SESSION 90 (SYMPOSIUM)**

#### **MOVING BEYOND TRADITIONAL GERIATRIC ASSESSMENT**

Chair: *S.M. Geron, School of Social Work, Boston University, Boston, Massachusetts*

Co-Chair: *H.Q. Kivnick, University of Minnesota, Minneapolis, Minnesota*

Discussant: *R. Applebaum, Miami University, Oxford, Ohio*

Recent researchers have made great strides in assessing the capacities, attributes, and resources of older adults. Measuring even basic constructs like physical functioning and depression has received renewed attention, and significantly improved tools have become available. At the same time, advances in scoring and data-gathering technology have increased the efficiency of assessment for determining service eligibility, need for long-term living supports and services, and diagnostic conditions. Greater assessment precision has improved our ability to make risk adjustments, refine payment approaches, increase care quality, and more. But these improvements have, paradoxically, highlighted shortcomings in traditional geriatric assessment. This symposium will explore these limitations, driven by the observations that: 1) while the ultimate goal of most geriatric assessment may be broadly construed as improved services and care for older adults, actual connections between assessment and care may be indirect, imperceptible, or nonexistent; 2) established assessment tools may fail to capture the older adult's own experience of conditions being assessed; and 3) strength-based approaches are often overlooked in existing assessments of deficits and disorders. This symposium will review the strengths and weaknesses of existing geriatric assessment approaches, and will present research introducing

the potential of new approaches — considering both process and content. The primary issues addressed include: 1) increasing direct benefits to the older adults being assessed; 2) measurement challenges to developing more clinically useful assessments of older adult strengths and capacities for meaningful engagement; and 3) the importance of including older adults' own perspectives as part of geriatric assessments.

### **THE LIMITS OF TRADITIONAL GERIATRIC ASSESSMENTS**

S.M. Geron, *School of Social Work, Boston University, Boston, Massachusetts*

The strengths and purposes of traditional purposes of geriatric assessment are well established: to identify eligibility for services; to identify needs/deficits/strengths in older adults; to diagnosis conditions; and to serve research purposes. This presentation will highlight some of the weaknesses of standardized assessments currently in use, including: a) the disconnect that frequently occurs between assessment and care; b) the weakness of traditional assessment to capture the strengths and personal experiences of older adults; c) the weakened or changed role of assessment due to emergence of consumer direction; and d) the gulf in geriatric assessment between the clinical or programmatic utility and the personal benefits to older adults. Two questions in particular will be discussed: Is there a way to increase the direct benefits to the older adults who are being assessed? Are the metrics of measurement validity and reliability inconsistent with goals of personal or therapeutic benefit?

### **NARRATIVES OF DEPRESSION AND THE CLINICAL SETTING: FINDING NEW WAYS TO CHANGE THE SCRIPT**

K. de Medeiros, *Sociology and Gerontology, Miami University, Oxford, Ohio*

Conversational exchanges between patients and professionals are governed by unspoken rules regarding appropriate behaviors and responses. Researchers or people in professional cultures (e.g., clinicians) may therefore have an inherent bias toward fitting a patient's experiences into known categories rather than exploring their potential. The purpose of this study was to explore the scripted narratives of depression interviews. Narratives of four older adults enrolled in a qualitative study on attributions of depression were examined. All participants completed the CIDI and CES-D and participated in a semi-structured interview and letter writing exercise. Results revealed that participants adhered to a "clinical script" regarding depression cause and symptoms during the formal CIDI and CES-D interview portions, but presented a different "lay" understanding of depression in the informal interviews and letter writing. Given the importance of correctly identifying and treating depression, especially in older men, findings point to the need for new ways to foster "authentic" narratives of experience rather than recounting clinical scripts.

### **VITAL INVOLVEMENT: ENRICHING GERONTOLOGICAL ASSESSMENT AND PRACTICE**

H.Q. Kivnick, C. Wells, *School of Social Work, University of Minnesota, Saint Paul, Minnesota*

As the elder population expands and diversifies, gerontologists must create new services, programs, opportunities, and supports to meet an extremely wide range of needs — including individuals' needs to contribute and to be needed. Current assessment tools and procedures utilize a narrow range of structured interactions to gather specific, standardized data corresponding to services and evaluation measures. Addressing expanding elder needs and potentials highlights limitations in the existing assessment-to-intervention-to-evaluation paradigm. E.g., person-centered approaches in care facilities and the positive effects of creative arts participation in community settings allow elders to maximize their strengths and commitments; these approaches also challenge existing measures of successful intervention. The construct of vital involvement (VI) (Erikson, Erikson, & Kivnick, 1986) provides a devel-

opmental framework for understanding the dynamics of creative, individually meaningful activity. Ongoing research is developing tools to measure individual VI as part of strength-based assessment, case planning, and evaluation.

## **SESSION 95 (SYMPOSIUM)**

### **SOCIAL SECURITY: POLITICS AND POLICY**

Chair: *J.B. Williamson, Boston Coll-Sociology, Chestnut Hill, Massachusetts*

Co-Chair: *D. Beland, University of Saskatchewan, Saskatoon, Saskatchewan, Canada*

Discussant: *F.L. Cook, Northwestern University, Evanston, Illinois*

The 2012 presidential election may well have major implications for when and how Social Security is reformed. This will be particularly true if either party controls the presidency and both houses of Congress. But are significant changes possible even if the outcome is again a power sharing arrangement between the two parties? To address these and a number of closely related policy questions we have assembled a panel of five experts. Eric Kingson will propose that progressives move beyond their current largely defensive posture and take the offensive in an effort to reform Social Security in ways that increase, rather than decrease the protection provided. Pamela Herd will follow with an assessment of the proposal to increase the retirement age. She will explore the potentially adverse consequences of such efforts with particular attention to the lower disability free life expectancies among African Americans and those with low incomes. David Ekerdt will argue that in debates over Social Security reform most policy analysts put too much emphasis on abstract statistics and too little on the moral and justice related case for social insurance using stories about specific beneficiaries. In his presentation Daniel Beland will provide an historical analysis of how the lessons from the past 30 years shaped the debate during the 2012 presidential campaign. John Williamson will conclude with a discussion of the link between the outcome of the 2012 election and the prospect for enactment of significant changes in Social Security during the next couple of years.

### **SOCIAL SECURITY: CHANGING THE NARRATIVE**

E. Kingson, *Syracuse University, Syracuse, New York*

The inability of the Supercommittee to reach agreement marked the failure of an intense and well-resourced two-year effort by conservatives and their neo-liberal supporters to achieve fast-track legislation that would roll back and possibly radically alter Social Security protections. During this time, Social Security advocates have been on the defense, as they were in 2004-5 (Bush partial privatization effort), 1998, and arguably before that. To prepare for the 2012 "lame duck" session and to lay the foundation for improvements 5, 10 or 15 years from now, many advocates have concluded that it is important to move from defense to offense: to develop a narrative, messages, and strategies that advance a progressive agenda to strengthen and, eventually, expand Social Security protections for today's working persons and their families. This presentation will further describe the need for as well as the intellectual and strategic elements of a progressive strategy.

### **HEALTH INEQUALITIES: A CENTRAL CHALLENGE TO RAISING THE RETIREMENT AGE**

P. Herd, *UW-Madison, Madison, Connecticut*

The debate on retirement age has largely emphasized average increasing life expectancy as a rationale for why individuals should work longer and retire later. But what is generally unacknowledged in current policy debates is nearly three decades of research documenting the fact that the benefits of increased life expectancy have not accrued evenly across the population. Not only do African Americans, those with low educational attainment and low incomes face a short life expectancy, they also have fewer years of disability free life expectancy. In short, they expe-



rience the onset of ill health and disability at much younger ages than do whites and those with higher educational attainment and income. And while there is some evidence that rates of general disability among the older population declined in the 1990s and early 2000s, there is also evidence that gaps in disability prevalence by educational attainment grew.

### **TALKING SOCIAL SECURITY: STORIES BEFORE STATISTICS**

D. Ekerdt, *Univ of Kansas, Lawrence, Kansas*

Anyone conversant with such items as these—2.22% of taxable payroll, 2036, \$110,100—is well-equipped for argumentative rhetoric about Social Security. Public discourse about the program, its features and prospects, is almost wholly conducted with numbers. Policy specialists may find these details compelling or persuasive, but the public has almost no frame of reference for appreciating them. To make the moral or communitarian case for social insurance, effective political rhetoric should bring stories about beneficiaries to the fore. Theorists Walter Fisher and George Lakoff have highlighted the limitations of reason for shifting opinion and contesting self-interest, as compared to the rhetorical power of narrative and framing. Narratives can persuade by giving people a self interest in the interests of others. Among the program's 50 million beneficiaries, advocates can find compelling, one-of-us protagonists in order to create a sense of commonality to counter individualist "money's worth" themes of the program's opponents.

### **REVISITING THE POLITICS OF SOCIAL SECURITY REFORM: LESSONS FROM THE REAGAN, CLINTON, AND W. BUSH YEARS?**

D. Bé land, *Johnson-Shoyama Graduate School of Public Policy, UNiversity of Saskatchewan, Saskatoon, Saskatchewan, Canada*

This paper offers an historical perspective on the politics of Social Security reform in the United States. More specifically, it draws lessons about the role of ideas, institutions, and actor mobilization from the political process leading to the enactment of the 1983 Amendments to the Social Security Act, and from the debate over Social Security privatization that took place during the Clinton and the W. Bush presidencies. The paper is grounded with interviews with federal policymakers as well as a survey of the available historical evidence about the role of key political actors in Social Security reform. This historical analysis is meant to shed light on the current debate on the future of Social Security, especially as it is shaped and reshaped during the 2012 presidential campaign. Campaign discussions over Social Security are analyzed in the mirror of previous presidential races from the last three decades.

### **POLITICS OF SOCIAL SECURITY: IS IT POSSIBLE THAT 2013 WILL BE A GOOD YEAR TO REFORM SOCIAL SECURITY?**

J.B. Williamson, *Boston College, Chestnut Hill, Massachusetts*

If in the 2012 election either the Democrats or the Republicans win the presidency and strong majorities in both houses of Congress, 2013 could be a year a successful effort will be made by the party in power to reform Social Security. However, the basket of reforms made is likely to differ dramatically depending on the party in power. I will focus on the more likely outcome that neither party ends up with a landslide victory. What then? I will discuss why even with that outcome, 2013 may still be a possible year for a grand compromise between Republicans and Democrats on Social Security reform. If Obama wins a deal may be possible. If a moderate Republican with a record of compromising wins, a deal may be possible; but if the Tea Party wing of the party controls, the Presidency, the House, or the Senate, a deal is very unlikely.

## **SESSION 100 (PAPER)**

### **HOUSING SERVICES AND NEIGHBORHOOD EFFECTS ON COMMUNITY DWELLING ELDERLY**

#### **LINKING AFFORDABLE SENIOR HOUSING AND COMPREHENSIVE CARE SERVICES**

C. Flores<sup>1,2</sup>, R. Newcomer, A.J. Caldwell, D. Werdegar, S.C. Tan, K. Skultety<sup>2</sup>, 1. *UC San Francisco, San Francisco, California*, 2. *Institute on Aging, San Francisco, California*, 3. *San Francisco State University, San Francisco, California*

This study investigates the first cohorts of residents in a newly opened Affordable Housing Plus Services (AHPS) model. AHPS links older residents in subsidized multi-unit housing to health and supportive services to promote aging in place. The housing complex consists of 150 apartments and two groups of residents, seniors from diverse backgrounds and of low to moderate income. One group, with significant frailty, consists of residents enrolled in a Program for All-Inclusive Care for the Elderly. The other group consists of seniors meeting age and income qualifications for housing who may or may not be utilizing long-term services and supports such as Case Management, Adult Day Services, or In-Home Supportive Services. The study groups also include comparison groups of eligible seniors not chosen for residency. Data concerning demographics, health status, service utilization, and quality of life were collected from interviews and chart review upon move-in and 6-months later. We compared types and frequencies of services before and after relocation using repeated measures least square regression for service use units and expenditures, and/or logistic regression for use/non-use comparisons of health status, service. This use and quality of life measured at admission and 6 months after relocation. The goal of this project is to advance the knowledge base about the influence of an Affordable Housing Plus Services (AHPS) model on residents' health status, service utilization and quality of life. This study was funded by the SCAN Foundation (grant #11-007).

#### **HOW DO OLDER ASIAN AMERICANS EXPERIENCE THEIR NEIGHBORHOOD? RESULTS FROM AN ACADEMIC-COMMUNITY PARTNERSHIP**

D. Nguyen, S. Park, *New York University, New York, New York*

Study aim: Social capital theory suggests increased social connections can improve health. Given the prominent role of ethnic mutual aid, we investigate the role of neighborhood characteristics and compared its association with overall health status and life satisfaction among Asian-American Older Adults. Method: This study utilized a cross-sectional, mixed method design. In partnership with community-based agencies, face-to-face or phone interviews were conducted with 121 older Asian Americans over the age of 60. A semi-structured interview was used to elicit responses to questions about housing, health and mental health, and service use. Descriptive statistics were used to explore relationships in the data. Open ended items were analyzed qualitatively by two independent coders. Results: Four major themes were emerged from the qualitative analysis: characteristics of neighbors, physical environment, convenience, and safety. Elders living in Asian neighborhoods expressed less satisfaction with their neighbors, and more uncertainty about their surroundings, but they recognized convenient living conditions including transportation and local ethnic supermarkets. Conversely, elders in non-Asian neighborhoods reported positive experiences with their neighbors, while noting the distance to ethnic supermarkets. The quantitative data showed some differences between the two cohorts. Elders in non-Asian neighborhoods endorsed more discrimination due to their English ability, and had fewer income resources than those living in Asian neighborhoods. Conclusion: These findings underscore the tradeoffs that Asian elders face when living in different neighborhoods.

Implications for elder housing policies and health promotion efforts will be described.

### **SYSTEMATIC IDENTIFICATION OF NATURALLY OCCURRING RETIREMENT COMMUNITIES (NORCS) IN OHIO**

M. Rivera-Hernandez, T. Yamashita, S. Kunkel, *Gerontology*, Oxford, Ohio

The term “Natural Occurring Retirement Communities” (NORCs) was first introduced in the 1980s by Michael Hunt, based on his observation of unusually large proportions of older populations in certain neighborhoods. NORCs are unplanned communities with large numbers of residents 60 years and older relative to younger residents (Hunt, & Ross, 1990). Arguably, such communities may face unique challenges and increasing needs/services for older adults. While NORCs have been observed rather sporadically in individual communities, little is known about how NORCs are spatially distributed across large geographical areas. Using GIS, this study systematically identified temporal trends in the emergence and stability of NORCs during the last decade in Ohio. Data are derived from the U.S. census 2000 and 2010 for all Ohio census tracts. Information regarding proportions of older house-owners/renters was visualized and color-coded in time-series thematic maps. Following the definition by the federal government, census tracts with 40% or greater older population are considered as NORCs. Results show that NORCs are consistently observed in urban areas (i.e., Cincinnati, Columbus, Cleveland and Toledo) and their surrounding areas. At the same time, more widely dispersed NORCs are identified across rural areas. In addition, distinctive temporal patterns of NORCs (i.e., consistent, emerging, disappearing over time) between 2000 and 2010 are evident from visual examinations of time-series maps. Using the methods and results from this study, systematic identification strategies for NORCs using GIS and policy implications (e.g., healthcare and social services allocation) are discussed.

### **BRINGING THE CARE HOME: A REVIEW OF FACTORS INFLUENCING THE UTILIZATION OF HOME AND COMMUNITY BASED LONG-TERM CARE AND IMPLICATIONS TO THE NURSING WORKFORCE**

P. Rosenfeld, D. Russell, *Center for Homecare Policy & Research, VNSNY, New York, New York*

Over the past several decades, home and community based services (HCBS) have played an increasingly important role in providing care to patients with complex health problems and functional impairments, and in enabling patients to remain independent in their own homes. This presentation will describe developments in U.S. health care policy during the past three decades that have led to increases in demand for and utilization of home and community-based health care, including the introduction of Medicare Prospective Payment System, the Supreme Court’s Olmstead decision, and the increased role of Medicaid Waivers to support non-institutional long term care. Increased focus on home and community based services provides important opportunities for nurses to practice independently. However, despite the clear growth in non-institutional long-term care, data gleaned from four iterations of the Sample Survey of Registered Nurse (1996-2008) produced little evidence that the nursing workforce, or the education of nurses, has responded adequately to these trends. The data suggests that RNs working in home and community based programs are statistically different than their counterparts in hospitals or nursing homes regarding both demographic and employment characteristics. The presentation concludes with recommendations for policy-makers and nursing leaders in education and service to consider in rebalancing the education and preparation of RNs to meet the growing demand in home and community based settings.

## **SESSION 105 (SYMPOSIUM)**

### **AFFECTIVE EXPERIENCES THROUGHOUT ADULTHOOD: FACETS AND PROCESSES**

Chair: M. Riediger, *Max Planck Research Group “Affect Across the Lifespan”, Max Planck Institute for Human Development, Berlin, Germany*

Co-Chair: A. Rauers, *Max Planck Research Group “Affect Across the Lifespan”, Max Planck Institute for Human Development, Berlin, Germany*

Discussant: S. Neupert, *NC State University, Raleigh, North Carolina*

Adult-age differences in emotional processes are a popular topic in current lifespan research. Yet many important questions still need to be answered. For example, do age differences in emotional experiences and reactivity hold across different distinct emotions? Do they vary across experiential and physiological dimensions of affective experience? What are the underlying mechanisms? This symposium will present recent conceptual and methodological advances concerning these questions. Contributions will address age differences in psychological and physiological facets of emotional functioning, using a wide range of methods, including assessments in daily-life and in well-controlled experimental settings; as well as explicit and implicit measurement approaches. Antje Rauers and colleagues will present evidence that subjective emotional reactivity to film clips eliciting a large number of distinct emotions increases from adolescence to old age for many, but not all, emotions. Ute Kunzmann and Thomas will present convergent evidence from explicit self-reports of daily emotional experience and from implicit association tests that age differences in emotional experience vary across the discrete emotions of sadness and anger. Martin Sliwinski will further demonstrate the fruitfulness of contextualizing emotional experience in participants’ daily lives for understanding age differences in affective experiences. Jennifer Piazza and colleagues will combine evidence from diary assessments and from analyses of ambulatory hormone samples to demonstrate age differences in the co-variation of affective and hormonal processes throughout the day. Shevaun Neupert, finally, will discuss the presented empirical results with regard to their implications for the field of emotional-aging research.

### **MORE, LESS, OR THE SAME? EMOTIONAL REACTIVITY TO 78 FILM CLIPS FROM YOUTH TO OLD AGE**

A. Rauers, M. Studtmann, M. Riediger, *Max Planck Research Group “Affect Across the Lifespan”, Max Planck Institute for Human Development, Berlin, Germany*

Emotional experiences become more positive with age. Age differences in responses to emotional events may contribute to this pattern. To investigate this possibility, past studies have used film clips as standardized emotional events. These studies have yielded mixed findings regarding age effects in emotional reactivity. Reasons for this inconsistency could have been the limited numbers of film stimuli, emotions, and age groups under study. We investigated emotional reactivity to a large number of film stimuli across a wide age range. Ninety-nine participants aged 12-80 years watched 78 film clips and rated how happy, amused, disgusted, fearful, sad, angry, or neutral they felt. Results indicate an age-related increase in emotional reactivity to film clips eliciting happiness, fear, sadness, and anger; but age invariance in reactions to neutral, disgusting, and amusing clips. We discuss the implications of these findings for understanding and studying age differences in emotional reactivity.

### **AGE AND NEGATIVE AFFECT: THE DISCRETE EMOTION MAKES A DIFFERENCE**

U. Kunzmann, S. Thomas, *University of Leipzig, Leipzig, Germany*

Age differences in anger and sadness were explored, focusing on the intensity and frequency of these experiences in everyday life and their implicit associations with the self. 96 young and older adults partici-

pated in the Day Reconstruction Method, in which emotional experiences on a typical day were recorded, and in two implicit association tests, in which implicit self-concepts for anger and sadness were assessed. Older adults experienced anger less frequently and less intensively than young adults did, but there were no age differences in sadness. In comparison with their younger counterparts, older adults showed a greater IAT effect in the implicit anger test, suggesting a weaker association between the self and anger, but there were no age differences in the implicit sadness test, suggesting age-invariant associations between the self and sadness. Together, these findings suggest multidirectional age differences in negative affect and support the usefulness of a discrete emotions approach.

#### **AFFECT AND CORTISOL: AGE MATTERS**

J.R. Piazza<sup>1,2</sup>, S.T. Charles<sup>3</sup>, R.S. Stawski<sup>4</sup>, D. Almeida<sup>2</sup>, 1. *Department of Health Science, California State University, Fullerton, Fullerton, California*, 2. *The Pennsylvania State University, University Park, Pennsylvania*, 3. *University of California, Irvine, Irvine, California*, 4. *University of Michigan, Ann Arbor, Michigan*

The current study examined age differences in the association between daily affective experiences and diurnal cortisol among participants from the National Study of Daily Experiences (N = 1735; age range: 33-84), which is the nightly interview portion of the Midlife Development in the United States Survey. Across four consecutive days, participants reported the negative and positive affect they experienced and provided four saliva samples per day, from which cortisol was assayed. Separate models indicated that higher negative affect (NA) and lower positive affect (PA) were each associated with increased total daily cortisol output (i.e., area-under-the-curve with respect to ground; NA:  $\beta = 1.93, p < .05$ ; PA:  $-.52, p < .05$ ). Moreover, these associations became more pronounced with increasing age. Findings suggest that the link between affective states and cortisol is best understood within the context of age.

#### **EMOTIONAL COMPLEXITY AND STRESS RE-EXAMINED: RESULTS FROM ECOLOGICAL MOMENTARY ASSESSMENT DATA**

M. Sliwinski, S. Scott, *HDFS, Pennsylvania State University, University Park, Pennsylvania*

Zautra's Dynamic Model of Affect (DMA) proposes that during normal conditions, individuals process complex emotional information and experience both positive and negative affect (PA and NA), but during stress PA and NA collapse to a single dimension. DMA predicts that PA and NA will be independent in the absence of stressors and inversely related when stressors are present. We evaluate this model of emotional complexity in ecological momentary assessment data by examining both variability and covariability between PA and NA in both presence and absence of stress. Although results support a central prediction (e.g., increased negative PA-NA covariance under stress), analysis of variance components suggests that this reflects greater, not restricted emotional complexity. An implication is the possibility that PA-NA covariation indices primarily reflect variability in environmental influences rather than individual dispositions.

### **SESSION 110 (SYMPOSIUM)**

#### **BENEFITS AND COSTS OF LATER-LIFE VOLUNTEERING**

Chair: *C. Tesch-Roemer, German Centre of Gerontology, Berlin, Germany*

Co-Chair: *D. Mueller, German Centre of Gerontology, Berlin, Germany*

Discussant: *J.A. Burr, University of Massachusetts Boston, Boston, Massachusetts*

Among gerontologists, later-life volunteering has a rather positive image: It does not only serve the community, but also the individual

volunteer. In various studies it has been shown that volunteering is beneficial for a broad array of ageing well facets like subjective well-being, health, and social integration. However, also potential costs of later-life volunteering should be acknowledged. At higher ages, extensive participation could even harm the well-being of individuals. Moreover, different participation areas might have varying effects for different age groups. Furthermore, organizations play an important role in balancing costs and benefits of volunteering. These considerations raise questions about moderating and mediating factors: Who does benefit from late-life volunteering, and who does not? Which role do socio-demographic factors such as SES and ethnic minority status play? How do personal or social factors like marital status influence benefits and costs of volunteering? What is the role of organizations for the balance of individual benefits and costs of volunteering? These questions will be treated in the submitted symposium, where experts from three continents will present their findings from ten different countries.

#### **EMPIRICAL PATTERNS OF STRAINS AND BENEFITS FROM VOLUNTEERING IN LATER LIFE**

S. Hong, *Social Work, National Univ Singapore, Singapore, Singapore*

**Purpose.** To understand older adults' low participation and unsustainability in volunteering in Singapore, this study aims to (1) structure the empirical pattern of strains and benefits and (2) identify its related factors. **Methods.** One-hour face-to-face interviews were completed by 361 English-speakers aged 55+. Eleven benefit and fourteen strain indicators were measured to classify homogenous volunteers via Latent Class Analysis. As determinants, volunteers' personal characteristics, volunteer experience, and organizational facilitators were measured. **Findings.** Multiple indicators of strain and benefit signified four classes: No Interest Class[NIC] (low strains and benefits; 6.37%), Beneficial Class[BC] (lower strains and highest benefits; 22.99%), Transitional Class[TC] (moderate strains and benefits; 42.94%), and Dynamic Class[DC] (high strains and benefits; 27.70%). Furthermore, organizational facilitators and family function were significant to distinguish such patterns of volunteer strains and benefits. **Implications.** Professional volunteer management and family cooperation are critical to maximize benefits and minimize strains from volunteering in later life.

#### **COSTS AND BENEFITS OF VOLUNTEERING IN OLDER AGE IN EUROPE: ORGANISATIONAL PERSPECTIVES**

A. Principi<sup>1</sup>, R. Lindley<sup>2</sup>, J. Persek-Bialas<sup>3</sup>, G. Lamura<sup>1</sup>, 1. *Centre of Socio-economic Gerontological Research, National Institute of Health and Science on Aging (INRCA), Ancona, Italy*, 2. *Institute for Employment Research, University of Warwick, Coventry, United Kingdom*, 3. *Institute of Statistics and Demography, Warsaw School of Economics, Warsaw, Poland*

**Purpose.** Volunteering in older age is acknowledged to be beneficial at the micro (individual), meso (organizational) and macro (societal) level. The organizational level – i.e. how organizations perceive their own costs and benefits of employing older volunteers – has been so far under-investigated. **Methods.** The ASPA study identified, through 72 case studies in 8 EU-countries, advantages (e.g. in terms of older volunteers' skills, reliability and experience) and disadvantages (e.g. need to pay more attention to match older volunteers to specific tasks) of mature volunteering for organizations. **Findings.** Those organizations interested to minimize disadvantages and maximize advantages, set or planned different strategies to this aim, with quite a different impact on older volunteers, both in positive (e.g. receiving training to maintain/develop skills) and negative terms (e.g. being excluded from specific tasks). **Interpretation.** Organizations can apply strategies to influence benefits and costs of late-life volunteering on both the individual and the organizational level.

## VARIATIONS IN PERCEIVED BENEFITS OF PARTICIPATION IN VOLUNTEER AND EDUCATIONAL ACTIVITIES

J. Teufel<sup>1</sup>, J.C. Greenfield<sup>2</sup>, N. Morrow-Howell<sup>2</sup>, P. Holtgrave<sup>1</sup>, 1. *OASIS Institute, Saint Louis, Missouri*, 2. *Washington University, Saint Louis, Missouri*

**Purpose.** This study examined outcomes of participation in OASIS, a national program with a mission to engage older adults in educational and volunteer activities to enhance healthy aging. The study questions are 1) do certain subgroups of older adults benefit more from participation? and 2) do participants benefit more from educational activities or volunteer activities? **Methods.** Over 3,000 OASIS participants were queried about perceived benefits of participation, including health, emotional, intellectual, and social benefits. Multiple regression was used to test the effects of socioeconomic status, hours of participation, and type of participation. **Findings.** Older adults with lower SES and of ethnic minority status reported more benefits. Caregivers reported higher perceived benefits than non-caregivers; and volunteers reported more benefits than those who were only involved in educational activities. **Implications.** Programs could maximize the benefits of participating in volunteer activities by targeting ethnic minority older adults, lower SES older adults and caregivers.

## BENEFITS AND COSTS OF SOCIAL ENGAGEMENT: LONGITUDINAL RESULTS FROM THE GERMAN AGEING SURVEY (DEAS)

D. Mueller, J.P. Ziegelmann, J. Simonson, O. Huxhold, C. Tesch-Roemer, *German Centre of Gerontology, Berlin, Germany*

**Purpose.** Age-group differences in the relationship between social engagement (volunteering, attendance in social clubs and associations) and well-being (cognitive, emotional) were examined. **Methods.** Longitudinal structural equation modeling was used on the German Ageing Survey 2002 and 2008. 2,980 adults aged 40-81 years were divided into six age groups for multiple group analysis. **Findings.** Throughout all age groups, positive reciprocal longitudinal relationships with well-being were found for time spent in social clubs, but not for time spent volunteering. Reciprocity vanished when analyzing age differences. The longitudinal benefits of social club attendance for well-being declined with age and turned into a negative relationship from age 68 years on. Higher well-being longitudinally predicted higher social group attendance from age 61 years on. **Interpretation.** Not all forms of social participation hold longitudinal benefits for well-being. Social club attendance affects well-being more strongly than volunteering. After retirement, however, the costs of social participation become visible.

## SESSION 115 (SYMPOSIUM)

### BODY AND MIND, HEART AND SOUL: AGEING TRAJECTORIES IN THE VERY OLD FROM THE NEWCASTLE 85+ STUDY

Chair: *C. Jagger, Institute for Ageing and Health, Newcastle University, Newcastle upon Tyne, United Kingdom*

Co-Chair: *T. Kirkwood, Institute for Ageing and Health, Newcastle University, Newcastle upon Tyne, United Kingdom*

Ageing can bring changes in mental, physical and social functioning and the very old are particularly at risk. This symposium seeks to address the breadth of ageing research under the title of 'Body and mind, heart and soul', and cuts across topic areas of three GSA Sections: Behavioral and Social Sciences; Health Sciences; and Social Research, Policy and Practice. The work is from the Newcastle 85+ Study, in which a large, representative cohort (n=852; including community-dwelling and those in institutional care) all born in 1921, underwent extensive medical, biological and psychosocial assessment, with follow up at 18 and 36 months. In 'Body and Mind' we contrast the role of cognitive impairment, compared to other chronic diseases, in terms of the impact

on transitions to severe disability and death between age 85 and 90, highlighting the different experiences of men and women. 'Heart' reports the burden of cardiac dysfunction among the very old and the degree to which this was already known to the medical practitioner. Finally 'Soul' presents patterns of loneliness in the very old as they age and highlights subgroups of individuals who are at particularly increased risk.

### WHY DO OLDER MEN DIE AND OLDER WOMEN BECOME DISABLED? THE ROLE OF DEMENTIA ON TRANSITIONS TO SEVERE DISABILITY AND DEATH IN THE VERY OLD

A. Kingston<sup>1</sup>, K. Davies<sup>1</sup>, C. Jagger<sup>1</sup>, J. Collerton<sup>1</sup>, T. Kirkwood<sup>1</sup>, J. Bond<sup>2</sup>, L. Robinson<sup>2</sup>, 1. *Institute for Ageing and Health, Newcastle University, Newcastle upon Tyne, United Kingdom*, 2. *Institute of Health and Society, Newcastle University, Newcastle upon Tyne, United Kingdom*

Women live longer than men but at the expense of more years with disability. To address this we explore gender differences in the impact of diseases on transitions to disability and death in the very old. We consider eight baseline diseases (arthritis, respiratory disease, hypertension, cardiac disease, cerebrovascular disease, diabetes, cancer obtained from general practice records, dementia from the Mini-mental State Examination). Disability at baseline, 18, 36 months was classified as none/mild (problems with 0-6 IADLs/ADL), or moderate/severe (problems with 7-15 IADLs/ADLs) with death an absorbing state at 18 and 36 months. Multi-state models were fitted adjusted for comorbidity. For men and women dementia had the greatest impact on disability incidence (Hazard rate(95%CI) men:2.4(1.1-5.2), women:3.9(2.0-7.5)) and death from moderate/severe disability (men:HR=1.6(1.0-2.5), women:HR=1.6(1.1-2.3)). In women diabetes (HR=2.0(1.2-3.3) and hypertension (HR=1.6(1.1-2.4) also conferred increased risk of disability incidence. Our findings suggest the disabling effects of diseases may differ for men and women.

### CARDIAC DYSFUNCTION AMONG THE COMMUNITY DWELLING VERY OLD

J. Collerton<sup>1</sup>, F. Yousaf<sup>1</sup>, A. Kingston<sup>1</sup>, A. Kenny<sup>2</sup>, K. Davies<sup>1</sup>, L. Robinson<sup>3,1</sup>, T. Kirkwood<sup>1</sup>, B. Keavney<sup>4</sup>, 1. *Institute for Ageing and Health, Newcastle University, Newcastle upon Tyne, United Kingdom*, 2. *Newcastle Hospitals NHS Foundation Trust, Newcastle upon Tyne, United Kingdom*, 3. *Institute of Health and Society, Newcastle University, Newcastle upon Tyne, United Kingdom*, 4. *Institute of Genetic Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom*

Heart failure (HF) prevalence rises sharply among those aged 85+. Previous community-based studies of left ventricular (LV) dysfunction and HF included only small numbers in this age group. We conducted a community-based study of 376 men and women aged 86-89 years using domiciliary echocardiography to assess LV systolic and diastolic function; findings were cross-referenced to pre-existing HF diagnoses in general practice medical records. Normal LV function (ejection fraction greater than 50% and no diastolic dysfunction) was found in just 8% of participants; 32% had LV systolic dysfunction and 41% had mild and 20% moderate/severe LV diastolic dysfunction with preserved ejection fraction. 62% of those with significant LV dysfunction had limiting breathlessness. 84% of those with symptomatic significant LV dysfunction did not have a pre-existing HF diagnosis in their medical records. LV dysfunction is much commoner in 86-89 year olds than previously suggested and the majority is both symptomatic and undiagnosed.

## LONELINESS IN THE VERY OLD: PATTERNS OVER TIME

K. Brittain<sup>1</sup>, C. Jagger<sup>2</sup>, A. Kingston<sup>2</sup>, J. Collerton<sup>2</sup>, K. Davies<sup>2</sup>, L. Robinson<sup>1</sup>, T. Kirkwood<sup>2</sup>, J. Bond<sup>1</sup>, 1. Newcastle University - Institute of Health & Society, Newcastle upon Tyne, United Kingdom, 2. Newcastle University - Institute of Ageing & Health, Newcastle upon Tyne, United Kingdom

Old age is often perceived as a time in life when we feel most lonely or are most at risk of experiencing loneliness. Little is known, however, about the level of loneliness in the very old or how this changes overtime. 90% (N=764) of the Newcastle 85+ Study were living independently at baseline and over half (56%) were always or often alone though only 2% always felt lonely. However 41% reported feeling more lonely than ten years previously. Women spent more time alone than men, reported more loneliness currently and than in the past. Over the period of the study the prevalence of loneliness changed from 2% at baseline to 1.9% (18 months) and 1.3% (36 months). This presentation will further explore transitions to and from loneliness and to death in this age group over a 3-yr period alongside key life events and the sub-groups most at risk.

## SESSION 120 (SYMPOSIUM)

### CHARTING NEW FRONTIERS IN AGING FAMILY RESEARCH: ADDRESSING SOCIETAL AND FAMILIAL TRANSITIONS

Chair: V.H. Bedford, University of Indianapolis, Indianapolis, Indiana  
Co-Chair: R. Blieszner, Virginia Polytechnic Institute and State University, Blacksburg, Virginia

Five papers will address societal, familial, or personal life course transitions that have an impact on the well being of older adults; in addition, they will address how family relationships impact the quality of the transitions themselves. Presenters will identify other influences on the transitions as well, such as an increasingly diverse and older population, and describe current research addressing these transitions, including their own research. Specifically, Agree and Hughes focus on the challenges that new cohorts of old adults will face given a radical shift in what kinds of family relationships will be available, such as more former, partial, and fictive relatives. Focusing on couples, Bookwala defines the many new forms of nontraditional partnering and compares their relationships in terms of quality, satisfaction, and conflict. Carr focuses on the broader family's influence and specifically on death-related transitions. She examines the impact of the quality of these relationships on preparing for one's own end-of-life as well as one's adjustment to widowhood in particular. De Vries examines the experience of the death transition across a wide range of family relationships. He compares the grief process among them, identifying similarities and differences. Teaster et al. zero in on the vulnerabilities to abuse that aging in general and aging of disabled populations in particular are subject to and the transitions the abused person experiences on multiple levels. Each presenter will identify future research challenges and ways to address them.

### WAVES OF CHANGE: DEMOGRAPHIC TRENDS AND THE 21ST CENTURY FAMILY

E.M. Agree, M. Hughes, Johns Hopkins School of Public Health, Baltimore, Maryland

Changes in the timing of demographic events over the life course have led to increasingly complex family structures in later life. We have always known that older persons as a group are heterogeneous. Yet, in family terms, new cohorts will age with more diverse family structures and norms than ever before. Today's older adults have benefited from large numbers of children and long-term marriages. As the baby boom enters old age, the effects of the divorce revolution, serial partnerships, and lower fertility will lead to fewer traditional sources of family support (spouses and biological children), but more ex-spouses, step-child-

ren, and surviving siblings. These trends have not been equally adopted across all socioeconomic groups. In this presentation we discuss the development of this plethora of current and former relationships and the ways that research can inform policies by investigating late life well-being in different family configurations.

### EMERGING TRENDS AND A COMPARATIVE REVIEW OF COUPLE RELATIONSHIPS IN MID AND LATE LIFE

J. Bookwala, Lafayette College, Easton, Pennsylvania

Given transitions in social norms and roles, society is witnessing a growing diversity in couple relationships among middle-aged and older adults. While marriage remains the most widely prevalent type of couple relationship, cohabitational relationships, same-sex partnerships, and living apart-together (LAT) relationships in mid and late life are on the rise in the United States and Europe. This presentation will review emerging trends in couple relationships among middle-aged and older adults and provide a comparison across relationship types on the nature of the relationship and its characteristics including relationship quality and satisfaction, sexual intimacy, and disagreement and conflict; the challenges experienced in the face of life transitions such as retirement and caregiving and; differences in health and wellbeing. To conclude, the presentation will discuss the societal and clinical implications of these changing trends in couple relationships and offer suggestions for further research.

### FAMILIES AT THE END OF LIFE: HOW FAMILY RELATIONSHIPS SHAPE DEATH PREPARATIONS AND ADJUSTMENT TO LOSS

D. Carr, Rutgers University, New Brunswick, New Jersey

Death and its aftermath are shaped by and subsequently affect family relationships. Prior to death, caregiving, negotiating end of life care, and end-of-life decision making are shaped by long-standing marital and parent-child relations. Following death, the bereaved survivor's psychological adjustment is affected by warmth, support, and conflict in family relations. I use data from three surveys of older adults (Changing Lives of Older Couples, New Jersey End of Life Study, and Wisconsin Longitudinal Study) to explore the impact of positive and negative family relationship attributes on two important aspects of end-of-life experiences: preparations for one's own end of life care (via the use of living wills, health care proxy appointments, and discussions); and widowed spouses' psychological reactions to loss. I find that warm and supportive relationships do not uniformly protect against problematic end-of-life preparations and smooth psychological adjustments to widowhood. I discuss implications for research, policy, and practice.

### DEATH IN THE LATER LIFE FAMILY

B. de Vries, San Francisco State University, San Francisco, California

The study of later life families and the study of later life losses have flourished but remain largely parallel fields of inquiry, rendering our knowledge of both incomplete; after all, grief is the study of people and their most intimate relationships. Widowhood has assumed the leading role in this area, but families, in their multiple forms, suffer losses of many (and sometimes multiple) members: grandparents, grandchildren, parents, siblings, children, and chosen/fictive kin comprise a partial list. These many relationship types will be briefly highlighted informing both the particular and shared characteristics of relationships in later life families as well as the unique and shared processes of grief. Embedded in such considerations are issues of interest/relevance to many disciplines focusing on diversity (e.g., family form, relationship type and meaning), entitlements to grief (the social recognition of families and relationships), as well as grief trajectories (e.g., the recognition of growth through grief).

## ELDER ABUSE IN AGING FAMILIES IN TRANSITION: APPLICATION OF THE ECOLOGICAL MODEL

P.B. Teaster<sup>1</sup>, T. Wangmo<sup>2</sup>, F.B. Vorsky<sup>1</sup>, 1. *University of Kentucky, Lexington, Kentucky*, 2. *University of Basel, Basel, Switzerland*

By 2030, 72.1 million older adults will live in the US and represent approximately 20% of the population. Most older adults, both now and in the future, will live longer, enjoy better health, and remain independent for a longer period of time than earlier cohorts. However, some older adults will live longer with chronic illnesses. Others will experience dementia, and some may experience both maladies, all situations that may create vulnerability to abuse. Individuals with mental retardation, developmental disabilities, and mental illnesses are also living longer than ever before and present new health and social support challenges, including vulnerability to abuse. The authors discuss elder abuse from an ecological framework, with attention to incidence and prevalence, victim and perpetrator characteristics, micro- to macro-level causes, and prevention and intervention efforts. Using the framework, we explore micro and macro level transitions for abused older adults and recommend future research and collaborative efforts.

## SESSION 125 (SYMPOSIUM)

### LAWTON'S VALUATION OF LIFE: SIMILARITIES AND CULTURAL DIFFERENCES IN MEAN LEVELS AND PREDICTORS

Chair: *D.S. Jopp, Fordham University, Bronx, New York*

Discussant: *M.S. Moss, Arcadia University, Glenside, Pennsylvania*

Powell Lawton's concept of positive valuation of life (VOL; Lawton, 1999) refers to the extent to which individuals appreciate their existence and are actively attached to life. VOL is a cognitive-affective schema that integrates the positive and negative features of life and is considered important in predicting how long individuals wish to live. In recent years, the concept has been studied less frequently, despite its theoretical and empirical value. The present symposium seeks to revitalize the discussion on VOL by presenting studies from around the world that investigate VOL in old and very old age. All studies used the same questionnaire and address mean-level and predictors of VOL. At the same time, these studies employ comparable (e.g., health) as well as unique predictors (e.g., personality). Rott and colleagues present data from Heidelberg, Germany highlighting the importance of health. Oswald and colleagues offer findings from Frankfurt, Germany examining environmental aspects as predictors of VOL. Ribeiro and colleagues discuss data from Portugal, stressing the role of personality as predictors. Nakagawa and Gondo present data from Japan, showing that social and spiritual factors are strongly related to VOL. Jopp and colleagues report on findings from US centenarians, suggesting predictive value of personality and coping. Study findings will be discussed by Miriam Moss, a collaborator of Lawton involved in the development of VOL. In sum, the symposium offers recent research on the fascinating construct of VOL, and draws attention to the importance of specific predictors that may vary depending on cultural context and age.

### VALUATION OF LIFE IN THE THIRD AND THE FORTH AGE: DOES HEALTH MATTER OR NOT?

C. Rott<sup>1</sup>, D.S. Jopp<sup>2,1</sup>, U. Bullinger<sup>3</sup>, 1. *Institute of Gerontology, Heidelberg University, Heidelberg, Germany*, 2. *Fordham University, Bronx, New York*, 3. *University of Applied Sciences, Darmstadt, Germany*

Lawton conceptualized valuation of life (VOL) in sharp contrast to health related quality of life. Thus health should play no or only a minor role for VOL. Previous studies demonstrated some relation between health and VOL. Beyond that activities emerged as important predictors. A sample of 158 young-old and 142 old-old community dwelling individuals filled out the PosVOL questionnaire and various scales assessing sociodemographic, health, and activity indicators. As expected,

many individuals depicted high levels of VOL regardless of age. In the total sample, the domain-specific health model had the highest explanatory value for VOL. When including all predictor groups, health remained the strongest predictor. Again, paralleling other studies health seems to be more important than originally stated by VOL theory. Results suggest that in the young-old having a disease has an impact on VOL while in the old-old the consequences of a disease are more influential.

### VALUATION OF LIFE AND AGING IN PLACE IN VERY OLD AGE

F. Oswald, R. Kaspar, *Interdisciplinary Ageing Research, Goethe University Frankfurt, Frankfurt, Germany*

The aim of this presentation is to test the assumption that valuation of life (VOL) mediates between health and the number of desired life years in old age. Moreover, we examine the role of person-environment (P-E) exchange indicators (e.g., accessibility, neighborhood efficacy, place attachment) in this regard. Data are drawn from a survey with targeted 600 community-dwelling urban citizens (Frankfurt, Germany) stratified by age (70-79 vs. 80-89) and household composition (living alone vs. with partner). Findings indicate different relationships between perceived health (SF-12) and VOL among young-old ( $r = .30^{***}$ ) versus old-old ( $r = .41^{***}$ ) participants. Moreover, VOL appears to become relevant with respect to years of desired life only in very old age ( $r = .28^{***}$ ) and the relationship between health and VOL is moderated by place attachment. Presented data underpin the need to address VOL with respect to P-E exchange to better understand aging in place processes.

### POSITIVE VALUATION OF LIFE: POSVOL SPECIFICITIES AND PREDICTORS FOR A PORTUGUESE SAMPLE OF OLDER ADULTS

O. Ribeiro<sup>1,2,4</sup>, L. Araújo<sup>1,3</sup>, L. Teixeira<sup>1</sup>, C. Paúl<sup>1</sup>, 1. *UNIFAI / ICBAS - University of Porto, Porto, Portugal*, 2. *University of Aveiro, Aveiro, Portugal*, 3. *ESE - Instituto Politécnico de Viseu, Viseu, Portugal*, 4. *ISSSP, Porto, Portugal*

Assessing the way old people think about the value of their lives and feel attached to life is receiving an increasing scientific attention worldwide. The purpose of this study is to examine the factor structure of the Portuguese version of Lawton's positive Valuation of Life measure (VOL) and to determine the predictive role of personality, meaning in life, social resources, depression and demographic factors on VOL. A sample of 207 community-dwelling seniors aged between 65 and 96 years (mean = 77.2, SD = 7.5) were interviewed. Factor analysis on the VOL scale yielded two factors accounting for 49% of the variance, suggesting that the construct may be more complex. Regression analysis predicting the overall valuation of life score indicated that extraversion, conscientiousness, meaning of life and depression explained 57% ( $R^2=0.565$ ). Findings highlight the complexity of the construct and the importance of intrapersonal factors regarding the way people appraise their life.

### THE FACTOR STRUCTURE AND PREDICTORS OF VALUATION OF LIFE AMONG THE YOUNG-OLD IN JAPAN

T. Nakagawa, Y. Gondo, *Osaka University, Suita, Osaka, Japan*

Previous studies suggest that some facets of well-being differ in importance across cultures, and that there are both universal and culture-specific predictors of well-being. However, valuation of life (VOL) has not been examined in nonwestern cultures. The present study investigated the factor structure and predictors of VOL among the elderly in Japan. Participants were 1000 septuagenarians aged 69-72 (479 males, 521 females). They responded to a questionnaire including the 13-item positive VOL scale, sociodemographic, social, and health predictors. First, we conducted a factor analysis, and identified two factors: positive VOL and spiritual well-being. These factors related to positive mental health moderately and weakly, respectively. Second, we examined

sociodemographic, social, and health predictors for VOL. The role of social factors was stronger than that of health factors, and spiritual well-being was more related to moral or religious activities than positive VOL. These results suggest that predictors for VOL vary by culture.

#### **VALUATION OF LIFE IN CENTENARIANS: PRELIMINARY RESULTS FROM THE FORDHAM CENTENARIAN STUDY**

D.S. Jopp, M. Park, A. Cavanagh, Y. Meschian, M.M. De Feo, M.E. Paggi, S. Raghavan, R. Weiss, *Psychology, Fordham University, Bronx, New York*

Valuation of life (VOL; Lawton et al., 1999) indicates how strongly individuals appreciate their lives. The extent to which very old individuals feel that their life is worth living, and which factors contribute to this phenomenon, has rarely been investigated. This study examined personal resources (i.e., sociodemographic, social, health) and psychological factors (i.e., personality, coping) as predictors of VOL in a sample of US centenarians. Analyses were based on 58 participants of the Fordham Centenarian Study (Mage = 98; range 95-102 years). Reflecting gender-specific survival, 70% were female. Correlational analysis indicated that sociodemographic and health indicators had no relationship to VOL, social indicators had weak links. Instead, extraversion, agreeableness, positive reappraisal and religious coping predicted VOL. Findings suggest that resources such as health may become less important in very advanced age, whereas psychological factors may help individuals to maintain a high sense of value with respect to their lives.

#### **SESSION 130 (SYMPOSIUM)**

##### **SENIOR MENTORS FOR HEALTH PROFESSIONS STUDENTS: A COMMUNITY-UNIVERSITY PARTNERSHIP**

Chair: *E. Idler, Emory University, Atlanta, Georgia*

Discussant: *E. Roberts, University of North Carolina Chapel Hill, Chapel Hill, North Carolina*

Providing opportunities and encouragement for the mentoring of beginning students is an important function of most academic and professional schools. But those mentoring relationships are usually conceived of and remain within the academy. A new program at Emory University, supported by its Office of University and Community Partnerships, and the Atlanta Regional Geriatric Education Center, gives community-dwelling seniors the opportunity to form a one-on-one relationship with first-year students in the schools of nursing and medicine. There are a small number of Senior Mentor programs in medical schools around the country, but this is one of the first to take an interdisciplinary approach, involving both medical and nursing students; plans are to expand the program to include physician assistants in coming years. Students complete one module per month to frame their discussions, on topics such as health history, values, function, advance directives, social networks, and community and volunteer activities. Nursing and medical students engage with each other, within and across disciplines, by contributing to online group blogs about their experiences. Mentors are recruited from diverse neighborhoods and housing types in metropolitan Atlanta. Students visit mentors in their homes and communities, and accompany them on a visit to a physician. The relationships the students form with the mentors continue throughout their course of study, to promote a deeper sense of the continuity and multiple determinants of health and well-being than can be gained by clinical experience gained solely in acute care, outpatient, or long term care settings.

##### **PERSPECTIVES FROM THE SCHOOL OF NURSING FACULTY**

C. Clevenger, *1. Birmingham/Atlanta GRECC, Department of Veterans' Affairs Medical Center, Grayson, Georgia, 2. Emory University, Atlanta, Georgia*

Carolyn Clevenger will speak about the program's commitment to simultaneously broadening and deepening inter-professional relation-

ships and university-community relationships. She will describe the arenas where interactions take place across these divides: the face-to-face meetings the students have with the mentors; the online group blogs; and the large meetings where students from the different programs and mentors get together. She will describe initial indicators of students' attitude change and development.

##### **PERSPECTIVES FROM THE SCHOOL OF MEDICINE FACULTY**

J. Flacker, *Emory University, Atlanta, Georgia*

Jonathan Flacker will speak about the concept of seniors as mentors, the structure of the program, and the modules that have been developed. He will address the challenges in finding a place for a new program within the demands of the first-year medical curriculum, and more broadly, the place of geriatrics in medical education and the promise of senior mentor programs for making it more central.

#### **SESSION 135 (SYMPOSIUM)**

##### **TODAY'S INTERGENERATIONAL FAMILY**

Chair: *L.L. Barrett, AARP, Washington, District of Columbia*

Co-Chair: *T.A. Keenan, AARP, Washington, District of Columbia*

Discussant: *L. Morgan, University of Baltimore, Maryland, Maryland*

Our family is a key source of support and a critical factor in our identity at all ages. The purpose of this symposium is to report new and innovative research on the family in later life conducted by AARP's Health, Home and Family Strategic Issues Research (SIR) Team. Dr. Teresa Keenan begins with a review of findings from AARP's Family Study which updates and enhances our understanding of contemporary intergenerational families in the U.S. Next, Dr. Cheryl Lampkin reports on her research on modern grandparents including a snap shot of their triumphs and challenges. Finally, Dr. Linda Barrett discusses the role technology can play in keeping family members in touch with each other regardless of distance. We are especially interested in understanding how technology shapes interactions among family members and family norms that are developing as a result of technology. Moderator: PBS (TBA) Discussant Dr. Leslie Morgan, Ph.D., Co-Director Doctoral Program in Gerontology / Professor of Sociology University of Maryland, Baltimore County

##### **AARP'S FAMILY STUDY TERESA A. KEENAN, PH.D. TEAM LEAD HEALTH, HOME AND FAMILY TEAM**

*L.L. Barrett, AARP, Washington, District of Columbia*

Qualitative and quantitative results from a recent study of U.S. families will be presented in this session. With information obtained through 16 focus groups and a national survey of midlife and older adults ages 50 and older, participants will hear the latest research how satisfied individuals are with various family relationships, the ways they'd like to improve them, and the role of distance on such relationships. Participants will also learn about how family members communicate with one another and how a critical member—the family “connector”—aids in maintaining and strengthening family relationships among immediate and extended family members. After attending this session, participants will be able to: 1. Identify the family “connector” in their family 2. Have a clearer understanding of individuals' satisfaction with their family relationships 3. Understand the role of distance on various family relationships

##### **CONTEMPORARY GRANDPARENTS CHERYL LAMPKIN, PH.D., SENIOR RESEARCH ADVISOR, AARP AARP HEALTH, HOME AND FAMILY TEAM**

*L.L. Barrett, AARP, Washington, District of Columbia*

This session will highlight the results in-depth interviews with grandparents age 50+ (including those who are the primary caregivers for their

grandchildren) as well as a national survey of grandparents age 50+. Participants will hear about the latest research in the roles grandparents play in raising their grandchildren, how grandparents communicate with their grandchildren, what grandparents and grandchildren talk about and how they enjoy each other's company as well as the challenges grandparents face. After attending this session, participants will be able to: 1. Provide a snap shot of experiences, triumphs and challenges of grandparents age 50+ as described by in-depth interview participants. 2. Summarize current research on grandparents age 50+, including topics such as the importance of grandparents in family life, the types of assistance grandparents provide the extended family and the increasing role of the grandfather in raising grandchildren.

#### **CONNECTING GENERATIONS LINDA L. BARRETT, PH.D., SENIOR RESEARCH ADVISOR AARP'S HEALTH, HOME AND FAMILY TEAM**

L.L. Barrett, *AARP, Washington, District of Columbia*

In this study, we explore how on-line and social media connect family members, their concerns about internet safety, and what they wish they knew more about related to online safety. We also explore the rules families have about online communication, and how family members feel about such practices. Ultimately we look at where family members would like these practices to move in the future. AARP and Microsoft worked together to conduct qualitative focus groups and survey to study teens (13-17 years), young adults (19-25 years), adults (39-58 years) and older adults (59-75 years). The results include findings from parents and grandparents. Key results include: A large majority overall (83%), including at least eight in ten in each age group, considers going online to be a "helpful" form of communication among family members. Although more and better communication does not necessarily close the generation gap, sizable numbers say that going online actually helps them to better understand other family members or to help other family members better understand them. Respondents in all surveyed age groups cite staying in touch with friends and family they do not see regularly as their number one reason for using social networking sites. After this session, participant will be able to: 1. Describe how technology is influencing and shaping how contemporary, multi-generational families communicate. 2. Explain how different family members feel about the role of technology and how they would like to influence how other members of their family communicate with them. 3. The importance of family rules (norms) and agreements about the safe use of technology.

#### **SESSION 140 (SYMPOSIUM)**

##### **UNDERSTANDING DISPARITIES IN END-OF-LIFE AND TREATMENT DECISION MAKING AMONG DIVERSE RACE GROUPS**

Chair: *T. Baker, University of South Florida, Tampa, Florida*

Discussant: *R. Thorpe, Johns Hopkins University, Baltimore, Maryland*

The concept of treatment decision making and care at the end-of-life focuses on respect for the patient, while tending to their physical, social and emotional well-being. While there is advancing research specific to decision making with regards to end-of-life care treatment in majority populations, little is known of these views among diverse race and ethnic populations. Our speakers will discuss the connecting pathways between race, culture, psychological and social factors in treatment decision making and end-of-life care. Dr. Bronwynne Evans will discuss the influence of psychosocial, cultural and spiritual disparities in palliative and end-of-life care. Dr. Irida Carrion's presentation will explore treatment decision making among older Latino males diagnosed with cancer, and the role of culture and gender in guiding cancer treatment decisions. Dr. Monique Williams will discuss disparities in end-of-life care in dementia, with a specific focus on factors that mediate the persistence of disparities among minority patients diagnosed with

Alzheimer's disease. After attending this symposium, participants will be able to identify and explain reasons for disparities in treatment decision making and end-of-life care among diverse race and ethnic populations. The audience will also be able to understand explain the factors that impact end-of-life and treatment decision making across a continuum of chronic-related illnesses among diverse race and ethnic groups.

##### **OLDER LATINO MEN WITH CANCER: A STUDY OF THEIR TREATMENT DECISIONS**

I.V. Carrion<sup>1</sup>, F. Nedjat-Haiem<sup>2</sup>, D.X. Marquez<sup>3</sup>, *1. Social Work, University of South Florida, Tampa, Florida, 2. VA Greater Los Angeles Healthcare System, Los Angeles, California, 3. University of Illinois at Chicago, Chicago, Illinois*

Latinos account for 22.5% of the population in Florida of which 19.2% are foreign born (FB). Addressing the health disparities and oncology needs of older FB Latino men diagnosed with cancer residing in Central Florida is essential, given the increased population and the urgency to provide effective cancer care. This study explored treatment decisions of 15 (FB) Latino men from Cuba, Mexico, Colombia and Venezuela diagnosed with cancer within the past five years. Data were collected using in-depth interviews, tape-recorded, transcribed in Spanish and translated into English. The median age of the participants was 55.4 years. Salient themes were derived using a grounded theoretical approach and constant comparison method. The findings support the role of culture and gender in guiding cancer treatment decisions, changing family roles due to the disease process, unknown expectations of health providers to participate in the selection of treatment options and advance care planning.

##### **A NEW FRONTIER: PSYCHOSOCIAL, CULTURAL, AND SPIRITUAL DISPARITIES IN END OF LIFE AND PALLIATIVE CARE**

B.C. Evans<sup>1</sup>, E. Ume<sup>2</sup>, *1. Arizona State University, Phoenix, Arizona, 2. Arizona State University, Phoenix, Arizona*

Although health disparities are well-documented, the extent to which they affect end-of-life care is unknown. Limited research funding leads to sparse and often contradictory palliative care literature, with few studies on causal mechanisms. This presentation will explore the extant psychosocial, cultural and spiritual health disparities in palliative care and end-of-life care, with the goal of identifying future research needs. Although little is known, minorities make little use of hospice, often because of lack of knowledge about hospice or palliative care, family-centered cultures, and preferences for more aggressive end-of-life care than hospice allows. Future research should avoid assumptions about decision-making models across minority groups; reflect the influence of socioeconomic, geographic and political contexts; and recruit adequate numbers of participants for meaningful analyses. It also should include a search for theoretical and causal mechanisms; prospective longitudinal investigations; diverse patients, conditions, contexts, and settings; methodological diversity and rigor; and interdisciplinary, culturally sensitive interventions.

##### **PERSISTENT DISPARITIES IN DEMENTIA END OF LIFE CARE**

M.M. Williams<sup>1</sup>, B. Goebel Jones<sup>2</sup>, B.L. Austin<sup>3</sup>, A.N. Dentino<sup>2</sup>, *1. Medicine/Geriatrics, Washington University, St. Louis, Missouri, 2. Texas Tech Health Sciences Center, Lubbock, Texas, 3. Barnes-Jewish Hospital, St. Louis, Missouri*

Factors that mediate the persistence of disparities in dementia end-of-life care are not understood fully. Alzheimer's disease, the most common cause of dementia, affects 5.4 million people in the United States; the prevalence is projected to increase to 13 million by 2050. Awareness of dementia as a terminal disease remains limited. Although underreported, Alzheimer's disease is the sixth leading cause of death. In



recent decades, provision of end-of-life care in the United States has improved substantially. Despite considerable improvements in end-of-life care and the increasing prevalence of Alzheimer's disease and other dementias, people with dementia have not experienced equitable advances in end-of-life care. In conjunction with the pervasive inequities observed in end-stage dementia, minority race and ethnicity present a dual disparity. Minority patients with advanced dementia are more likely to have indicators of suboptimal end-of-life care including tube feedings, lack of advance directives, and terminal hospital admissions

## SESSION 145 (PAPER)

### AFFECT AND AGING

#### FROM STATIC TO SIGNAL: EXAMINING THE SOCIAL PATTERNING OF INTRINDIVIDUAL VARIABILITY IN TRAJECTORIES OF DEPRESSIVE SYMPTOMS AMONG ADULTS AGED 50 AND OVER

J. Lin, J. Kelley-Moore, *Case Western Reserve University, Cleveland, Ohio*

Intraindividual variability in trajectories of health in later life constitutes a key source of information on patterns of health and aging. Yet scholars have largely missed the opportunity to discover important social dynamics that govern these variations, mainly due to standard practice in both conceptual framing and statistical analysis of such trajectories. Age effects in trajectory models are often presumed to represent biological aging, rendering socially-produced patterns to organismic processes. A methodological tradition that focuses exclusively on the population mean trajectory relegates intraindividual variability over time to random errors which further reinforces an ontogenetic assumption to age-related change. Using 8 waves of data from the Health and Retirement Study (1994-2008), we estimate trajectories of depressive symptoms (CESD-8). A substantial amount of intraindividual variability, as indicated by level-1 residuals in multilevel mixed models, is present and heteroscedastic. Further, this variability is significantly associated with a variety of social indicators. Women, those who have ever applied SSI/SSDI, and those with more chronic conditions have greater intraindividual variability in depression over time. On the other hand, those with more education and household wealth are less variable over time. The social patterning of intraindividual variability is indicative of mechanisms that influence late-life health outcomes operating at the individual rather than the group level. Such patterning also weakens the explanatory power of chronological age in long-term health changes. Our findings suggest that intraindividual variability should be considered systematically as manifestations of structural forces that organize human aging, rather than presumed "static" in the investigations.

#### AGE DIFFERENCES IN POSITIVE AND NEGATIVE AFFECT AMONG OLDEST-OLD ADULTS: FINDINGS FROM THE GEORGIA CENTENARIAN STUDY

J. Cho<sup>1,2</sup>, P. Martin<sup>3</sup>, M.G. Ory<sup>2</sup>, L. Poon<sup>4</sup>, *1. Scott & White Healthcare, Temple, Texas, 2. School of Rural Public Health, Texas A&M Health Science Center, College Station, Texas, 3. Iowa State University, Ames, Iowa, 4. University of Georgia, Athens, Georgia*

**Background.** The developmental adaptation model (Martin & Martin, 2002) provides insights into how current experiences and resources (proximal influences) and past experiences (distal influences) contribute to outcomes (well-being) in later life. Applying this model, this study examined significant proximal and distal influences for positive and negative affect among oldest-old adults, examining age differences. **Methods.** Data from 306 octogenarians and centenarians who participated in Phase III of the Georgia Centenarian Study were used. Proximal influences included physical functioning, cognitive functioning, self-rated health, number of chronic conditions, social resources, and perceived economic status; distal influences included education, social

activity experiences, management of personal assets, and other learning experiences. Analysis of variance and block-wise regression analyses were conducted. **Results.** Octogenarians showed significantly higher levels of positive emotion than centenarians,  $F(1, 169) = 9.63, p < .01$ . Cognitive functioning was significantly associated with positive affect ( $\beta = .27, p < .05$ ) and number of chronic conditions was significantly associated with negative affect ( $\beta = .25, p < .01$ ) after controlling for gender, ethnicity, and residence. Furthermore, there were significant interaction effects between age and cognitive functioning ( $\beta = -.84, p < .000$ ), between age and physical functioning ( $\beta = -.49, p < .05$ ), between age and number of chronic conditions ( $\beta = .62, p < .01$ ), and between age and learning experiences ( $\beta = .39, p < .05$ ) for positive affect. **Conclusion.** Findings suggest that it is important for researchers and practitioners to consider both proximal and distal influences for improving the quality of life in very old age.

#### TRENDS IN DEPRESSIVE SYMPTOM BURDEN AMONG OLDER ADULTS IN THE UNITED STATES FROM 1998 TO 2008

K. Zivin<sup>1,2</sup>, P. Pirraglia<sup>4</sup>, R.J. McCammon<sup>3</sup>, K.M. Langa<sup>3</sup>, S. Vijan<sup>3,2</sup>, *1. University of Michigan Department of Psychiatry, Ann Arbor, Michigan, 2. Department of Veterans Affairs, HSR&D/SMITREC, Ann Arbor, Michigan, 3. University of Michigan Department of Internal Medicine, Ann Arbor, Michigan, 4. Department of Veterans Affairs, Providence, Rhode Island*

**Background:** Whether the prevalence of depressive symptoms among older adults has decreased concurrently with expanding diagnosis and treatment is unknown. **Objective:** After attending this activity, participants will know about trends in depressive symptoms between 1998 and 2008 in a nationally-representative sample of older adults. **Methods:** We performed a serial cross-sectional analysis of depression symptom burden among Health and Retirement Study respondents using six biennial survey waves. The eight-item Center for Epidemiologic Studies Depression scale (CES-D8) assessed depressive symptoms; multivariable logistic regression analyses controlled for demographic and clinical characteristics of the study sample (N=90,024). The primary predictor of interest was year, which could capture depressive symptom trend. We repeated the analysis including an age-by-year interaction term to test whether trend was age-dependent. **Results:** There was a 7% decrease in odds of an elevated depressive symptom burden (CES-D8 of 4+) over the ten-year period (adjusted odds ratio: 0.93, 95% CI 0.86, 0.99) across all age groups. The addition of the age-by-year interaction terms demonstrated a significantly greater rate of decline in symptom burden over the study period among ages 65-74 and 80-84 compared to the change observed in those aged 55-59. **Conclusions:** We observed a significant decline in odds of elevated depression symptom burden from 1998 to 2008 in older adults in the US. This change appeared to be driven by greater declines in depressive symptoms in the oldest old. This suggests an age-dependent downward trend in depressive symptom burden, extending previous findings of increased depression treatment over time among older adults.

#### DEPRESSION IN MODERN TIMES: EFFECTS OF MODERN COMMUNICATION TECHNOLOGY ON DEPRESSIVE SYMPTOMS AMONG THE JAPANESE ELDERLY

Y. Minagawa<sup>1,2</sup>, Y. Saito<sup>2</sup>, *1. Sociology, University of Texas at Austin, Austin, Texas, 2. Nihon University, Tokyo, Japan*

Drawing on the well-established literature on the health effects of social integration, this paper examines how the use of information and communication technologies (ICTs) – computers and cell phones – are associated with the levels of depressive symptoms among older adults aged 65 and over in Japan. Results are based on ordinary least square (OLS) regression analyses of data from the Nihon University Japanese Longitudinal Study of Aging (NUJLSOA). Although the use of computers is related to lower levels of depressive symptoms, controlling for

socio-demographic and health factors wipes out the effects. On the other hand, cell phone usage's protective effects against depression persist despite controls for all the covariates among men and women. Moreover, the impact of using cell phones is not explained by social relationship measures, suggesting that cell phone use exerts influences on the mental health status of the Japanese elderly that are independent from their levels of social integration. More research and policy attention should be given to identifying the wide range of social factors which promote the health status of the Japanese elderly.

## SESSION 150 (SYMPOSIUM)

### CARE PROVISION IN SMALL-SCALE, HOMELIKE LONG-TERM CARE SETTINGS – IMPACT ON RESIDENTS OUTCOMES

Chair: *J. Gräske, Alice Salomon University of Applied Sciences Berlin, Berlin, Germany*

Co-Chair: *E. van Rossum, Maastricht University, Maastricht, Netherlands*

Discussant: *M. Boltz, New York University, New York, New York*

Providing person-centered care for persons with dementia (PwD) in a small-scale and homelike setting is a worldwide trend. Staff play key roles in improving PwDs health related outcomes and quality of life (QoL). Small-house long-term care arrangements are homelike, and care is oriented on residents needs and choices. This symposium provides an overview of various international small-scale long-term care arrangements, focusing on staff and their impact on residents health related outcomes. Presenters discuss organizational and staff characteristics as a way to improve care for PwD. Beside socio-demographic characteristics, attitude, empathy as well as work satisfaction and the relationship to residents QoL, need-driven behavior, satisfaction with care and psychotropic drugs are investigated. The first presenter evaluates the impact of staff attitude and empathy on residents outcomes, using data from a cross-sectional study investigating German Shared-Housing Arrangements. The second presenter addresses a study from US Greenhouse Models, in which care is delivered in response to the caregivers deep and profound understanding of who the care depended person is. This creates an environment of resident and family satisfaction. The third presenter studied the relationship between characteristics of the work environment (job demands, decision authority and social support) on psychotropic drug use and physical restraints in Dutch small-scale living arrangements. The last presentation investigates different perceptions of residents QoL by family and staff in Dutch small-scale nursing homes. It Shows, that their QoL ratings differ, which may be influenced by the degree of small-scale homelike care provision.

### ATTITUDE AND EMPATHY OF PRIMARY CAREGIVERS IN GERMAN SHARED-HOUSING ARRANGEMENTS – RESULTS FROM THE WGQUAL STUDY

*J. Gräske, S. Meyer, A. Worch, K. Wolf-Ostermann, Alice Salomon University of Applied Sciences Berlin, Berlin, Germany*

Objectives Care in German shared-housing arrangements (SHA) is considered to be especially person-centered. However, it is unclear, whether staffs knowledge, attitude and empathy affect outcomes of persons with dementia (PwD). Methods In a cross-sectional study, nursing staff members (NSM) of 30 SHA were examined concerning their attitude (ADQ) and empathy (JSPE) towards PwD. In addition residents' QoL (QUALIDEM) and need-driven behavior (NPI) and further secondary outcomes were evaluated. Results 130 NSM (mean age 40 years, 77.7% female) showed a moderate attitude and empathy. Attitude correlates with empathy moderately. Nurses with a longer work experience have a more positive attitude towards PwD which also leads to slightly better outcomes of residents in terms of QoL and need-driven behavior. Further results will be presented. Conclusion Caregiving is not only a

question of either attitude or profession but of sensibly combining both. Our results add new knowledge in terms of an improved dementia care.

### THE SMALL HOUSE MODEL OF CARE: BRINGING INDIVIDUALS WITH COGNITIVE IMPAIRMENT HOME

*J. Rabig, MHS Institute, Masonic Health System, Leeds, Massachusetts*

The Small House model of care is the generic name for deinstitutionalized small residential homes which may be licensed as skilled nursing homes or assisted living. The author has implemented this model in a variety of configurations including the registered trademarked Green House. These environments have as their hallmarks : small easily navigated spaces with 10 or fewer elders, and consistent, highly trained caregivers. All of the rhythms of a home are present - meal preparation, laundry, cleaning are moved from the institutional "back of the house" to within the elders space. The outcomes of this model include fewer elders who exhibit agitation, pacing and crying out and restlessness, and an environment that has been qualitatively described as calm, serene, inviting and warm. The elements of the model and the outcomes will be discussed.

### QUALITY OF LIFE IN SMALL-SCALE HOMELIKE CARE: FAMILY AND STAFF'S VIEWS COMPARED

*H. Verbeek, S.M. Zwakhalen, E. van Rossum, G.I. Kempen, J. Hamers, CAPHRI School for Public Health and Primary Care, Maastricht, Netherlands*

In Small-scale Living Facilities (SSLFs) in the Netherlands Approximately Six Residents Live Together in a Homelike Environment. Residents Are Encouraged to Participate in Normal Daily Activities and Staff is Part of the Household, Having Integrated Tasks. We Investigated Effects of the Care Environment on Quality of Life (QoL) For Residents (n=259) As Rated By Family and Staff, Comparing SSLFs With Regular Wards. Multi-level Analyses Showed That Family Caregivers in SSLFs Rated Residents' QoL Significantly Higher Than at Regular Wards Regarding Feeling at Home (p=.023), Having Something to Do (p=.018) and Social Relations (p=.020). However, Staff Ratings Were Different: Staff in SSLFs Rated Residents' QoL Higher Regarding Having Something to Do (p<.001) But Lower Regarding Negative Affect (p=.01) Compared With Regular Wards. Our Results Show That More Knowledge Is Needed On Active Ingredients of Care Settings and How They Exert Their Effect On QoL For Effective Implementation in Daily Care Practice.

### THE RELATIONSHIP BETWEEN THE PSYCHOSOCIAL WORK ENVIRONMENT IN DEMENTIA CARE AND THE USE OF PSYCHOTROPIC DRUGS AND PHYSICAL RESTRAINTS

*B.M. Willems<sup>1,2</sup>, D. Smit<sup>1,2</sup>, W. Dasselaa<sup>1</sup>, J.D. Lange<sup>1</sup>, A. Pot<sup>1,2</sup>, I. Program on aging, Netherlands institute of mental health and addiction, Utrecht, Netherlands, 2. Department of Clinical Psychology, Faculty of Psychology and Education, VU University, Amsterdam, Netherlands*

Psychotropic drugs and physical restraints are still frequently used in some living arrangements providing nursing home care for people with dementia, despite their strong adverse effects. Other living arrangements don't use or hardly use any of these methods. Staff may have an impact on the decisions to use physical or pharmacological restraints. The purpose of this study is to explore to what extent psychosocial working conditions of healthcare staff - job demands, decision authority and social support -, explain the variations in the use of a wide range of psychotropic drugs and physical restraints. Data were used from the LAD-study, including 996 healthcare workers and 1138

people with dementia in 111 arrangements in the Netherlands. Preliminary analyses showed that both high job demands and low decision authority are related to the use of more physical restraints. Low supervisor support is found to be associated with the use of more psychotropic drugs.

## **SESSION 155 (SYMPOSIUM)**

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### **NAVIGATING THE COMPETENCY MAZE: GEROPSYCHIATRIC NURSING AND INTERPROFESSIONAL COLLABORATIVE PRACTICE**

Chair: *M. Harris, Harding University, Carr College of Nursing, Searcy, Arkansas*

Co-Chair: *A.M. Mayo, University of San Diego, San Diego, California*

Discussant: *B. Buron, University of Arkansas for Medical Sciences Northwest Campus, Fayetteville, Arkansas*

A number of contemporary social, professional, and pedagogical trends are simultaneously converging and transforming health care delivery in the United States. An aging society with significant mental health needs, the dearth of geropsychiatric healthcare professionals, and demand for interprofessional mental and behavioral health programs are important factors influencing nursing education. Therefore, Geropsychiatric Nursing Competency Enhancements and Interprofessional Education Collaborative Competencies were developed to improve the mental health of older adults. The overarching goal of these competencies is to prepare students entering health care professions to effectively work together as a team with the common goal of building safer, higher quality, patient-centered systems that will meet the physical and mental health needs of older adults. The purpose of the symposium is to describe the importance and implications of incorporating the recently released Geropsychiatric Nursing Competency Enhancements and Interprofessional Education Collaborative Competencies into nursing education. We secondarily aim to provide examples of how these competencies could be applied in undergraduate and graduate classroom and clinical experiences. There is a demand for access to high quality GPN care and nurses must be prepared to meet these challenges. The transformative leadership of nursing educators to recognize, incorporate, and implement these competencies will prepare the next generation of nurses for practice.

### **GEROPSYCHIATRIC NURSING COMPETENCY ENHANCEMENTS**

*C.S. Aaron, Menmonite College of Nursing, Illinois State University, Normal, Illinois, Illinois*

The forecasted changes in the United States demographics in older adults with mental health conditions suggest an unprecedented need for all nurses to be educated to care for older adults with common psychiatric disorders. Therefore, geropsychiatric nursing competency enhancements (GPNCE) were developed for undergraduate and graduate nursing curriculum. The GPNCE are based on four domains: assessment, management, approach to older adults, and role. The purpose of this presentation is to explain the GPNCE, resources for GPNCE and geropsychiatric nursing content including the Portal of Geriatric Online Education (POGOe) website, and content mapping for smooth transitions in nursing education. After attending this session, participants will be able to discuss how to integrate GPNCE into nursing curricula.

### **CONVERGING THE GEROPSYCHIATRIC NURSING COMPETENCY ENHANCEMENTS AND INTERPROFESSIONAL EDUCATION COLLABORATIVE PRACTICE COMPETENCIES IN UNDERGRADUATE AND GRADUATE NURSING EDUCATION**

*A.M. Mayo<sup>1</sup>, M. Harris<sup>2</sup>, 1. Hahn School of Nursing & Health Science, University of San Diego, San Diego, California, 2. Harding University, Searcy, Arkansas*

An aging population presents challenges to the health care community, not the least of which is managing co-morbid complex conditions such as those in the geropsychiatric domain. It is incumbent upon the academic community to prepare skilled clinicians in interdisciplinary geropsychiatric mental health care. Using a visual model for undergraduate and graduate nursing education, this portion of the seminar will illustrate how the Geropsychiatric Nursing Competency Enhancements (GPN) and the Interprofessional Education Collaborative Practice Competencies (IPEC) converge. Strategies will be presented to address the importance of increasing awareness for needed curriculum changes, recruiting faculty champions, mentoring faculty, and identifying resources. Finally, a sample curriculum will be presented. After attending this session, participants will be able to discuss strategies for integrating GPN Competency Enhancements and IPEC Practice Competencies into a nursing curriculum.

### **ENHANCING COLLABORATIVE PRACTICE THROUGH INTERPROFESSIONAL EDUCATION COMPETENCIES**

*B. Buron, University of Arkansas for Medical Sciences Northwest Campus, Rogers, Arkansas*

Interprofessional education (IPE) is often defined as students from two or more professions coming together to learn with, from and about each other. The World Health Organization adds that IPE involves collaborating to provide "...promotive, preventative, curative, rehabilitative, and other health-related services". In 2011, following two years of collaborative work on an expert panel, six nationally recognized educational health-care associations released core competencies to guide the development of interprofessional collaborative practice. These core competencies include: 1) values/ethics for interprofessional practice, 2) roles/responsibilities for collaborative practice, 3) interprofessional communication, and 4) interprofessional team work and team-based care. The purpose of these four competencies is to direct and enhance education and professional practice among all disciplines, with the goal of working collaboratively to provide for the wellness of others. These shared interprofessional competencies promote patient-centered, culturally sensitive and outcome-driven care.

### **INFUSING GEROPSYCHIATRIC NURSING COMPETENCY ENHANCEMENTS AND INTERPROFESSIONAL EDUCATION COLLABORATIVE COMPETENCIES INTO CLINICAL EXPERIENCES**

*M.C. Balas<sup>2</sup>, M. Harris<sup>1</sup>, 1. Carr College of Nursing, Harding University, Searcy, Arkansas, 2. University of Nebraska, Omaha, Nebraska*

Nurse educators play a critical role in designing, integrating, and implementing both the Geropsychiatric Nursing Competency Enhancements (GPNCE) and Interprofessional Education Collaborative Competencies (IPECC) into theory and clinical experiences at undergraduate and graduate levels. Geropsychiatric collaborative care needs to be addressed across all settings including the community, hospital, assisted living, and nursing homes. Partnerships with deans from colleges within universities can facilitate recommendations for interprofessional education. The purpose of this presentation is to provide participants with examples of how the GPNCE and IPECC can be infused into clinical experiences on geropsychiatric units, Acute Care for Elders units, nursing homes, teaching hospitals, and simulation laboratories. Successful integration of these experiences will improve the mental health care of older adults and change the culture of practice for the next generation

of nurses. After attending this session participants will be able to identify strategies for infusing GPNC and IPECC into clinical experiences.

## SESSION 160 (SYMPOSIUM)

### QUALITY INDICATORS IN DEMENTIA CARE - AN INTERNATIONAL PERSPECTIVE

Chair: *K. Wolf-Ostermann, Alice Salomon University, Berlin, Germany*

Co-Chair: *E. Capezuti, New York University College of Nursing, New York, New York*

Discussant: *E. Tanner, Johns Hopkins University, Baltimore, Maryland*

In most parts of the world the number of older care-dependent adults with dementia is increasing rapidly. A high proportion of people with dementia are living at home in the community, and hence likely to receive formal as well as informal care. This places a great demand on developing and evaluating indicators to identify high quality care for persons with dementia in different settings and care situations. Quality indicators (QI) should be multiprofessional and focus on specific needs and care situations in order to identify best practice person-centered care. Bringing together academic researchers from multiple disciplines in the US, the Netherlands and Germany, this symposium will examine example of QI tailored to different settings and care situations. The first presentation will analyze nurses' perceptions of quality of care for people with dementia in the hospital setting in the US. The second presentation will focus on incorporating QI into primary care practice by reviewing the guidelines, recommendations, and results from two primary care settings for older persons, identifying key areas needing improvement and potential strategies to do so. The third presentation will describe the development and implementation of QI in shared-housing arrangements in Germany and relate these to health outcomes of older, care-dependent people with dementia. In the fourth presentation, we will discuss a set of unique QI that aims at assessing the quality of psychosocial dementia care and will assist dementia care professionals to individualize and tailor psychosocial interventions.

### CAN QUALITY OF LIFE BE IMPROVED BY ENHANCING QUALITY OF CARE? - RESULTS FROM A STUDY ON QUALITY INDICATORS FOR PEOPLE WITH DEMENTIA LIVING IN GERMAN SHARED-HOUSING ARRANGEMENTS

*K. Wolf-Ostermann, S. Meyer, A. Worch, J. Gräske, Alice Salomon University, Berlin, Germany*

Objectives Quality indicators (QI) concerning the care of people with dementia in German shared-housing arrangements (SHA) are missing. It is unclear if a guided quality development process in SHA leads to better health outcomes and quality of life (QoL) of residents. Methods Using a longitudinal cluster-randomised design, residents of 36 SHA in Berlin/Germany were surveyed for one year, half of them undergoing a guided quality development process. We developed and examined QI for SHA and surveyed health outcomes/QoL of residents. Results Residents in SHA are mostly female (73%) with a mean age of 79 years, living in SHA for nearly three years on average. No statistically significant differences between intervention and control group could be established at baseline. Further results will be presented. Conclusion The study results will add some clarification as to whether or not claims of improvement of health outcomes/QoL in SHA due to quality development processes are viable.

### INCORPORATING DEMENTIA QUALITY INDICATORS INTO PRIMARY CARE PRACTICE

*P.D. Sloane<sup>1</sup>, D.I. Kaufer<sup>1</sup>, C. Lathren<sup>1</sup>, M. Dulin<sup>2</sup>, 1. Family Medicine, Univ North Carolina Chapel Hill, Chapel Hill, NC, North Carolina, 2. Carolinas Medical Center, Charlotte, North Carolina*

A document from the Physician Consortium for Performance Improvement of the American Medical Association recommends that primary care providers of persons with dementia document performance in 10 domains, including cognitive and functional assessment, staging, neuropsychiatric symptom assessment and management, depression screening, caregiver education and support, and counseling regarding safety, driving risks, and advance care planning / palliative care. A quality improvement program addressing these domains should conduct an assessment of current practice, recommend changes in practice systems that will enhance performance, implement the changes, and re-evaluate performance. This presentation will review the guidelines, recommendations, and results from two primary care settings for older persons, identifying key areas needing improvement and potential strategies to do so.

### NURSE PERCEPTIONS OF QUALITY OF CARE FOR PEOPLE WITH DEMENTIA IN US HOSPITALS

*E. Capezuti, M. Boltz, L. Denysyk, J. Shuluk, L. Wagner, New York University College of Nursing, New York, New York*

Cognitive impairment (CI), whether due to dementia and/or delirium, can complicate the hospital stay of older patients. This secondary analysis examines nurse perceptions of the specialized needs of hospitalized persons with dementia (PWD) and other forms of CI. The sample of US nurses (N= 6,429; x age=43.31, x=15.97 years of experience) from 46 hospitals, completed the Geriatric Institutional Assessment Profile (GIAP) between January and June 2011 prior to implementation of NICHE (Nurses Improving Care for Healthsystem Elders). Among 3,139 nurses who responded to an open-ended question regarding pressing issues in their work, 19% (n=575) specifically addressed dementia, delirium and related behavioral issues. Many recognized the added complexity of these patients ("acuity of caring for the confused"), including the need for specific resources and sensitive, well-trained staff. Barriers to quality care included overuse of sedatives, lack of baseline mental status, absent familial support, and ethical dilemmas related to treatment decisions.

### QUALITY INDICATORS ON PSYCHOSOCIAL DEMENTIA CARE

*M. Vernooij-Dassen<sup>1,2</sup>, E. Vasse<sup>1</sup>, A. Spijker<sup>1</sup>, N. Vries<sup>1</sup>, R. Koopmans<sup>1</sup>, L. Schoonhoven<sup>1</sup>, 1. Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands, 2. Kalorama Foundation, Nijmegen, Netherlands*

Objectives Quality indicators (QIs) are measurable key elements of care. The objective is to develop and evaluate quality indicators to assist dementia care professionals to individualize and tailor psychosocial interventions. Methods Search on literature, dementia guidelines and sets of quality indicators on psychosocial dementia care; development of a set of potential quality indicators by a multidisciplinary panel (n=7); panel of healthcare inspectors (n=7) to achieve content and face validity; Consensus conference meeting of the two panels to discuss measurability and applicability of the QIs. Results Consensus has been reached on a set of eight QIs. They include psychosocial care (treatment of behavioural symptoms, individual care plans for patients and their carers) and organisation of care (case-management, education of professionals, and professional collaboration). Conclusion QIs provide simple guidance in complex care. They can be used as outcome measures in psychosocial intervention studies.

## SESSION 165 (SYMPOSIUM)

### SAFETY AND SECURITY FOR OLDER ADULTS: ARE WE CREATING UNINTENDED FEAR?

Chair: *E. Galik, University of Maryland, Baltimore, Maryland*  
Co-Chair: *B. Resnick, University of Maryland, Baltimore, Maryland*  
Discussant: *K.K. Mangione, Arcadia University, Glenside, Pennsylvania*

Every year, one in three older adults experiences a fall. While it is critical to continue to work towards fall prevention, careful consideration has to be given to how health care providers respond to falls and how we work with older individuals and their caregivers in fall prevention. In response to an increased focus on safety, nurses and other health care providers are all the more focused on “watching over” patients to protect them from falls and other adverse events. The response to this focus is a tendency to encourage what are believed to be risk-free activities such as staying in bed, using a urinal versus walking to the bathroom, providing activities for long term care residents that are in the seated position only, and limiting recommendations for engagement in physical activity. This type of protective, custodial, task oriented care facilitates functional decline, decreases physical activity and contributes to deconditioning and disability. Conversely, care by the interdisciplinary team in which older individuals are taught, cued, positioned, and helped to perform functional tasks as independently as possible and encouraged to engage in physical activity across all settings is what is needed to optimize clinical outcomes. This symposium will provide a review of five different studies that demonstrate the association between falls and function and the devastating impact of fear of falling on function and physical activity and show that implementation of a function focused care approach versus a solely safety focused approach maintains and improves function and does not increase falls.

### FEAR OF FALLING CONTRIBUTES TO DISCHARGE FUNCTIONAL STATUS IN HOSPITALIZED OLDER ADULTS

M. Boltz<sup>1</sup>, B. Resnick<sup>2</sup>, *1. New York University, New York, New York, 2. School of Nursing, University of Maryland, Baltimore, Maryland*

A secondary analysis of data used to evaluate function-promoting activity in the acute care setting examined the impact of fear of falling upon discharge functional status in hospitalized older adults. In a sample of 168 patients  $\geq$  age 70, 62% (n = 104) rated fear of falling as “2” or more on scale of 0 to 4 with 4 being the most fear. Further, 54% (n=90) did not return to baseline function. Stepwise multiple regression showed that controlling for age, baseline ADL, admission ADL, and having a prior fall, fear of falling influenced discharge functional status ( $t=-2.6$ ,  $p=0.01$ ). Interviews with participants described the following factors as issues influencing fear of falling: a) intrapersonal (symptoms of the acute illness, fear, depression); interpersonal (staff and family engagement); the physical environment, and institutional policy that limited physical activity. Future research should investigate approaches that address these factors in tandem with individualized function-focused interventions.

### FALLS, FUNCTION AND SAFETY IN NURSING HOME RESIDENTS WITH DEMENTIA

E. Galik, B. Resnick, *School of Nursing, University of Maryland, Baltimore, Maryland*

The purpose of this study was to consider the relationship of physical and psychosocial variables on falls among 103 nursing home residents with dementia. The majority of residents were female (77%), black (65%), and not married (85%). The average age was  $83.74 \pm 9.97$  and MMSE was  $8.71 \pm 4.02$ . A total of 27(26%) of the participants had at least one fall over three months. Five individuals (19% of all falls) sustained injury associated with the fall and 5 individuals were sent to the emergency room due to the fall. Based on a multivariate analysis of variance and controlling for gender, cognition and race, there were significant

differences among fallers versus non-fallers. Fallers had worse underlying physical capability, more agitation, lower functional abilities, and were more sedentary compared to those who did not fall. Fall prevention should focus on increasing physical activity and functional activity and on decreasing the associated psychological symptoms of dementia.

### FALLS EFFICACY AFTER TREADMILL TRAINING IN STROKE

M. Shaughnessy, K. Michael, *School of Nursing, University of Maryland, Baltimore, Maryland*

Stroke survivors with hemiparesis are at high risk for falls due to central and peripheral balance disturbances, and may consequently self-limit ambulatory activity to mitigate fall risk. This study reviewed falls efficacy scale data in 64 stroke survivors randomized to either a 6-month treadmill training program or a stretching program. Lower scores indicate increased confidence in ability to navigate ambulatory challenges safely. Generalized estimation equations were used to compare difference in treatment groups over time. Controlling for baseline differences, the stretching group dropped from a mean of 16.39 (SD  $\pm 1.61$ ) to 12.18 ( $\pm 0.97$ ) and the treadmill group dropped from a mean of 21.2 ( $\pm 2.41$ ) to 18.30 ( $\pm 2.62$ ). A treatment by time effect was noted with a significant difference between the groups after 6 months participation. While the goal of the treadmill training program was to enhance cardiovascular fitness, it also had a beneficial impact on ambulatory confidence.

### THE IMPACT OF FEAR OF FALLING ON PHYSICAL ACTIVITY IN ASSISTED LIVING RESIDENTS

B. Resnick, E. Galik, *School of Nursing, University of Maryland, Baltimore, Maryland*

This study considered the impact of fear of falling on functional ambulation and overall physical activity among 177 assisted living residents who consented to participate in a randomized trial testing a Function Focused Care Intervention. Analyses were done using baseline data. The residents were mostly female [n=136 (80%)], white [n=160 (94%)] and widowed [n=136 (80%)]. Twenty-six percent had no fear, 11% had a little fear, 50% had some fear and 13% had a lot of fear that they would fall. Using a stepwise multiple regression and controlling for age, gender, cognition and having a prior fall, fear of falling was the only variable to influence ability to walk a functional distance ( $t=-2.7$ ,  $p=.01$ ). Fear of falling was not significantly associated with overall activity. Future research should focus on interventions to eliminate/decrease fear of falling and optimize function among older adults.

### FEAR OF FALLING IN COMMUNITY-DWELLING OLDER ADULTS AND ITS RELATIONSHIP WITH LEVEL OF EXERCISE

E. Nahm<sup>1</sup>, B. Resnick<sup>1</sup>, J. Magaziner<sup>2</sup>, S. Zhu<sup>1</sup>, C. Brown<sup>2</sup>, K. Kim<sup>1</sup>, *1. School of Nursing, University of Maryland, Baltimore, Maryland, 2. University of Maryland School of Medicine, Baltimore, Maryland*

In an ongoing online randomized controlled trial (N = 866), we are testing the impact of two online bone health interventions on selected outcomes in community-dwelling older adults (age > 50). The aim of this study was to examine the association between participants' fear of falling and amount of exercise, number of falls (over the past 3 months), and self-efficacy and outcome expectations for exercise (SEE / OEE) at baseline. More than half of participants reported having a fear of falling “sometimes” (43.9%, n = 380) or “most or all of the time” (8.6%, n = 74). Fear of falling was not associated with age. It was, however, associated with number of previous falls ( $r = .31$ ), amount of exercise (Kcal) ( $r = -.128$ ), SEE ( $r = -.09$ ) and OEE ( $r = -.14$ ). Findings suggest that fear of falling may be important for engaging older adults in exercise activities.

**APPROACHES TO HEALTH FOR OLDER ETHNICALLY DIVERSE POPULATIONS****OBESITY, DIABETES, AND DISABILITY IN OLDER MEXICAN AMERICANS, 1993-2011**

S. Nam<sup>1</sup>, S. Al Snih<sup>2,3</sup>, K. Markides<sup>1,3</sup>, 1. *Population Health Sciences, University of Texas Medical Branch, Galveston, Texas*, 2. *The Division of Rehabilitation Sciences, University of Texas Medical Branch, Galveston, Texas*, 3. *Sealy Center on Aging, University of Texas Medical Branch, Galveston, Texas*

**OBJECTIVE:** To determine the effect of obesity and diabetes on disability in older Mexican Americans over 17 years of follow-up. **METHODS:** 3,050 Mexican Americans aged 65 year and older at baseline (1993-1994) from the Hispanic Established Population for the Epidemiological Study of the Elderly (Hispanic-EPESE). Measures included sociodemographic variables, medical conditions (arthritis, diabetes, heart attack, hypertension, stroke, and cancer), body mass index (BMI), waist circumference (WC), and activities of daily living (ADL). Generalized estimating equations (GEE) and linear mixed models (MIXED method) were used to estimate the effect of obesity and diabetes on disability over time. **RESULTS:** The prevalence of obesity, diabetes, and ADL disability ranged from 20.3%, 27.3%, and 13.8% in 1993-94 to 26.2%, 65.6%, and 51.9% in 2010-2011 respectively. BMI and diabetes were associated with greater disability in the oldest old (85+) group, women, and US-born compared with the young old (65-74) and very old (75-84), men, and the foreign-born. **CONCLUSION:** Subjects with obesity and diabetes were more likely, over time, to develop ADL and mobility disability than subjects with obesity only, subjects with diabetes only, and subjects without obesity and diabetes. **Key words:** Obesity, BMI, Diabetes, ADL, disability, older adults, Mexican-Americans.

**POLYPHARMACY AND POLYHERBACY AMONG ETHNICALLY DIVERSE OLDER ADULT POPULATIONS**

L. Chiang-Hanisko, C.L. Williams, R.M. Tappen, D. Newman, *Nursing, Florida Atlantic University, Boca Raton, Florida*

Polypharmacy is of particular concern in the older adult population. Older adults use more medication on a long-term basis to treat chronic disease. As major consumers of health care and prescription medication, older adults are more vulnerable to drug-related adverse effects and interactions of medications. However, few studies have focused on polypharmacy among diverse ethnic older adults, a population experiencing rapid growth. The purpose of this study was to evaluate the prevalence of polypharmacy among 120 individuals age 55 and older from community settings representing four cultural groups: African American (AA), Afro-Caribbean (AC), European American (EA) and Hispanic American (HA). Data is from the NIH funded Culture Bias in Testing Expressive Ability for Dementia including detailed medication records. A Oneway-ANOVA with a Bonferoni was conducted to compare means among the ethnicities. Results revealed the average number of medications used were 4.61. There were significant differences among ethnicities on OTC ( $F_{3,114}=2.63, p<.05$ ) where Afro-Caribbean used significantly more OTC than Hispanic Americans ( $p=.04$ ). There was also a significant ethnic difference for herb and supplement usage ( $F_{3,114}=5.01, p=0.03$ ) where EA was higher than AA and HA ( $p=.01, p=.003$ ) respectively. A multiple regression examined the factors that impact polypharmacy with a significant prediction ( $F_{9,84}=3.27, R^2=.260, p=.002$ ). Only SF-8 and chronic illness accounted for a significant proportion of unique variance. Income, spirituality, age, sex, education, and ADL accounted for shared variance but were not unique. This study suggests culture was a contributing factor in polypharmacy among ethnic older adults. Ethnoculturally appropriate health management is needed.

**BARRIERS AND FACILITATORS TO THE PARTICIPATION OF AFRICAN AMERICANS IN BIOMARKER STUDIES**

T.A. Schroefer, J. Dykema, G. Groth, W. Gunn, D. Edwards, *University of Wisconsin-Madison, Madison, Wisconsin*

Biomarker research, which involves the collection of tissue and bodily fluids such as blood or cerebrospinal fluid, is increasing the ability of researchers to effectively diagnose, monitor and treat disease. For African Americans and other minority populations who bear a disproportionate burden of chronic diseases and disabilities, participation in biomarker research is essential; yet, their participation remains low. Garnering an understanding of why African Americans choose not to participate in biomarker studies is critical if their burden of disease is to be lifted. This study explores the attitudes and beliefs of African Americans toward clinical research, and the barriers and facilitators to participation in biomarker studies of Alzheimer's disease, cancer, pulmonary disease and cardiovascular disease. Twenty-six African American respondents participated in in-depth, one-time face-to-face interviews regarding their willingness to provide samples of saliva, blood, tissue and cerebrospinal fluid, participate in brain donation and clinical drug trials, and have an MRI, CAT scan or endoscopy. Qualitative analysis of the transcripts revealed mistrust, lack of sufficient information and fear of serious risk to self as key barriers. Mistrust involved fearing lack of confidentiality, not knowing where the information will go or how it will be used, possibility that samples will be manipulated, being used as a guinea pig, and that the African American community will not experience any benefits. Concern was high regarding the risk of medical errors, complications and death. Implications for culturally appropriate outreach procedures and educational materials designed to increase visibility about and increase participation in biomarker studies will be discussed.

**RURAL AFRICAN AMERICANS' EXPERIENCES OF CAREGIVING TRANSITIONS AND LONG-TERM CARE DECISION-MAKING**

Y. Eaves, *University of Alabama at Birmingham, Birmingham, Alabama*

Few studies have examined developmental, situational, and illness related transitions in rural African Americans. Therefore, little is known about the experiences of African American older adults and their family caregivers, how they manage during critical transitions, and how and when they make decisions about long-term care (LTC). The purpose of this ethnographic study was to identify and analyze episodic and/or emergent health events (namely, decision-making about LTC placement) that resulted in caregiving transitions in rural African American families. The sample included eleven caregiving families comprised of 11 care recipients (70-86 years) and 11 caregivers (27-63 years). Semi-structured audio-taped interviews, fieldnotes, and focused observations were used to generate data. Ethnographic analytic techniques were used to code and classify the data and then formulate meaningful categories, themes, and patterns into an explanatory framework. Data analysis and interpretation uncovered patterns (precipitating health events, emotional reactions to nursing home placement, and unrealistic perceptions of self-care abilities) and themes (reasons for placement, anger, mistrust of family members, and returning home) that explained transitional events of caregiving and LTC decision-making. Serendipitous findings included two stories of previous elder abuse, neglect, and violence. Thus, two older adults verbalized satisfaction with care provided by the nursing home staff and viewed their stay at the nursing home as an improvement over previous living conditions and arrangements. A culturally relevant LTC planning (LTCP) intervention was developed based on this ethnographic data. The LTCP intervention provides families with specific strategies for decision-making and LTC planning in response to caregiving transitions.

## COMPARISON OF FRAILTY MODELS IN THE AFRICAN AMERICAN HEALTH (AAH) COHORT

T.K. Malmstrom<sup>1</sup>, D.K. Miller<sup>2,3</sup>, J.E. Morley<sup>1</sup>, 1. *Saint Louis University, St. Louis, Missouri*, 2. *Indiana University, Indianapolis, Indiana*, 3. *Regenstrief Institute, Inc., Indianapolis, Indiana*

Frailty is a condition which places older persons at increased risk for poor outcomes when exposed to stressful events or with advancing age. This study examines frailty models and adverse health outcomes. AAH is a population-based study of African Americans (baseline ages 49-65) from St. Louis, MO. Participants completed in-home assessments at baseline (N=998), 3 years (N=853), and 9 years (N=582). The proportion of surviving participants reassessed was 90% (3 years) and 70% (9 years). Outcomes included activities of daily living (ADLs; 0-7) and instrumental ADLs (IADLs; 0-8) at baseline, 3, and 9 years; and 9 year mortality. Frailty models included the International Association of Nutrition and Aging (FRAIL), Study of Osteoporotic Fractures (SOF), Cardiovascular Health Study (CHS), and Rockwood frailty scales; scores were categorized as frail, pre-frail, or robust. Analyses excluded participants (n=142) with any baseline ADL dependency and adjusted for age, gender, and baseline outcomes. Frail and pre-frail status on FRAIL and Rockwood predicted mortality ( $p < .05$ ), but not SOF or CHS. IADLs were predicted at 3 years for frail and pre-frail by all scales ( $p < .05$ ) except CHS pre-frail; and 9 years by FRAIL and SOF for pre-frail ( $p < .05$ ), and Rockwood for pre-frail and frail ( $p < .01$ ). ADLs were predicted at 3 years for frail and pre-frail by all scales ( $p < .05$ ) except pre-frail for CHS and Rockwood; and 9 years by FRAIL and SOF for frail and pre-frail ( $p < .05$ ) and Rockwood frail ( $p < .001$ ). FRAIL is a simple robust scale that performs as well as or better than more complex scales.

## SESSION 175 (PAPER)

### NUTRITION, OBESITY AND ORAL CARE

#### RELIABILITY STUDY: CAREGIVERS/RESIDENTS INTERACTION DURING FEEDING USING BARNARD'S FEEDING SCALE

C. Beel-Bates, J. French-Rogers, P. Stephenson, *Kirkhof College of Nursing, Grand Valley State University, Grand Rapids, Michigan*

Initial pilot work using Barnard's Feeding Scale (BFS) to measure dyadic interaction between caregivers and residents with dementia during feeding suggests that it is a viable, appropriate alternative to creating a new scale to assess interaction during feeding in this population. The goal of this study was to achieve 80% inter-rater reliability among four certified observers using Barnard's Feeding Scale (BFS) to measure interaction between caregivers and LTC residents with dementia during feeding. The BFS contains 76 specifically defined behavioral items which are coded "yes" if seen during a feeding and "no" if not seen during the feeding. After appropriate written permissions were obtained from nursing homes, guardians, and caregivers, 30 caregiver/resident dyads were videotaped for one meal or no longer than 20 minutes. Videos were labeled and transferred to DVDs. Two feedings were filmed specifically for use as training by the observers. Each rater received a set of DVDs to view and score independently. One observer had extensive experience with the BFS and served as a training leader of the other raters. The average percentage of agreement on the six subscale scores and total score on the BFS for 28 filmed feedings were calculated. The combined scores showed an inter-rater reliability of 85%. Cronbach's Alpha procedure showed a 0.75 correlation coefficient between the items in each of the six subsets of the BFS.

## EFFECT OF A MOUTH CARE INTERVENTION FOR NURSING HOME RESIDENTS WITH DEMENTIA WHO REJECT CARE

R. Jablonski<sup>1</sup>, A.M. Kolanowski<sup>1</sup>, B. Therrien<sup>2</sup>, E. Mahoney<sup>3</sup>, C. Kassab<sup>4</sup>, 1. *School of Nursing, The Pennsylvania State University, University Park, Pennsylvania*, 2. *University of Michigan, Ann Arbor, Michigan*, 3. *Boston College, Boston, Massachusetts*, 4. *By the Numbers, West Decatur, Pennsylvania*

Common reasons for the omission of mouth care include inadequate time and care-rejection behaviors. The purpose of the experimental study was to test a mouth care intervention that combined best oral hygiene practices with behavioral techniques designed to prevent and reduce care-rejection behavior. Twelve nursing home residents with severe dementia and histories of mouth care-rejection behaviors were randomly assigned to a control or experimental group. The majority were female (83%); mean age was 82.7 years. Residents were observed receiving "usual" mouth care by nursing assistants twice daily during a 7-day baseline period. Residents then received mouth care twice daily for 21 days by research assistants, who were blinded to the specific aims of the study and were yoked to either the control or experimental group. Control group research assistants delivered mouth care per the approved protocol, but without care-rejection behavioral techniques. Data from 525 observations were analyzed. The duration of oral hygiene activities during the baseline period was 2.7 minutes (experimental group) and 2.4 minutes (control group). Mouth care was completed 85.7% of the time. During the intervention period, the duration of mouth care was 5.9 minutes (experimental group) and 4.9 minutes (control group) ( $t=2.910$ ;  $df=507$ ;  $p=0.004$ ). Oral hygiene was successfully delivered 92.4% of the time for residents in the experimental group and 59.1% of the time for residents in the control group. Results from this study suggest that the mouth care intervention addressed care-rejection behaviors and resulted in the best rate of mouth care completion.

## IS PERIODONTAL INFLAMMATION ASSOCIATED WITH DEPRESSIVE SYMPTOMS IN OLD AGE?

P. Holm-Pedersen<sup>1</sup>, K. Avlund<sup>1</sup>, D.E. Morse<sup>2</sup>, 1. *Gerodontology, University of Copenhagen, Copenhagen, Denmark*, 2. *New York University, New York, New York*

Objectives: To analyze the association between periodontal inflammation (age 70) and depressive symptoms (age 75). Methods: The study was based on the Glostrup Aging Study, with oral data collected in 1984 when the participants were 70 years old and follow-up 5 years later. Periodontal inflammation was measured using the Community Periodontal Index (CPI) and defined using numerous definitions. Depressive symptoms were measured using the Center for Epidemiologic Studies Depression Scale (CES-D). Periodontal inflammation and depressive symptom data were available for 229 subjects. Analyses were conducted based on data from all 229 subjects, as well as subgroups of participants. Results: After adjusting for covariates, dichotomized CES-D scores ( $16+ / < 16$ ) at age 75 were not consistently positively associated with periodontal disease defined by CPI scores at age 70. Conclusion: Our analyses of data from older adults provide little evidence of a positive association between periodontal disease at 70 and depressive symptoms at 75.

## CHARTING INTERPROFESSIONAL CONNECTIONS TO IMPROVE ORAL HEALTH IN AN AGING AMERICA

J. Haber, D. Shelley, M. Dolce, *NYU College of Nursing, New York, New York*

Millions of Americans have unmet oral health care needs and profound oral health disparities persist in vulnerable and underserved populations, especially older adults. The prevalence of dental caries and periodontal disease increases with age, and older adults are more likely to have chronic conditions such as cardiovascular disease and diabetes, which are associated with poor oral health outcomes. Over 3 million

nurses, including approximately 140,000 nurse practitioners, can play a significant role in improving the quality of oral health for older adults including access to care. The purpose of this paper is to describe New York University College of Nursing's response to this challenge - a national interprofessional initiative aimed at preparing a nursing workforce with the competencies to prioritize oral disease prevention and health promotion, provide evidence-based oral health care in a variety of practice settings, and collaborate in interprofessional teams across the health care system. The overarching goal of this national initiative is to create an educational infrastructure for the nursing profession that advances nursing's contribution to reducing oral health disparities across the life cycle. This presentation describes the development, implementation, and evaluation of a replicable model for integrating oral health in nursing education and best practices in nurse managed primary care settings. Participants will be able to describe a model for charting interprofessional connections between nursing and dental professionals in providing oral health preventive services to older adults. The importance of interprofessional education and collaborative practice in improving oral health for an aging America is underscored.

## SESSION 180 (SYMPOSIUM)

### CLINICAL INTERVENTIONS TO ENHANCE WELL-BEING OF CHINESE ELDERS WITH CHRONIC ILLNESSES

Chair: *T.Y. Lum, Social Work and Social Administration, The University of Hong Kong, Pokfulam, Hong Kong, Sau Po Centre on Ageing, Pokfulam, Hong Kong*

Very few intervention studies have been designed and implemented specially for Chinese older people. As a result, there is very few evidence based interventions that can help improve the well-being of older Chinese. The goal of this symposium is to present the results of three intervention studies that used specific clinical intervention to promote health and well-being of older Chinese people in Hong Kong. Two studies focused on the narrative approach to enhance older Chinese's well-being. Chow investigated the effect of narrative therapy in helping stroke survivors to enhance their self-esteem and coping skills and to find meaning of their life after suffering from stroke. She found that those received narrative intervention had better self-esteem, proactive coping skills and were able to find meaning of their life than those in the control group. Lai and her colleagues supplemented Chow's study by focusing on reasons why some Chinese elders participated in a life story intervention while other refused to participate. They interviewed 25 Chinese elders who joined and 19 who did not join the intervention and found that the participants' perception of what others would think of them after they shared their life stories were the main difference between the two groups. Leung and her colleagues investigated the effect of a program to increase the walking level of older Chinese with chronic illness. They recruited 178 older Chinese to participate in a 10 weeks intervention and found that the program was associated with an increase working and participants' physical health.

### NARRATIVE THERAPY IN RECONSTRUCTING STROKE SURVIVORS' SELF-IMAGE AND MEANING OF LIFE

E.O. Chow, *Applied Social Studies, The University of Hong Kong, Kowloon, China*

Aims: To examine the effectiveness of narrative therapy in helping stroke survivors (SS) to externalize their experiences, reconstruct the identity and their meaning of life. Methods: A randomized controlled trial was conducted to SS who had stroke within 2 years and aged over 59. Fifteen intervention and fifteen control groups were carried out for eight weekly sessions. SSs were assessed at baseline, interim and post-intervention through face-to-face interviews. Repeated-measures ANOVA were used to assess the group changes throughout these three time-points on their self-esteem, proactive coping skills and meaning of life. Findings: 181 SS were randomly assigned to intervention groups

(n= 91) or control groups (n= 90). Significant group and time changes were found in self-esteem ( $F=4.78, p=.01$ ), proactive coping skills ( $F=5.52, p=.004$ ), and their meaning of life ( $F=4.49, p=.01$ ) after the intervention. Conclusion: NT was found effective in enhancing SS' self-esteem, proactive coping skills and the meaning of life.

### SENIORS SHARING THEIR LIFE STORIES WITH OTHERS: WHY AND WHY NOT?

C.K. Lai<sup>1</sup>, A. Chan<sup>1</sup>, W. Shae<sup>2</sup>, Y. Zhang<sup>1</sup>, *1. School of Nursing, The Hong Kong Polytechnic University, Hong Kong SAR, China, 2. Department of Social Sciences, The Hong Kong Polytechnic University, Hong Kong SAR, China*

Few studies explored why some seniors willingly engage in life story work and others do not. This study was conducted in 17 senior centers randomly assigned to an intervention or control group. The seniors who joined (n=25) and those who declined to join the study (n=19) were invited for an in-depth interview. Colaizzi's method is used for data analysis and interpretation. Themes identified from the data included: "sharing my life stories helped me to reflect on my past and release my emotions", "my life stories have been recorded and passed down to the next generation", "I would like to let my family members know more about me", "I share my life stories to benefit others", and "I seldom share my life stories with others because it sometimes causes trouble". If the life story approach can enhance the well being of seniors, then certainly it is worthwhile to promote it further.

### HEALTH ENHANCEMENT AND Pedometer-DETERMINED AMBULATORY (HEPA) PROGRAM: A CAPACITY BUILDING PROGRAM IN HONG KONG

A. Leung<sup>1,2</sup>, M. Tse<sup>3</sup>, W. Shum<sup>4</sup>, J. Lancaster<sup>5</sup>, C. Lam<sup>6</sup>, *1. School of Nursing, The University of Hong Kong, Hong Kong, China, 2. Sau Po Centre on Ageing, The University of Hong Kong, Hong Kong, China, 3. Institute of Human Performance, The University of Hong Kong, Hong Kong, China, 4. SKH Holy Carpenter Church, Hong Kong, China, 5. University of Virginia, Charlottesville, Virginia, 6. Department of Family Medicine and Primary Care, The University of Hong Kong, Hong Kong, China*

Doing regular physical exercise is not an easy task. A 10-week Health enhancement and pedometer-determined ambulatory (HEPA), was developed to build up community-dwelling older adults' capacity in walking in their neighbourhood in Hong Kong. Objectives: This study aims to report the change of health outcomes of the HEPA participants. Method: A pre-and-post intervention design was used. Results: A total of 179 older adults participated in the program. After 10 weeks, participants' average number of steps per day increased from 6591 to 8934 (increased by 36%). Their lower body strength (mean difference, m.d. = 1.71,  $p<0.001$ ), upper body strength (m.d. = 1.29,  $p<0.001$ ), aerobic fitness (m.d. = 20.74,  $p<0.001$ ), quality of life in physical health (m.d. = 2.86,  $p<0.001$ ) were significantly improved. Conclusion. HEPA program seemed to improve participants' walking capacity and other health outcomes. A randomized controlled trial should be carried out to test its effectiveness in future .

## SESSION 185 (SYMPOSIUM)

### EVALUATING THE QUALITY OF LONG TERM CARE: A REVIEW OF SOME RECENT INITIATIVES

Chair: *A. Muma, Abt Associates Inc., Durham, North Carolina*

The Centers for Medicare and Medicaid Services (CMS) has responsibility for overseeing the quality of care provided in the nation's nursing homes and in other long term care settings. Quality of care initiatives, whether designed and implemented by the Federal government, by healthcare researchers, or by other groups, have been developed to assess and improve quality in a variety of domains and for a variety of different topics. This session will provide background on some current



CMS initiatives in evaluating long term care quality. These initiatives cover a broad range of topics including: The Nursing Home Compare 5-Star Rating System, The Quality Indicator Survey (QIS) for health inspection surveys, the impact of therapy staffing on nursing home resident outcomes, and the effectiveness of the CMS Special Focus Facility program.

### **NURSING HOME COMPARE: THE THIRD YEAR OF THE FIVE-STAR QUALITY RATING SYSTEM**

A. Muma, C. Williams, A.J. White, M.R. Plotzke, *Abt Associates Inc., Durham, North Carolina*

In December 2008, the Centers for Medicare and Medicaid Services enhanced its Nursing Home Compare website to include “star” ratings for each US nursing home, measuring multiple dimensions of quality including performance on selected quality measures, outcomes of health inspections, and staffing levels. The five-star rating system has now been in place for over three years. Over this period, we have been examining trends in the ratings each year and across years. Specifically, we examined stability and longitudinal changes in the underlying components of the rating system, and compared the results of each individual year, noting significant changes among the years. We also used qualitative information from the five-star Helpline to aid in understanding the quantitative trend data from the three years of the rating system.

### **THE RELATIONSHIP BETWEEN THERAPIST STAFFING LEVELS AND NURSING HOME RESIDENT OUTCOMES**

B. Morefield, *Abt Associates Inc., Durham, North Carolina*

The Centers for Medicare and Medicaid Services currently uses nurse staffing levels to derive the staffing domain of the five-star quality rating system on the Nursing Home Compare website. This presentation will explore an additional measure of staffing which may impact the quality of resident outcomes, namely therapist staffing. The presentation will describe trends in therapist staffing levels from 2006 to 2011, as reported in OSCAR. Additionally, the presentation will provide the results of analyses of the relationship between facility-level therapist staffing and resident outcomes (i.e. successful discharge to community). Finally, the presentation will discuss the feasibility of including therapist staffing as a measure of nursing home quality, including the generalizability of facility-level therapist staffing measures to describe nursing home quality, and the extent to which nurse staffing levels may serve as a proxy for therapist staffing.

### **EVALUATING THE EFFECTIVENESS OF THE CMS SPECIAL FOCUS FACILITY PROGRAM FOR NURSING HOMES**

C. Williams, A. Muma, *Abt Associates Inc., Durham, North Carolina*

The Special Focus Facility program (SFF) centers on nursing homes with a track record of substandard quality. CMS reviews health inspection data and develops a candidate list of facilities for the program; states select facilities for participation in the SFF program. We analyzed SFF program data from 2005 through 2011. The primary goal was to examine whether participation in the program improved quality in poorly performing nursing homes, as measured by health inspection performance. We compared the experience of SFF facilities to a similar group of candidate facilities not chosen for the program and examined the likelihood of: 1) improved performance, as measured by having a health inspection without citations greater than ‘D’; 2) termination; and 3) enforcement actions, including civil money penalties and denial of payment for new admissions. Early results show the SFF program appears to be associated with faster improvement in quality, but increased likelihood of termination.

### **THE QUALITY INDICATOR SURVEY FROM 2007-2011: HOW DO FINDINGS COMPARE TO TRADITIONAL NURSING HOME SURVEYS?**

A.J. White, C. Williams, *Abt Associates Inc., Durham, North Carolina*

The Quality Indicator Survey (QIS) is intended to improve survey consistency and accuracy by using a more structured process and focusing survey resources on areas within facilities with greater quality concerns. The QIS has been implemented to varying extents in nineteen states, and more than 7,500 QIS surveys were conducted in the years 2007-2011. We used survey results (cited deficiencies) from QIS and traditional surveys to examine how survey findings differ between QIS and traditional surveys. Analyses focused on paired analyses for facilities with multiple QIS surveys. Each year, QIS surveys, on average, cited more deficiencies than traditional surveys, although there was substantial variation across States. QIS surveys were also more likely to cite deficiencies related to quality of life and quality of care. These trends are evolving as states gain more experience with the QIS.

### **IMPLEMENTATION OF NURSING HOME VALUE BASED PURCHASING (NHVBP) DEMONSTRATION – YEAR 1 EXPERIENCE**

A.J. White<sup>1</sup>, A. Edwards<sup>1</sup>, E. Axelrod<sup>1</sup>, A. Laberge<sup>2</sup>, *1. Abt Associates Inc., Durham, North Carolina, 2. CMS, Baltimore, Maryland*

Under NHVBP, performance is assessed based on a set of performance measures, and participants with high performance levels or improvement over time are eligible for performance payments. The size of the performance payment pool is based on an estimate of the Medicare savings achieved by demonstration participants. The demonstration includes 171 providers from 3 States (Arizona, New York, Wisconsin). This presentation reviews results from the first year of the demonstration. Performance is measured based on facility performance across four domains: potentially avoidable hospitalizations, staffing levels and turnover, MDS-based quality measures, and survey deficiencies. Results from the first year show early promise for influencing some dimensions of provider behavior and generating Medicare savings. In all three States, staffing levels were higher in Year 1 than in the baseline. In Arizona and Wisconsin, the demonstration was associated with lower rates of potentially avoidable hospitalizations. There was little impact on MDS-based outcome measures.

## **SESSION 190 (SYMPOSIUM)**

### **POLICY SERIES: POST-ELECTION ANALYSIS: IMPLICATIONS FOR AN AGING SOCIETY**

Chair: *B. Blancato, Matz, Blancato & Associates, Washington, District of Columbia*

Co-Chair: *L.K. Harootyan, The Gerontological Society of America, Washington, District of Columbia*

Discussant: *A. Sarmiento, Senior Service America, Inc, Silver Spring, Maryland*

The 2012 election is now history. What kind of history will those it elected make? Which age group had the greatest impact on the election and what might that mean for future policies? Will Social Security and other entitlement programs be spotlighted or put on the backburner in light of the results? This session will analyze what the election outcomes infer about rising issue priorities, and anticipate how the elected politicians will interpret their election-day victories. In addition, before the 113th Congress convenes and the next President is inaugurated, there is a lame duck session of this Congress to contend with. Will decisions related to tax cut extensions, sequestrations, Medicare physician reimbursement be made or deferred? What other top tier issues will await Washington in 2013? Join in this bipartisan post-election session to gain insights into the political and policy landscape ahead. Find out how the

results will influence your work as a researcher and an advocate. Sponsored by the GSA Public Policy Committee, Bob Blancato, Matz, Blancato & Associates, Moderator Speakers: Tony Sarmiento, Senior Service America, Inc. Thair Phillips, Retire Safe Rep. Susan Davis (D-California) Deb Whitman, AARP

## SESSION 195 (SYMPOSIUM)

### PROMOTING INTERNATIONAL COLLABORATION IN PUBLIC HEALTH AND AGING: THE PAHO AND CDC-HAN EXPERIENCE

Chair: *M. Altpeter, Institute on Aging, UNC at Chapel Hill, Chapel Hill, North Carolina*

Discussant: *B. Belza, University of Washington, Seattle, Washington*  
Discussant: *M.U. Pérez-Zepeda, Médicas del Instituto de Geriatria, Mexico City, Mexico*

The CDC-funded Healthy Aging Network (CDC-HAN) and the Pan American Health Organization (PAHO) share the common mission of increasing visibility of the aging of the population and improving the health and quality of life of older persons. To this end, both organizations have agreed to advance an agenda to: 1) reposition views of aging as a resource and not a burden to society; 2) create age-friendly environments that foster the health and participation of older adults; and 3) collaborate to bring health promotion to scale for older adults through research, practice, policy and educational initiatives. This session will share our collaborative experiences to date and promote international networking among those interested in global public health and aging. CDC-HAN and PAHO presenters will discuss: 1) collaborative efforts to bring researchers, educators and program administrators together from 12 countries to discuss extending the healthy aging initiative in Latin America and the Caribbean; 2) educational approaches for addressing public health and aging competencies to train program administrators and researchers; and 3) areas of common interest with relation to evidence-based health promotion research and programming and the need for a common metric to assess their public health impact. This session will encourage active engagement of attendees to share their experiences and interests in collaborative international work and to identify priorities and next steps for promoting healthy aging initiatives globally.

### LAUNCHING AN INTERNATIONAL ORGANIZATIONAL COLLABORATION: PURPOSE AND LESSONS LEARNED

*M. Altpeter, Institute on Aging, UNC at Chapel Hill, Chapel Hill, North Carolina*

This session will describe the process and steps taken to develop the meeting agenda, activities, and outcomes of the "University Consortium on Public Health and Aging" held in Mexico City that launched the PAHO and CDC-HAN collaboration of researchers, educators and program administrators. Overarching topics presented and discussed included: setting the vision for a healthy aging agenda and collaborative projects for aging; key content areas and competencies to address in public health and aging education across disciplines and borders; building public health and aging curricula at the graduate level and for continuing education; models for conducting collaborative research and collaborative education; theoretical approaches and strategies for translating and disseminating healthy aging research into sustainable programs and policies. Steps taken to create and sustain international collaborations, with attention to cultural and language factors, will be addressed.

### DISSEMINATING EVIDENCE-BASED HEALTH PROMOTION PROGRAMS AND ASSESS IMPACT

*S.L. Hughes, University of Illinois Chicago, Chicago, Illinois*

ing Impact A key objective of the HAN/PAHO meeting was the identification and sharing of evidence-based interventions, with apprecia-

tion of the context and diversity within each country. Currently, several evidence based programs have been recognized by the U.S. Administration on Aging as meeting criteria for broad uptake by aging services providers. The HAN/PAHO meeting provided an opportunity to review the development and testing of these programs, discuss their characteristics, identify existing programs in our respective countries and discuss ways to adapt and adopt these programs across multiple countries. The meeting also sparked the discussion of the need for universal performance-based health metrics that can be used to assess the public health impact of these programs. Ongoing efforts that are taking place to continue this work following the conference include the possible development of a research institute that would foster cross-national collaboration and cross training/development of a workforce that can deliver these programs.

### PREPARING A PUBLIC HEALTH AND AGING WORKFORCE THROUGH INTERNATIONAL ORGANIZATIONAL COLLABORATION

*E. Vega, Pan American Health Organization, Washington, District of Columbia*

A comprehensive strategy for building a public health and aging workforce requires an education and training infrastructure to prepare professionals. As part of the University Consortium on Public Health and Aging, PAHO established an MPH program in Public Health with an aging and health services focus and a specialization certificate for program administrators. The CDC-HAN PAHO collaboration has begun to identify next steps to define and implement an educational mission. These address several needs: 1) supply specific research, education, and practice skills required by the workforce; 2) establish standards and competencies in public health and aging on which to base curricula and training tailored to regional priorities; and 3) challenge negative stereotypes by informing the public about the evidence supporting healthy aging. The session will include discussion of opportunities for mutual assistance in developing curricula, programs, and public awareness.

## SESSION 200 (SYMPOSIUM)

### THE OLDER LABOR FORCE: SUPPLY, DEMAND AND TRAINING

Chair: *B. Harootyan, Research, Senior Service America, Inc., Silver Spring, Maryland*

Discussant: *S.E. Rix, AARP, Washington, District of Columbia*

During 2000-2010, the number of workers age 55+ increased by 60.8 percent (vs. 7.9 percent for the entire labor force). By 2020 they will comprise one-fourth of all workers, double the proportion in 2000. These trends reinforce the need for ongoing job-skill development, retraining for those displaced from certain industries, and educational opportunities for persons seeking new careers. Such training must consider the needs and learning styles of older workers while also responding to employers' requirements for specific skills and credentialing. Presentations address different aspects of older worker supply, demand, experiences, and training. Sum and Harootyan review multivariate results of national data, indicating the plight of low-income older workers, their labor market barriers, and how these affect their well-being. Ejaz, Rose and Bukach present results from a stratified random survey of long-term care providers regarding employment prospects for low-income Senior Community Service Employment Program participants, and providers' OJT training, accommodations for older workers, and awareness of SCSEP as a source of employees. Morgan and Farrar report findings from a mixed-methods evaluation of formal education for later-life careers in health care, documenting learning challenges and lifestyle demands faced by older persons and recommended strategies to respond to them. Cummins and Kunkel review findings from a multi-stage Delphi analysis of 10 community colleges that provide credential-focused

training for older workers, emphasizing the importance of peer mentoring, supportive services, and employer relationships. Rix discusses the relevance and implications of this research for organizations and government agencies involved in older worker programs and advocacy.

### **COMMUNITY COLLEGES AND OLDER STUDENTS: CAN OUTCOMES BE IMPROVED?**

P. Cummins<sup>1,2</sup>, S. Kunkel<sup>1,2</sup>, *1. Sociology & Gerontology, Miami University, Oxford, Ohio, 2. Scripps Gerontology Center, Oxford, Ohio*

Unemployed older adults may not have the skills required for available jobs and may need to acquire new skills in order to become reemployed. For U.S. workers in general, and for older workers seeking employment, credential attainment is a significant trend and community colleges play an important role in that endeavor. Using a multi-stage Delphi method, 10 community colleges were selected for key informant telephone interviews or site visits to gain a better understanding of the role community colleges play in providing credential-focused training for older workers. Areas that were explored during the site visits and interviews include challenges faced by older students, outreach programs, strategies to improve retention rates, educational programs that involve credential attainment, job placement, employer relationships, and student financial support, all related to older students. Findings suggest that peer mentoring, intensive counseling services, financial aid, and strong employer relationships are all important for successful outcomes.

### **PROSPECTS FOR SENIOR COMMUNITY SERVICE EMPLOYMENT PROGRAM (SCSEP) PARTICIPANTS IN LONG-TERM CARE**

F. Ejaz, M. Rose, A. Bukach, *Benjamin Rose Institute, Cleveland, Ohio*

SCSEP provides on-the-job-training for lower-income older adults in non-profit/public organizations. Its goal is for participants to obtain unsubsidized employment. Possible employment opportunities were explored in a cross-sectional study of 248 adult day care centers, assisted living facilities, home health agencies and nursing homes in seven states. Sample selection was based on a stratified random sampling by state, provider type, auspice and capacity, with oversampling of nonprofit/public/governmental organizations. Telephone surveys were conducted with management staff to gauge the extent to which they employed older workers, used volunteers and served as host agencies for SCSEP participants. Findings indicated that providers make accommodations to retain older workers and more than 75% use volunteers of all ages, but the majority was not aware of SCSEP. Of those that reported having been host agencies, most were adult day care centers. Recommendations to improve the hiring of older workers include better marketing and “branding” of SCSEP.

### **EDUCATION AND TRAINING FOR OLDER WORKERS: CHALLENGES AND PROMISING PRACTICES**

J.C. Morgan<sup>1</sup>, B. Farrar<sup>2</sup>, *1. UNC Institute on Aging, Chapel Hill, North Carolina, 2. North Carolina State University, Raleigh, North Carolina*

Delayed retirement, the ever-changing skill and labor needs of industries, and massive layoffs due to the recent recession compel many individuals to pursue formal education later in life to gain the skills and credentials necessary to be competitive in the labor market. Little research has identified education-related challenges for older workers. The purpose of this study is to describe the challenges that older adults face in pursuing formal education and suggest strategies that may address these challenges. Data come from the Jobs to Careers: Transforming the Front Lines of Health Care mixed-method evaluation (583 follow-up surveys, 38 focus groups and 226 interviews). Results show that older workers struggle with education anxiety, advanced technology, and the competing demands of work and family life. Strategies that have the poten-

tial to overcome these challenges include collaborative and active learning methods, formalized social support, explicit instruction on innovative learning technologies, and flexible academic policies.

### **THE PLIGHT OF LOW-INCOME OLDER WORKERS: EMPLOYMENT BARRIERS, ECONOMIC INSECURITY, AND MENTAL HEALTH PROBLEMS**

B. Harootyan<sup>1</sup>, A. Sum<sup>2</sup>, *1. Senior Service America, Inc., Silver Spring, Maryland, 2. Center for Labor Market Studies, Northeastern University, Boston, Massachusetts*

The Great Recession of 2007-2009 had a disproportionately negative effect on the labor market experiences of low-income and less educated workers age 55-74. Based on analyses of Current Population Survey data, this presentation reviews the employment experiences of disadvantaged older workers during 2000-2010, documenting their dramatically higher rates of unemployment and underemployment, and their much longer average time without a job. These difficulties compound their already fragile economic status, making it unlikely that they will have adequate incomes either as workers or retirees. Furthermore, multivariate analyses of the Behavioral Risk Factor Surveillance System's 2010 survey data indicate that these older workers are much more likely than others to suffer from anxiety, depressive symptoms, and other mental health issues. The authors discuss the implications of these findings, stressing the need for person-centered coordination of services to appropriately address the myriad challenges faced by disadvantaged older workers.

## **SESSION 205 (PAPER)**

### **BUILDING MORE SUPPORTIVE ENVIRONMENTS AND HOUSING**

#### **NEIGHBORHOOD AND PHYSICAL ACTIVITY IN COMMUNITY-DWELLING OLDER ADULTS: VALUE OF A MIXED-METHODS APPROACH**

H. Chaudhury<sup>1</sup>, A. Mahmood<sup>1</sup>, Y.L. Michael<sup>2</sup>, M. Campo<sup>1</sup>, *1. Gerontology, Simon Fraser University, Vancouver, British Columbia, Canada, 2. Drexel University, Philadelphia, Pennsylvania*

Although there is increasing evidence to suggest the salience of neighborhood physical environmental features and social support in influencing older adults to stay active, there is a dearth of studies examining the integrated effect of neighborhood-based physical environmental features and social dimensions on active aging. The overarching research question of this three year study was, “How are physical environment and social context of neighborhoods associated with physical activity of older adults?” Eight neighborhoods with varying residential density were selected across Vancouver, British Columbia and Portland, Oregon. The study utilized mixed methods that included — development of a neighborhood environmental audit tool, photovoice engagement of older adults, and a telephone survey. The structured observation method was used to collect comprehensive objective data on neighborhood micro-environment (across the dimensions of safety, destinations, aesthetics and function) that would support walking behaviors in older adults. The photovoice method was a community-participatory process resulting in rich visual and text-based qualitative data on both physical and social aspects. Finally, the survey (based on a structured questionnaire developed for this study) collected quantitative data on health and physical functioning, physical activity levels, neighborhood perceptions and social motivators for older adults' residing in the selected neighborhoods. This presentation will discuss the rationale behind the various quantitative and qualitative methods, interrelationships among them and methodological lessons learned.

## IMPLEMENTATION AND IMPACT OF A GEOGRAPHICALLY-TARGETED NORC-AGING IN PLACE PROGRAM

A.E. Scharlach<sup>1</sup>, L. Pipes<sup>2</sup>, N.E. Cutler<sup>2</sup>, *1. Social Welfare, University of California, Berkeley, California, 2. Motion Picture & Television Fund, Woodland Hills, California*

The Motion Picture & Television Fund (MPTF) provides a range of health and social services for entertainment industry retirees, including residential care on its 40-acre Los Angeles campus, as well as community-based programs for retirees throughout Southern California. Since 2008 MPTF has piloted a neighborhood-based approach, targeting services to four specific geographic communities with relatively high concentrations of entertainment industry retirees. This “NORC-Aging in Place” approach includes social services, volunteerism, home renovation, transportation, and technology. The analysis reported here compares administrative service provision data in the first two targeted MPTF NORC-Aging in Place communities with the two comparable communities where programs have not yet been initiated. The analysis demonstrates that service use increased in these first two targeted NORC areas faster than in the other two. Longitudinally, significantly greater increases were found for home visits (2006 to 2011), numbers of clients served (2010 to 2011) and program referrals (2010 to 2011), whereas assessment growth did not differ significantly. These findings have direct implications for the development of targeted neighborhood approaches for enhancing social support for older adults who choose to age in place. Moreover, the findings are instructive regarding the potential roles that residential care providers and other existing community resources can play as partners in developing community support programs.

## EVALUATING VILLAGE-MODEL PROGRAMS: A CONSUMER-DRIVEN APPROACH TO AGING IN COMMUNITY

C. Graham, A.E. Scharlach, *UC Berkeley, Berkeley, California*

This paper presents both the conceptual framework and findings from a multi-tiered evaluation of Village-model programs. Villages are a new, consumer-driven, “membership” model that aims to promote aging in place for older adults. Authors will present a conceptual model that guides an evaluation strategy for predicting organizational sustainability and effectiveness. This paper presents findings from a multi-tiered evaluation, including: 1) a national survey of 30 Village organizations; 2) results from a single-site evaluation that surveyed 185 members of one Village-model program; and 3) preliminary results from a multi-site evaluation of 9 Villages. The national survey of Village organizations found that Villages are highly consumer-driven, have few stable sources of funding, and their membership tends to be disproportionately better-educated, less frail and more ethnically homogeneous than the general senior population. The single-site evaluation findings include results from a survey of 185 current Village members. The most common services used by Village members were volunteer driving (45%) and grocery shopping (54%). Self-reported, retrospective measures of program impact suggest that the program has reduced financial distress (30%), reduced members’ self care and home care burden (39% and 29% respectively), increased social connectedness (34-44%), and improved members’ quality of life (70%). This paper will also include a discussion of a “scaling up” of this study to the first multi-site evaluation of Villages, and will discuss methodological implications for the evaluation of similar community-based aging-in-place models

## URBAN NEIGHBORHOOD CONTEXTS AND THE INTENTION TO MOVE AMONG OLDER ADULTS

M. Kim, S. Park, *University of Michigan, Ann Arbor, Michigan*

An increasing number of studies indicate that neighborhood environments play a significant role in older adults’ quality of life, such as physical and mental health. However, studies focusing on the association between urban neighborhood contexts and residential mobility are

limited. Using data from the Chicago Community Adult Health Study (2001-2003), this study examined the effect of neighborhood-level physical and social environments and individual-level socioeconomic and demographic factors on the intention to move among the adults aged 50 and older (N=933). Neighborhood environment measures were used as scales, constructed from the Systematic Social Observation data. Logistic regression was applied to capture the association between neighborhood environments and whether they are likely to move from the current neighborhood within five years. Preliminary results indicate that increased risky behaviors at the neighborhood-level and higher physical impairment at the individual-level are significantly associated with increased likelihoods of move-out intention. Increased residential security at the neighborhood-level played a significant role in decreasing the likelihoods of moving-out intention. However, physical disorder (e.g. broken window and graffiti) was not associated with the move-out intention. Older age, having more friend/kin networks, and being married decreased the odds of intention to move. The results suggest, in terms of residential mobility, what matters to older people more are neighborhood safety and personal health status, not the neighborhood physical disorder itself. Also, results reveal potential positive effects of individual’s support network on decreasing move-out intention.

## SESSION 210 (POSTER)

### ADULT PROTECTION AND ELDER ABUSE

#### RESIDENT ABUSE IN ASSISTED LIVING

N. Castle<sup>1</sup>, L. Wagner<sup>2</sup>, S.M. Handler<sup>1</sup>, S. Beach<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. New York University, New York, New York*

Few empirical studies have examined resident abuse in assisted living (AL). In the literature the opinion exists that abuse may be an issue of concern in AL, but few empirical investigations exist. The paucity of information on abuse in AL led us to conduct this research. A survey was sent to Direct Care Workers (DCWs) in 1,500 facilities across the U.S. The survey requested DCWs to provide their opinions of resident abuse in the areas of verbal, physical, material, psychological, caregiving, medication, material, and sexual abuse (a total of 45 items were used). A \$20 gift card was used as an incentive. A total of 12,555 responses from DCWs were received (this gave a response rate of 81%). Overall, we found resident abuse to be uncommon; but, varied according to the type of abuse. For example, verbal abuse and psychological abuse was reported more often than sexual abuse. The highest percent was for staff arguing with a resident (9.65% of DCWs observed this in the past 3 months). Also, we found resident-to-resident abuse to be more common than staff abuse (but again varied according to the type of abuse). The highest percent was for arguing with another resident (12.83% of DCWs observed this in the past 3 months). The observed abuse was also associated with characteristics of the AL settings (such as size and staffing levels). This research gives us one of the first empirical views of resident abuse in AL.

#### IMPACT OF FINANCIAL EXPLOITATION ON THE HEALTH-RELATED QUALITY OF LIFE (QOL) OF OLDER WOMEN

C.P. Mouton, *Meharry Medical College, Nashville, Tennessee*

Background: Financial abuse (FA) and exploitation is a growing problem. Nationally, an estimated 12.3% of elders are victims of FA. Little is known about the effects of FA on the QOL of older women. Objectives: To determine the effect of FA on health-related quality of life in a cohort of functionally independent older women. Design: Cross-sectional survey Setting: The Observational Study Cohort of the Women’s Health Initiative (WHI) recruited at the San Antonio, Texas site. Participants: 1271 women, aged 50-79 years old, enrolled in WHI. Measurements: Baseline assessment of lifetime exposure to FA using 4

questions asked at time of enrollment, demographic variables, and HRQL assessed with the RAND SF-36. Results: Of the 1271 women surveyed, 2.9% reported being made to sign documents they did not understand, 3.6% were pressured to give up property, 32% had money borrowed, and 2% had finances controlled against their wishes. After controlling for (include covariates), compared to women reporting no FA, women with FA had poorer HRQL. Specifically, being made to sign documents was associated with the following subscales of HRAL: lower role-physical, pain, general health and the physical component summary score. Giving up property was associated with lower role-physical, social functioning, role-emotional, mental health, and mental component summary scores. Having money borrowed was associated with lower role-physical, role-emotional, and mental component summary scores. Having finances controlled was associated with lower social functioning, role-emotional, and mental component summary scores (all p-values < 0.05). Conclusion: Experiencing FA is associated with poorer HRQL in older women.

### **PIERCING THE VEIL? THE LINK BETWEEN INDIVIDUAL CONCEPTION/DEFINITION OF ELDER MISTREATMENT AND PHYSICIAN BEHAVIOR**

A.E. Sokan, *Graduate Center for Gerontology, University of KY, Lexington, Kentucky*

Healthcare professionals, in particular physicians, have been identified as one of the professions most likely to encounter elder mistreatment (EM), as they come into contact with older adults seeking healthcare. However studies indicate that physicians are one of the groups least likely to screen for, identify or report elder mistreatment. The reasons posited by a variety of studies range from inadequate training, low levels of confidence in ability to detect EM, to lack of time in the elder patient encounter. A qualitative study of Kentucky based physicians seeking to understand physician behavior in response to EM, found that a more basic and fundamental explanation for physician response is tied to physician knowledge of EM. This study found that physicians generally have a personal conception or definition of EM, which is premised on factors such as knowledge/awareness of EM, education/training, experience, personal values, as well as environment and culture. This finding is important because individual conceptions may act to introduce subjectivity and capriciousness to physician response to EM, especially in the absence of standardized definitions or body of knowledge about EM. Also, it underscores the importance of targeting physician education and training as a viable means to improve knowledge and awareness, key steps in changing response to EM.

### **ELDER MISTREATMENT IN A COMMUNITY-DWELLING POPULATION: FINDINGS FROM A LARGE COHORT OF U.S. CHINESE OLDER ADULTS**

E. Chang<sup>1</sup>, M.A. Simon<sup>2</sup>, E. Wong<sup>3</sup>, B. Wong<sup>3</sup>, F. Huang<sup>1</sup>, Y. Li<sup>1</sup>, X. Dong<sup>1</sup>,  
1. *Rush Institute for Healthy Aging, Rush University Medical Center, Chicago, Illinois*, 2. *Northwestern University, Chicago, Illinois*, 3. *Chinese American Service League, Chicago, Illinois*

Background: Elder mistreatment (EM) is a social, legal, and human rights issue with adverse health consequences. Despite increased calls for rigorous research in EM among racial/ethnic groups, there is very little empirical evidence on the prevalence rate of EM among U.S. Chinese older adults. Methods: This is a cross-sectional study with community-dwelling Chinese older adults over the age of 60. To our knowledge, this is the largest cohort of U.S. Chinese older adults in epidemiological studies. A total of 1,112 participants were recruited through community centers, churches, senior facilities in Chicago. In an interview format, we administered a 10-question elder mistreatment screening instrument (Cronbach's alpha = 0.84). Results: Among surveyed participants, the mean age was 74.8. Sixty-four percent were female. A total of 12.7% of the participants reported positive to elder

mistreatment. 7.5% of the participants have felt uncomfortable with someone in the family, 5.6 % reported having had family conflicts at home. 5.2% reported that they had been called names, been put-down, and felt bad recently, 3.2% of the participants have felt that nobody wanted them to be around, 1.5% of participants had been taking belongings without ok. Conclusion: Our findings suggest that EM is an existing health issue in U.S. Chinese aging population. There exists an urgent need for educational initiatives and community awareness programs that highlight this pervasive public health issue. Population-based study of risk and protective factors are needed to inform future prevention and intervention programs to improve the well-being of this vulnerable population.

### **EVIDENCE OF CONSTRUCT VALIDITY FOR A COMMUNITY-BASED SELF-NEGLECT SEVERITY SCALE: RESULTS OF A CONFIRMATORY FACTOR ANALYSIS**

J. Burnett<sup>1,3,2</sup>, P.M. Diamond<sup>4,3</sup>, A.E. Hochschild<sup>1,3,2</sup>, J. Booker<sup>3,5</sup>, C. Dyer<sup>1,3,2</sup>,  
1. *Internal Medicine, UT Health, Houston, Houston, Texas*, 2. *Harris County Hospital District, Houston, Texas*, 3. *Texas Elder Abuse and Mistreatment (TEAM) Institute, Houston, Texas*, 4. *UT Health, Houston-School of Public Health, Houston, Texas*, 5. *Texas Department of Family and Regulatory Services, Division of Adult Protective Services (APS), Houston, Texas*

Background: Self-Neglect is the most common report to Adult Protective Services (APS) nationwide and is linked with a 6-fold increase in the odds of mortality among older adults. Currently, there is no standardized assessment available for detecting self-neglect in the community. This study provides evidence supporting the construct validity of a community-based assessment for identifying self-neglect among older adults. Methods: The SSS was completed in the homes of 250 community-dwelling adults 65 years of age and older with APS validated self-neglect. The SSS consists 28 observational items rated on a scale of 0 (No Evidence of Self-Neglect) to 4 (Evidence of Severe Self-Neglect). Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were conducted to identify the underlying factor structure confirm the most parsimonious model that replicated the pattern of latent factors. Fit criteria in the form of the X<sup>2</sup>, Comparative Fit Index (CFI), the Tucker-Lewis Index, the Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Square Residual (SRMR) were assessed to determine model fit. Results: The EFA identified 3 underlying factors: personal appearance (MPA), exterior environment (EE) and interior environment (IE). MPA consisted of usual source of health care, time since the last physician visit, personal hygiene, and untreated medical conditions. IE consisted of odor, cleanliness, clutter, number and condition of pet. EE consisted of structure and exterior of the home. The CFA showed adequate fit based on the X<sup>2</sup> = 53.24, df = 40, p=0.08, CFI = 0.962, TLI = 0.948, RMSEA = 0.041 and SRMR = 0.056. Conclusion: The SSS appears to have construct validity supporting the measurement of the different areas of self-neglect. With further development this tool could potentially be used as a community-based research tool for incidence and prevalence studies as well as providing evidence needed for targeted public health prevention and intervention programs.

### **PROFESSIONALS' PERSPECTIVES ON INTERVENTIONS FOR ELDER FINANCIAL ABUSE: A PILOT STUDY**

S.C. Gibson, E. Greene, *Psychology, University of Colorado at Colorado Springs, Colorado Springs, Colorado*

Introduction. Professionals working with older adults are faced with the challenge of detecting and possibly reporting suspected financial exploitation. This preliminary study examined professionals' perceptions on possible intervention strategies in cases of elder financial abuse. Method. Using vignette methodology, participants (N = 76) from various professions were randomly assigned to one of four conditions portraying a financially exploitative situation involving an older widow

and a recently-befriended caregiver. The vignettes varied by the victim's age (e.g., 60 or 80-years old) and the presence of cognitive impairment (e.g., with or without). Participants rated their perceptions of appropriateness to five help-seeking intervention strategies using a 1-7 Likert scale. Participants also rated the level of potential risk to the elder when no intervention was taken. Results. One-way between-groups ANOVAs revealed no statistically significant differences for age or presence of cognitive impairment on intervention appropriateness ratings. Descriptive findings revealed "Contacting Adult Protective Services" as the most appropriate intervention ( $M = 5.62, SD = 1.55$ ) and "Reporting to the police" as the least appropriate intervention ( $M = 2.92, SD = 1.82$ ). When rating the level of potential risk to the elder when no intervention was taken, statistical results approached significance for age,  $F(1, 72) = 3.48, p = .06$ , with a small effect size (partial Eta squared = .04); whereas greatest risk was perceived when the victim was 60 years old ( $M = 6.08, SD = 0.19$ ) compared to 80 years old ( $M = 5.58, SD = 0.18$ ). Discussion. Findings may be an artifact of vignette methodology in that professionals may need more evidence to endorse intervention strategies. Findings may also be related to the increased advocacy for older adults and support for autonomy that has been shaped by policy and legislation in elder care.

### **ELDER FINANCIAL ABUSE: DECISION CUES INFLUENCING CERTAINTY THAT ABUSE IS TAKING PLACE AND LIKELIHOOD OF TAKING ACTION**

M.L. Gilhooly<sup>1</sup>, M. Davies<sup>1</sup>, D. Cairns<sup>1</sup>, P. Harries<sup>1</sup>, K. Gilhooly<sup>2</sup>, 1. Brunel Institute for Ageing Studies, Brunel University, Uxbridge, United Kingdom, 2. University of Hertfordshire, Hatfield, United Kingdom

In the UK mandatory reporting of suspected elder financial abuse is only required of a small proportion of the professionals likely to encounter such abuse, namely adult safeguarding professionals. Little is known about how other professionals, for example people in banking or health care, make decisions in relation to suspected financial abuse or what prevents them accepting responsibility for intervening in cases of abuse. The research questions for this study were, (1) Which decision cues (case features) are most influential in decision-making? (2) Which characteristics of the decision-maker are most influential in decision-making? Data was collected via the World Wide Web where participants (82 health, 70 social care and 70 banking professionals) were asked to read and rate case scenarios. Data was analyzed quantitatively using two methods: (a) cluster analysis to group participants according to their judgement about the certainty that financial abuse is occurring and likelihood of taking action, and (b) regression techniques to identify the importance of each of the factors in decision-making. Of the many cues that could be used in making a decision, only a few appear to persuade professionals that financial abuse is taking place. Similarly, only a handful of cues influence decision-making in relation to actions taken. The characteristics of the decision-maker appeared to have little influence on the decisions they made; Age, years of experience, gender and living circumstances did not influence certainty of identifying financial abuse or the likelihood they would take action.

### **SESSION 215 (POSTER)**

#### **AGE-RELATED DEPRESSION AND ANXIETY**

##### **PROBLEM-SOLVING THERAPY FROM STROKE SURVIVOR PERSPECTIVE: A PILOT STUDY**

N. Hadidi<sup>1</sup>, R. Lindquist<sup>1</sup>, K.C. Buckwalter<sup>2</sup>, 1. University of Minnesota, School of Nursing, Minneapolis, Minnesota, 2. University of Iowa, College of Nursing, Iowa City, Iowa

Background: Problem solving therapy (PST) is a psychosocial intervention that is effective for treatment of depression in non-stroke patients; however, literature on its impact on stroke survivors is limited. The purpose of this paper is to present the stroke survivors' perspective

on helpfulness and confidence in the use of PST as assessed in a pilot study. Methods: Twenty-two stroke patients ( $n=11$  per group) participated in a randomized controlled, non-blinded pilot study in which treatment group participants received weekly PST, vs. the control group which received weekly phone calls. A questionnaire was administered to the treatment group at a 3-month follow-up to evaluate their subjective perceptions of the impact of PST. Results: Eighty-two percent of participants found PST to be "helpful" or "very helpful" and felt "confident" or "very confident" in using it to resolve issues. Thirty-six percent of participants responded that they used PST to resolve issues "always" or "almost always. Themes were derived from a single-item question asking participants, "In what way, if any has PST, helped you?" Themes included, "accountability," "simplifying problems by breaking them down and considering pros and cons of solutions," "feelings of support," "feeling of not being alone," "motivation to reach goals" and "feeling positive in addressing problems." Conclusion: 3-month follow-up suggests that stroke survivors perceive PST to be a helpful therapy in reducing depressive symptoms and have confidence about using it. Through PST, participants learn and apply the therapy to solve everyday life problems. Considering the small size of this study, future larger-scale research is needed to identify the impact of PST on stroke survivors during recovery.

##### **UNDERSTANDING DEPRESSION IN A COMMUNITY-DWELLING U.S. CHINESE POPULATION: FINDINGS FROM A CROSS-SECTIONAL STUDY OF CHINESE OLDER ADULTS IN CHICAGO**

E. Chang<sup>1</sup>, M.A. Simon<sup>2</sup>, E. Wong<sup>3</sup>, B. Wong<sup>3</sup>, F. Huang<sup>1</sup>, Y. Li<sup>1</sup>, X. Dong<sup>1</sup>, 1. Rush Institute for Healthy Aging, Rush University Medical Center, Chicago, Illinois, 2. Northwestern University, Chicago, Illinois, 3. Chinese American Service League, Chicago, Illinois

Background: The burden of mental health disparities continue to disproportionately affect immigrant older adults. Vast knowledge gaps still persist in understanding the psychological needs of Chinese immigrant older adults – one of the fastest-growing minority communities in the U.S. Methods: We examined psychological-well-being of community-dwelling Chinese older adults in Chicago in a cross-sectional study. In an interview format, we administered PHQ-9 to detect depressive symptoms. Community-based participatory research approach was utilized to partner with Chicago Chinese community. Results: Among surveyed participants ( $N=1,112$ ), the mean age was 74.8 and 64% were female. With respect to depressive symptoms, 32.5% of participants felt trouble falling or staying asleep, 30 % of participants reported tired or having little energy, 19.5% of participants reported little interest or pleasure in doing things, 16.9 % of participants felt left out of life, 16.6 % of participants had trouble concentrating on things, 13.7% of participants reported feeling down or depressed, 10.8 % of participants reported poor appetite or over eating, 7.6% of participants had felt bad about oneself, and 4.4 % of participants had thoughts of better-off dead or hurting oneself at least several days in the past two weeks. Conclusion: To our knowledge, this is the largest cohort of U.S. Chinese older adults in epidemiological studies. Our findings suggest that symptoms of depression are common in Chinese aging population. Population-based study of risk and protective factors are needed to inform future prevention and intervention programs to improve the psychological well-being of this population.

##### **DEPRESSION ON THE MARGINS: THE MEANING VERSUS THE EXPERIENCE OF DEPRESSION**

D.J. Van Dussen<sup>1</sup>, K.L. Culler<sup>2</sup>, 1. Sociology, Anthropology, and Gerontology, Youngstown State University, Youngstown, Ohio, 2. The University of Akron, Akron, Ohio

This presentation covers the experiences of older adults, with depression and the meaning of depression compared to the CES-D. The objective of the presentation is to explore the meaning of depression from

multiple perspectives using mixed-methods research approaches, including the meanings behind and disconnect between quantitative measures and the underlying experiences and meanings of depression. The next part of this presentation examines the roles of stigma and the lifecourse among a sample of older adults with depression. Historic influences of the World War II generation and the sometimes harsh treatment of people with mental health issues are explored to discuss their context in contemporary diagnosis, treatment and experiences of depression. It is important to continue to explore current measures of depression and the measurement characteristics of these measures (e.g. CES-D showing a higher order factor in the current data). The question is how well do these measures capture what it means to be depressed on a qualitative level? The idea behind meaning at the level of measurement is to see how items “behave” across a spectrum of sociocultural variables. This research examines measures of depression with a focus on the CES-D as used among a sample (n= 760) independent living residents of CCRC’s. Major limitations of the CES-D include a lack of perspective (e.g. I feel hopeful about the future) reported by respondents and explored the correlation between age and individual measures within this instrument.

## SESSION 220 (POSTER)

### AGING SUCCESSFULLY

#### PROMOTING COGNITIVE FUNCTION THROUGH CONTINUITY OF ACTIVITY PARTICIPATION

R. Stevens-Ratchford, *Occupational Therapy and Occupational Science, Towson University, Towson, Maryland*

Background. Continuity (Menec, 2003) of longstanding occupation fosters cognitive function and successful aging. Objective. I examined the continuity of longstanding occupation and its relation to cognitive function and successful aging in a sample of 292 community-dwelling older adults. Longstanding occupations are activities in which individuals have devoted time and effort for a prolonged period. Successful aging is ongoing health and mental / spiritual well-being, continued high cognitive and physical function, and engagement with life (Rowe & Kahn, 1999; Stevens-Ratchford, 2008). Cognitive function is essential to continuity of participation in long-standing occupations. Method. I used cross sectional survey procedures to examine cognitively stimulating longstanding occupations. The Longstanding Occupation Measure (LSOM;  $r=0.81$ ) measured the continuity of cognitive activities. The Successful Aging Profile (SAP;  $r=0.84$ ) measured successful aging. Descriptive and correlational analyses were used to describe participation and its relation to successful aging. Results. These participants engaged in a variety of activities that promoted cognitive function. Forty-eight percent ( $n=142$ ) - 65% ( $n=192$ ) of the sample engaged in cognitive activities for 41-60+ years. The continuity of longstanding cognitive occupations had a low but significant correlation to successful aging. Discussion. The study’s findings support Rowe and Kahn’s (1999) notions that engagement with life fosters cognitive function and successful aging. The study also supports Atchley’s (1989) notions of continuity of activity patterns. The results also support the relationship between activity participation fosters cognitive function and successful aging (Holtzman et al., 2004). Conclusion. This sample of community dwelling older adults exhibited continuity in their cognitively stimulating activities.

#### THE ROLE OF LIFE EVENTS IN MEANING-MAKING FOR HEALTHY AGEING PERSONS

W.V. Vaart, *1. University for Humanistics, Utrecht, Netherlands, 2. VU university medical center, Amsterdam, Netherlands*

In scientific literature there is a growing attention for relationships between ageing, health outcomes and ‘meaning in life’. However, while the core of ‘meaning in life’ is commonly seen as a coherence in life

stories that builds on connections between life events, little is known about the role that these life events play in meaning-making by ageing persons. Drawing on a review of empirical research in the fields of psychology, health sciences and related disciplines, this paper presents a theoretical framework that aims to fill that gap. The framework incorporates widely used categories of event characteristics – like the event’s importance, severity, desirability, controllability and the life domain involved – and relates them to dimensions that underlie the concept ‘meaning in life’ in a context of healthy ageing. The paper demonstrates that this theoretical characterization of life events increases our understanding of meaning-making and how this relates to healthy ageing.

#### NEW FRONTIERS IN AGING: INSIGHTS FROM AUTISM APPLIED TO ELDERLY BASED ON “GREEN CARE” FARMS IN EUROPE

R.J. McGovern<sup>1,2</sup>, J.J. McGovern<sup>3</sup>, *1. Clinical Psychology, Argosy University-Arizona School of Professional Psychology, Phoenix, Arizona, 2. Case Western Reserve University-Dept of Psychiatry, Cleveland, Ohio, 3. AT Still University-past president, Kirksville, Missouri*

After learning about the successes of caring for the autistic, elderly, and others at thousands of Green Care farms in Europe, a review of related developmental literature was begun to detect the underlying psychological dynamics. The fact that Green Care (care focused on learning to care) worked for both young autistic children as well as older adults suggested that some common principles might be involved. Green Care settings have residents working with plants, animals, and people in very nurturing environments. Among the positive outcomes reported were improvements in the ability to cope, self-esteem, and empathy. The residents gained an improved sense of their own emotions and a growth in logic and understanding of others by accepting responsibility (meaning) for such tasks as watering plants, feeding animals, and caring for more impaired residents. The characteristics of successful Green Care settings were found to fit the components recommended for healthy human development by Stan Greenspan, M.D., of George Washington University in his highly successful treatment of the autistic. His theoretical framework included the central role of emotional regulation in coding perceptions, controlling movements, and developing empathy and complex thinking. In this presentation, this fundamental framework will be applied to a large number of areas of elder care.

#### THE MOTIVATIONAL POWER OF REGRET: INVESTIGATING THE POSITIVE FUNCTIONS OF REGRET

M. Barreto<sup>1</sup>, L.D. Frazier<sup>2</sup>, *1. Mount Ida College, Newton, Massachusetts, 2. Florida International University, Miami, Florida*

This study aims to shed light on the adaptive function of regrets by exploring how regrets generate positive psychological effects through goal-directed behavior. Regret is both an emotional and cognitive phenomenon; regret includes an element of dissatisfaction and implies counterfactual thinking. Thus, regret involves a comparison of some event or process with another, better event or a process that might have been. Through this process regrets can provide information on why events occurred, the particular causes attributed to events, and the resulting emotional and motivational consequences. We seek to be the first to uncover the processes linking regret to goal-oriented behaviors that result in positive outcomes. Data is being collected through an interview format. The sample consists of both men (32%) and women (68%) across adulthood. Specifically, 36% are young adults between the ages of 18 and 29; 21% are middle-aged adults between the ages of 30 and 59; and 43% are aged 60 or older. Preliminary analyses suggest that regrets can be used as a tool for goal-directed behavior. Our data has shown that regrets present themselves in all periods of adulthood; regrets are incorporated into a future goal; and that the inclusion of a regret into the goal repertoire results in positive psychosocial outcomes. This study paves the way for

important prevention programs aimed at promoting an individual's well-being. This sort of intervention would boost an individual's sense of control, self-esteem, self-efficacy for desired outcomes, and help individuals derive meaning from their experiences in ways that enhance well-being.

#### **IMPACT OF AGE AND RETIREMENT PROXIMITY ON THE RELATIONSHIP BETWEEN SUBJECTIVE WELL-BEING (SWB) AND SELF-EFFICACY**

V. Ryser, *FORS- Swiss Centre of Expertise in the Social Sciences, Lausanne, Switzerland*

Chronological age is a very popular independent variable in developmental research. It is linked with corresponding behaviour and roles, and general expectations over the life course. Chronological age, however, is becoming a less useful variable as people aged because the variability across individual increases over the life course. Consequently, the effect of age is often overestimated in old age research. The aim of our communication is to develop a better understanding of SWB trajectories at the end of life using alternative measures of age. Former research have demonstrated that despite the effectiveness of personal resources and processes of regulation which contribute to the maintenance of a quite good level of SWB in old age, SWB deterioration at the end of life reflects a combination of age, mortality and pathology-related processes. In the present study we will take into account the distance to retirement as a determinant factor for the relation between SWB and self-efficacy. We know that the period of life following retirement is linked with a high level of SWB. After this so-called honeymoon, however, a deterioration of the SWB is often observed which can be explained by a lack of social contact and a loss of personal feeling of being useful. Using a subsample of the Swiss household panel data older than 60 years of age, multilevel analysis will demonstrate how processes of adaptation as self-efficacy help to maintain a good level of SWB in old and very old age taking into account chronological age and distance to retirement.

#### **THE COMPARABILITY OF HAPPINESS AND LIFE SATISFACTION ACROSS COHORTS**

A. Bardo, T. Yamashita, *Sociology and Gerontology, Miami University, Cincinnati, Ohio*

Happiness and life satisfaction are often treated as interchangeable concepts, yet little is known about their comparability across different age groups or cohorts. Underlying conceptual issues make happiness and life satisfaction complex measures to define. The life course perspective suggests that major historical events can affect individual assessments of happiness and life satisfaction disparately. We hypothesize that happiness and life satisfaction are not comparable measures for different cohorts, which previous studies have yet to examine. This study examines the comparability of happiness and life satisfaction across cohorts using the 1973 General Social Survey (GSS: N = 1,504). We selected this earlier wave of the GSS because it includes a wide range of birth cohorts from both before and after the Great Depression. Structural equation modeling was used to test the validity of life satisfaction and its relationship with self-reported happiness. Results show that the life satisfaction measure was valid for our entire sample, as indicated by a series of model fit indices (CFI = .98; TLI = .96; RMSEA = .07). However, this same measure was not valid (RMSEA > 0.1) for older cohorts. Results from multi-group analyses show that the relationship between happiness and life satisfaction is not consistent across cohorts. Interestingly, in this study, the older cohort experienced major historical events (e.g., the Great Depression) during their formidable years (e.g., as children, and young adults). Finally, we discuss more detailed explanations for cohort difference

and the limitations of the interchangeable use of happiness and life satisfaction.

#### **EXPLORING AFFECT IN MIDLIFE AND OLDER ADULTS: COMPARISON OF FACTOR STRUCTURE**

B. Whitehead, C. Bergeman, *University of Notre Dame, Notre Dame, Indiana*

Objective. A substantial literature has established that the experience of affect changes across adulthood; the present study seeks to extend this literature by investigating how the structure of the affective space differs among young midlife (YML; aged 31-50), older midlife (OML; aged 50-64), and later life adults (LL; aged 65+), both globally and on the day level. Methods. 762 midlife and older adults participated in the global and day-level surveys of the Notre Dame Study of Health and Well-Being in Year 1. Affect was measured via the original PANAS supplemented with 22 affect terms tapping a broader arousal spectrum of affective experience. Exploratory factor analyses in each group at each level served to a) provide valence and arousal loadings for each affect term which were then used to plot the affective space, and b) reveal a best-fitting rotated factor structure. Confirmatory factor analyses compared fit for theoretical factor structures and the plot- and EFA-based models; best-fitting models were tested for measurement invariance across groups/levels to better elucidate group differences. Results and Conclusions. A 4-factor model dividing items into 4 valence/arousal quadrants emerged as a best-fitting model for both midlife groups; in the LL group, a 4-factor structure (PA factor and 3 differentiated NA factors) based on the day-level EFA fit best. Measurement invariance tests revealed that the OML group aligned more closely with the YML group in some aspects but with the LL group in others, indicating that this age span is a time of transition in terms of affective structure.

#### **THE DYNAMIC RELATIONSHIP BETWEEN SELF-RATED HEALTH AND LIFE SATISFACTION AMONG RURAL CHINESE OLDER ADULTS: A LONGITUDINAL STUDY USING LATENT GROWTH CURVE ANALYSIS**

L. Xu, I. Chi, *School of Social Work, USC, Monterey Park, California*

Background: Compared with their urban counterparts, rural Chinese older adults were more likely to experience functional impairment and have lower life satisfaction. However, we are unclear about whether health determinate life satisfaction or the other opposite direction. In this study, we tested which one is the leading indicator between self-rated health (SRH) and life satisfaction among rural Chinese older adults. Methods: Four waves of a longitudinal Study of Older Adults in Anhui Province of China were used for this study. A total of 1,715 older adults completed the first wave at 2001 and were followed up in 2003, 2006 and 2009 respectively. Latent difference score (LDS) analyses were applied respectively by using Mplus 5.1 and Amos 5. Results: The results indicated that life satisfaction on average increased over time and SRH followed a decreasing trajectory. The positive correlation between SRH and life satisfaction at each wave meant that the healthier the older adults, the more life satisfaction they have. In addition, the LDS analysis showed that SRH in previous occasion had a significant effect on the subsequent change in life satisfaction ( $\beta = 5.65, p = .000$ ), while life satisfaction slightly predicted subsequent change in SRH ( $\beta = 2.01, p = .065$ ). Therefore, there was almost no lagged effect between SRH and life satisfaction, and SRH thus had a leading role in the prediction effect. Discussion: The results of this study are important for social workers and family practitioners when developing programs and interventions for rural elders.



## AGING VETERANS

**POSTTRAUMATIC STRESS DISORDER AND HELP-SEEKING FROM CLERGY AMONG VETERANS WITH DEPRESSION IN PRIMARY CARE**

L. Bonner<sup>1,8</sup>, A. Lanto<sup>4</sup>, C. Bolkan<sup>2</sup>, G. Watson<sup>1,8</sup>, D.G. Campbell<sup>3</sup>, K. Zivin<sup>5,6</sup>, L. Rubenstein<sup>4,7</sup>, 1. *Veterans Affairs Puget Sound, Seattle, Washington*, 2. *Washington State University, Vancouver, Washington*, 3. *University of Montana, Missoula, Montana*, 4. *Veterans Affairs Greater Los Angeles, Los Angeles, California*, 5. *Veterans Affairs Ann Arbor, Ann Arbor, Michigan*, 6. *University of Michigan, Ann Arbor, Michigan*, 7. *University of California Los Angeles, Los Angeles, California*, 8. *University of Washington, Seattle, Washington*

Although many individuals seek help from clergy for mental health problems, little is known about the prevalence of help-seeking from clergy among Veterans or about the characteristics of VA patients with depression who seek clergy support. We surveyed VA primary care patients (N=761, mean age = 60) with depressed mood and other mental/physical health concerns. Participants responded about preferences for provider type, actual help-seeking from clergy and other providers, and outcomes. Nearly half the sample (47.2%) endorsed being likely to choose clergy for help with emotional problems. Individuals who were likely to consult clergy were also likely to consult physicians and other mental health professionals. A smaller number (11.8%) reported actually consulting clergy within the past 6 months. Controlling for baseline depression, social support, medical comorbidities and alcohol abuse, we found that patients with current PTSD symptoms ( $p=.037$ ) and those with a recent mental health visit ( $p<.001$ ) more frequently endorsed likelihood of seeking help from clergy and actual help-seeking from clergy for emotional problems. A significant number of Veterans surveyed expressed openness to incorporating clergy into their mental health care, particularly older Veterans and those with PTSD. The proportion who actually consulted clergy was smaller, but nonetheless represents a large number of Veterans who could potentially benefit from access to clergy. Further research is needed to determine the treatment preferences of aging Veterans with PTSD. The present data may help inform the role played by clergy within patient-centered care efforts.

**UNIQUE NEEDS AND PREFERENCES OF OLDER HOMELESS VETERANS**

K.A. Frahm<sup>1</sup>, L.M. Brown<sup>1</sup>, S.D. Barnett<sup>3,1</sup>, L. Schonfeld<sup>1</sup>, J. Schinka<sup>2,1</sup>, R. Casey<sup>2</sup>, 1. *Aging and Mental Health Disparities, University of South Florida, Tampa, Florida*, 2. *James A. Haley Veterans Hospital, Tampa, Florida*, 3. *Department of Veterans Administration Center for Excellence, Tampa, Florida*

Objective: Older age is a predictive factor of increased healthcare utilization among veterans. We analyzed data from a large cohort of homeless veterans completing a large transitional program to compare client characteristics and treatment outcomes between older (age  $\geq 55$  years) and younger homeless veterans. Methods: Data for this study consisted of veterans admitted into, and discharged from, the Grant Per Diem (GPD) program during 2003-2009. The VA GPD program provides funds to community-based organizations to deliver housing and supportive services. Information from intake interviews and program discharge was analyzed based on the initial GPD program admission of 40,820 homeless veterans. Results: Older homeless veterans were more likely to be white but comparably male, and recently utilize VA services. A significantly greater number of older homeless veterans reported more serious medical problems including hypertension, cardiovascular disease and emphysema. While older veterans reported decreased use of alcohol and drugs and fewer total days of intoxication, they were less likely to complete the program if they had any

reported current or past alcohol abuse. Despite any alcohol abuse, older homeless veterans were 40% more likely to complete the program compared to younger homeless veterans. Conclusion: Older homeless veterans are at a substantially increased risk of serious medical issues. This older age group is especially vulnerable to experiencing the negative consequences associated with homelessness, including chronic, long-lasting physical and mental health problems and a longer history of homelessness. VA sponsored programs and services may require tailoring to meet their cumulative and complex needs.

**A NEW INSTRUMENT FOR ASSESSING SAFETY CLIMATE IN VA NURSING HOMES: YOU CAN'T IMPROVE WHAT YOU CAN'T MEASURE**

C.W. Hartmann<sup>1,2</sup>, M. Meterko<sup>3,2</sup>, S. Zhao<sup>1</sup>, J.A. Palmer<sup>1,2</sup>, D. Berlowitz<sup>1,2</sup>, 1. *CHQOER, Bedford VA Medical Center, Bedford, Massachusetts*, 2. *Boston University School of Public Health, Boston, Massachusetts*, 3. *VA Boston Healthcare System, Boston, Massachusetts*

A climate of safety—shared values and beliefs regarding patient safety—is recognized as a key to reducing adverse events in hospitals. However, we know little about resident safety climate in VA Community Living Centers (CLCs—i.e., nursing homes), which are undergoing “culture change” to promote resident-centered care. A preliminary version of the CLC Employee Survey of Attitudes about Resident Safety (CESARS) was developed by an expert panel. We conducted two rounds of cognitive interviews and then piloted the revised survey at a national CLC employee conference. A multi-trait analysis (MTA) of these pilot data produced a revised CESARS consisting of 38 items representing 8 dimensions. This version was administered online in 5 geographically diverse CLCs, and exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and MTA were applied to the data. We had an overall response rate of 43% (n=300; range 26%-66%). The EFA replicated the factor structure of the pilot data. Based on the CFA results, we dropped 4 items. The final CFA model indicated satisfactory global data fit: CFI=0.89; TLI=0.87; RMSEA=0.07; SRMR=0.06. All dimensions demonstrated internal consistency reliability of 0.70 or above (range 0.70 to 0.96) except the Culture Change dimension (0.65). A multivariate analysis of variance indicated significant site safety climate differences across sites ( $p<0.000$ ). Overall, sites scored highest on the Shared Importance of Safety dimension (8.04) and lowest on Senior Management's Commitment to Safety (4.04), both 1-9 scales. This is the first instrument to assess safety climate in VA nursing homes, identifying areas for improvement.

**TARGETING ENGAGEMENT ACTIVITIES THROUGH MONTESSORI: EXAMINING FEASIBILITY IN A VA MEDICAL CENTER**

M.M. Hilgeman<sup>1,2</sup>, A. Snow<sup>1,2</sup>, D.J. Vawters<sup>1</sup>, M. Mangrum<sup>1</sup>, J. Biladeau<sup>1</sup>, D. Leonard<sup>1</sup>, B.L. Dinoff<sup>1</sup>, 1. *Tuscaloosa VA Medical Center, Tuscaloosa, Alabama*, 2. *The University of Alabama, Tuscaloosa, Alabama*

Individuals with dementia first benefited from Montessori-based activity programming over a decade ago (Camp, 1999). Montessori activities have documented improvements in basic cognitive abilities (e.g., attention, object permanence), social behaviors/engagement, and decreased behavioral disturbances (e.g., aggression). However, translation to the Veterans Affairs Community Living Centers has not been systematically evaluated. This pilot study examined the feasibility (i.e., implementation, practicality, satisfaction, etc.) of implementing Montessori activities within four diverse units of a VA CLC. Fifty-four CLC staff completed anonymous pre- and post-training questionnaires during a 2-day workshop. Participants included RNs/LPNs (10.8%), CNAs (18.9%), allied health professionals (20.3%), medical providers (1.4%), environmental and dietary support staff (6.8%), administrators (5.4%) and others (9.5%). Staff reported providing M=3.98 direct patient care hours per day (range = 0-8hrs). Prior to training, a minority of staff

reported feeling “mostly” (25.9%) or “completely” (11.1%) able to engage residents with dementia for an extended period of time. Yet 74.5% viewed resident activity engagement as part of their job and 72.7% reported leading a planned activity in the past month. Staff scores on a 12-item pre-training dementia knowledge test revealed satisfactory knowledge about dementia prior to training (i.e.  $M=79\%$  correct, range = 50-100%). Post-training scores revealed improvement on some items though overall scores were not statistically different. Finally 93.9% were satisfied with the training; 89.8% believed it would make them better at their job; and 93.7% reported the training had changed the way they would interact with residents.

#### COMFORT LEVELS WITH CULTURE CHANGE: A SURVEY OF VA NURSING HOME STAFF

J. Palmer<sup>1,2</sup>, M. Meterko<sup>2,3</sup>, S. Zhao<sup>1</sup>, D. Berlowitz<sup>1,2</sup>, C.W. Hartmann<sup>1,2</sup>, 1. Bedford, MA VAMC, Center for Health Quality, Outcomes and Economic Research, Bedford, Massachusetts, 2. Boston University School of Public Health, Department of Health Policy and Management, Boston, Massachusetts, 3. VA Boston Healthcare System, Center for Organization, Leadership and Management Research, Boston, Massachusetts

“Culture change” in nursing homes promotes resident-centered care over medical model care. To assess staff acceptance of culture change principles, we surveyed all employees in a convenience sample of five geographically diverse VA Community Living Centers (CLCs—i.e., nursing homes). The overall response rate was 43% ( $n=300$ ; range 26%-66%). Twelve items inquired about level of comfort with specific culture change scenarios, and two items inquired about the relationship between culture change and CLC residents’ safety. All items used a 9-point response scale, with higher scores indicating greater support for culture change. Overall, staff attitudes about the culture change scenarios tended towards being moderately positive (mean=4.52). Responses to all scenarios varied significantly by site (Wilks’  $\lambda < 0.0001$ ) and by occupation (Wilks’  $\lambda = 0.024$ ). We observed the greatest heterogeneity in staff attitudes on the scenario of staff and residents sharing restrooms ( $CV=101.76$ ). Staff responses were the most homogeneous on the scenario of allowing nursing assistants to access medical records ( $CV=35.18$ ). On the two items regarding resident safety, participants: 1) felt that culture change had a slightly positive effect on resident safety (mean=5.85; s.d.=1.93), but 2) had neutral views about whether safety rules and policies interfered with culture change (mean=5.12; s.d.=2.33). This study identified varying levels of support for culture change among CLC staff. Such information will allow managers, senior leadership, policymakers, and researchers to anticipate specific aspects of culture change for which staff acceptance may be equivocal and for which staff input and/or staff training might be beneficial.

#### EXAMINING RELATIONSHIPS BETWEEN OBJECTIVE AND SUBJECTIVE STRESSORS AND PSYCHOSOCIAL OUTCOMES IN VETERANS WITH DEMENTIA

M. Krestar<sup>1</sup>, D.M. Bass<sup>2</sup>, K. Judge<sup>1,2</sup>, A. Snow<sup>3,4</sup>, N.L. Wilson<sup>5,6</sup>, R.O. Morgan<sup>5,7</sup>, M.E. Kunik<sup>5,6,8</sup>, 1. Cleveland State University, Cleveland, Ohio, 2. Benjamin Rose Institute on Aging, Cleveland, Ohio, 3. Center for Mental Health and Aging and Department of Psychology, Tuscaloosa, Alabama, 4. Veterans Affairs Medical Center, Tuscaloosa, Alabama, 5. Michael E. DeBakey Veterans Affairs, Houston, Texas, 6. Baylor College of Medicine, Houston, Texas, 7. University of Texas School of Public Health, Houston, Texas, 8. Department of Veterans Affairs South Central Mental Illness Research, Education, and Clinical Center, Houston, Texas

Research has consistently found a variety of negative symptoms and psychosocial outcomes associated with living with dementia, such as embarrassment about memory loss and symptoms of depression. However, few studies have examined predictors of well-being outcomes for

individuals with dementia or have utilized self-report data from individuals that assess their perceptions and experiences of their illness. The current study investigated self-report data from 283 veterans with dementia enrolled in “Partners in Dementia Care,” a clinical trial testing a care coordination intervention, to identify salient predictors (e.g., cognitive impairment, difficulty with IADLs) of psychosocial outcomes (e.g., depression). Guided by the Stress Process Model for Individuals with Dementia, the following research questions were addressed: (1) What is the relative importance of primary subjective stressors compared to primary objective stressors in the prediction of psychosocial outcomes in veterans with dementia? (2) Do primary objective stressor measures moderate the relationship between primary subjective stressor measures and psychosocial outcomes? Results will be discussed in terms of the predictive value of objective and subjective reports of individuals with dementia for psychosocial outcomes along with how this information can be used further to understand the illness experience of individuals with dementia.

#### VETERANS HEALTH ADMINISTRATION ADULT DAY HEALTH CARE PROGRAMS: VARIATIONS AND COMMON FEATURES

T. Rivero, J. Hughes, J.L. Martin, B. Kramer, VA Greater Los Angeles Healthcare System Geriatric Research, Education and Clinical Center, North Hills, California

Background: The Veterans Health Administration (VHA) provides non-institutional geriatric and extended care services through a number of programs including Adult Day Health Care (ADHC). VHA ADHC aims to provide interdisciplinary care with the goals of maintaining function and reducing institutionalization for older Veterans. However, there is a paucity of literature that identifies types of mental/behavioral health services provided to Veterans within these programs. Objective: To describe the population served by VHA ADHC and to identify common ADHC program elements with the aim of developing and implementing new mental/behavioral health interventions targeted for VA ADHC programs. Methods: A semi-structured open-ended telephone survey collected data from 7 ADHC site directors in five domains; 1) program background information, 2) screening and admission processes, 3) common patient characteristics; 4) existing mental/behavioral interventions offered, and 5) desirable mental/behavioral health interventions. A comparison of qualitative responses was conducted using note-based analysis. Results: There was substantial variation across programs in services provided. There were also differences in perceptions of mental/behavioral health interventions and the role that these services play in the ADHC setting. Conclusions: Further research is necessary to understand these and other barriers to the implementation of mental/behavioral health interventions for older Veterans in VHA ADHC programs.

#### ASSESSMENT OF A VULNERABLE POPULATION FOR DISASTER PREPAREDNESS

M. Claver<sup>2,1</sup>, T. Wyte<sup>2</sup>, K. Tran<sup>2</sup>, K. Ricci<sup>2</sup>, 1. Gerontology Program, Calif State Univ Long Beach, Long Beach, California, 2. VHA Emergency Management Evaluation Center, Sepulveda, California

This pilot project assessed the role of Veterans Health Administration (VHA) home-based primary care (HBPC) providers in assessing the disaster preparedness of community-dwelling veterans and identified ways in which HBPC policy supports routine assessment of disaster preparedness for its patients. Veterans receiving home-based primary care are especially vulnerable during disasters due to their high rates of chronic diseases, cognitive impairment, and physical disabilities, and their dependence on life-saving treatments and equipment. For many HBPC patients, their functional limitations may also prevent them from being adequately prepared for disasters. Eight HBPC providers from one VA facility participated in face-to-face and telephone interviews about 25 minutes in duration. Transcripts of the interviews were ana-

lyzed using qualitative methods. Results will allow VHA HBPC programs to better understand the role of providers in assessing home-bound patients for disaster preparedness. Future research will expand the study to include several VHA HBPC programs regionally, and then nationally.

### **COLLECTIVE MEMORY IN TESTIMONIES OF THE BATAAN DEATH MARCH**

D. Garst, *University of Texas at Dallas, Richardson, Texas*

Eyewitness accounts of wartime experience are not only essential in historic remembrance of events, but are also valuable resources to explore the collective memory of aging veterans. Reflections of the horrors of war can be used to address topics of collective silence, life review, transmission of legacy, and the development of wisdom in the unique population. American and Filipino soldiers fought to protect Luzon in the Philippines during the Pacific Theater of World War II. The men faced depleted supplies, malfunctioning equipment, disease, and lack of reinforcements and were surrendered to the Imperial Army in April 1942. The prisoners of war (POW) were forcibly marched across the Bataan peninsula in the "Bataan Death March," held in captivity, and ultimately transported via train and ship to Japan for forced labor. The project utilizes oral history testimonies gathered from survivors of the Bataan Death March accessed in archives of the Oral History Project at the University of North Texas, the National World War II Museum, and the Veterans History Project. The project will explore eyewitness testimonies of conditions and physical brutality and cultural/military history in relation to life review and transmission of legacy. Collective memory of the soldiers will also be explored in illustrations of solidarity among the marchers in brutal conditions, silence of the POW experience, post-war reactions, and public memorials to events.

### **SESSION 230 (POSTER)**

#### **ANTECEDENTS AND CONSEQUENCES OF DISABILITIES**

##### **PREDICTORS OF PRECLINICAL DISABILITY IN ADULTS WITH SLEEP COMPLAINTS**

R.A. Lorenz<sup>1</sup>, C.B. Budhathoki<sup>1</sup>, G. Kalra<sup>2</sup>, K.C. Richards<sup>3</sup>, 1. *School of Nursing, Saint Louis University, Saint Louis, Missouri*, 2. *University of Pennsylvania, Philadelphia, Pennsylvania*, 3. *George Mason University, Fairfax, Virginia*

**Introduction:** Preclinical disability, a stage of functional decline, precedes the onset of physical disability. During this stage, older adults have difficulty completing daily tasks, such as walking and climbing stairs, which is associated with increased health care utilization, reduced quality of life, and increased risk for dependency in older age. Because poor sleep may be associated with functional decline, this study examined the relationship between sleep and preclinical disability in adults with sleep complaints. **Method:** Fifty-three community-dwelling adults (38 Females; Mean age=69.6 years; SD=8.9) participated in an ongoing study (1R01AG027778, KC Richards PI) for one night of in-laboratory polysomnography (PSG) and completed the Functional Performance Survey. Preclinical status was constructed by calculating the proportion of tasks for which a change in method or frequency was reported, divided by the total number of tasks. Hierarchical regression analysis was used to estimate the association of sleep variables (mean total sleep time, sleep efficiency, and wake after sleep onset) with preclinical disability after controlling for age, gender, and chronic disease burden. **Results:** In a final multiple regression model ( $R^2=0.202$ ,  $F(2,47)=5.94$ ,  $p=0.005$ ) adjusting for chronic disease ( $p=0.025$ ), total sleep time ( $p=0.01$ ) was the strongest predictor of preclinical disability, such that less sleep was associated with more difficulty completing daily tasks. **Discussion:** Short total sleep time is a potentially modifiable risk factor, which could substantially reduce functional decline and

associated health care costs among the rising population of older adults. Future research should test interventions to improve total sleep time and sleep efficiency.

##### **THE ROLE OF SOCIAL RELATIONSHIPS FOR RECOVERY FROM SEVERE MOBILITY LIMITATION AMONG COMMUNITY-DWELLING OLDER AMERICANS**

K. Latham<sup>1</sup>, P. Clarke<sup>1</sup>, G. Pavela<sup>2</sup>, 1. *Population Studies Center, University of Michigan, Ann Arbor, Michigan*, 2. *University of Florida, Gainesville, Florida*

Recovery from functional health declines is often overlooked in the literature; however, identifying potential facilitators of recovery may highlight opportunities for intervention. Prior research has documented a positive association between social relationships and health, yet there is limited research investigating social relationships and recovery from functional health declines or disease. There is some evidence to suggest that social relationships may be important facilitators for recovery, but the extant literature is very limited including a lack of diverse social relationship measures and measures of recovery as well as a paucity of nationally representative data. Utilizing data from Waves 4 through 9 (1998-2008) of the Health and Retirement Study (HRS), this research examines social relationships and recovery from severe mobility limitation among community-dwelling older adults. Using a more nuanced measure of recovery including complete recovery (severe to no mobility limitation) and partial recovery (severe to mild mobility limitation), a series of discrete-time event history models with multiple competing events were created, which were estimated by using multinomial logistic regression. Robust standard errors were also employed to adjust for clustering at the individual-level. Perceived social support (adjusted odds ratio=1.42,  $p$ -value=0.009) was a strong and consistent predictor of complete recovery, while neighborhood engagement (adjusted odds ratio=1.22,  $p$ -value=0.008) and community engagement (adjusted odds ratio=1.18,  $p$ -value=0.044) were significant predictors of partial recovery. These findings have both theoretical and policy implications.

##### **PREDICTORS OF OLDER ADULTS' MOBILITY BASED ON A COMPREHENSIVE THEORETICAL FRAMEWORK**

M.C. Janke<sup>1</sup>, M. Umstadt Meyer<sup>2</sup>, A. Beaujean<sup>2</sup>, 1. *University of South Florida Polytechnic, Lakeland, Florida*, 2. *Baylor University, Waco, Texas*

Forty-six percent of older adults report limitations in their mobility (Shumway-Cooke et al., 2005), and maintaining mobility is considered an important factor in keeping adults' independent and active in later life. Recently, Webber and colleagues (2010) proposed a theoretical framework identifying multiple domains of mobility, including of five determinants that additively influence mobility (financial, psychosocial, environmental, physical, and cognitive), while also acknowledging the influences of gender, culture and biographical factors. Using data from the Health and Retirement Study ( $N = 6112$ ), this study tests this framework as it relates to older adults' personal and transportation mobility. Our sample had a mean age of 74.74 years, was 84.5% White, 41% male, and 57% married. Structural equation modeling was conducted using MPLUS 6. Using the five determinants, we tested a model of the original framework predicting adults' personal and transportation mobility. This model did not fit the data very well ( $\chi^2 = 1377.15$ ,  $p = .00$ ; RMSEA = .10; CFI = .77; SRMR = .09). Subsequently, we altered the model to include only three determinants of mobility (environment, physical, and psychosocial), which fit the data better ( $\chi^2 = 215.56$ ,  $p = .00$ ; RMSEA = .04; CFI = .97; SRMR = .02). Last, we examined the influence of socio-demographic factors, and found only age and marital status to contribute substantially in predicting mobility. Transportation mobility was predicted by age, marital status and psychosocial and environmental determinants ( $R^2 = .53$ ). Personal mobility was predicted by age, marital status and physical determinants ( $R^2 = .35$ ).

## FACTORS INFLUENCING FUNCTIONAL ABILITY AMONG COMMUNITY-DWELLING ADULTS AGING WITH DEVELOPMENTAL DISABILITIES

B. Hutchings, *Social Work, Marywood University, Scranton, Pennsylvania*

Adults with developmental disabilities are increasingly reaching old age while living in community-based, non-institutional settings. The overlay of cognitive and physical age-related impairments onto existing intellectual and physical disabilities place this generation at risk for premature functional limitations and dependency. This paper presents the results of a study examining individual functional ability in the performance of typical self-care and household activities, personal expectations of competency, and the physical and social environment of the homes of people aging with developmental disabilities. Collecting both quantitative and qualitative data, in-home interviews and observations were conducted with 129 adults aging with developmental disabilities who reside in small, community-based residences. Telephone interviews were also conducted with 20 of their direct care staff. Questions investigated consumers' perceptions of their ability to perform specific self-care and independent living skills in their home environment. An extensive task observation component followed in which consumers were asked to demonstrate how they performed everyday self-care activities. Staff interview topics included how consumers' functional abilities shifted as a consequence of aging, and issues impacting consumers' task performance. Findings indicated that 90 percent of the consumers expected to perform less well than they did during the task observation. Analysis of all data sources suggested factors that may have inhibited functional ability, such as an over-concern with the risks involved, basic home modification and repair needs, and staffs' habitual care-giving behaviors such as performing tasks themselves to improve efficiency. Methods of encouraging and fostering independence and autonomy in the home are discussed.

## INSUFFICIENT HELP FOR ADL DIFFICULTIES AND FUTURE EMERGENCY DEPARTMENT UTILIZATION

G. DePalma, L.P. Sands, *School of Nursing, Purdue Univ, West Lafayette, Indiana*

**BACKGROUND.** Insufficient help for activities of daily living (ADL) disabilities is associated with self-reports of skin breakdown, going hungry, and injuries. Prior research has not determined whether self-reports of health consequences are predictive of need for emergency department (ED) services. We hypothesized that insufficient human help for ADL disabilities is associated with greater risk for ED utilization. **METHODS.** Community-living older adults who responded to the 1994, 1999 and 2004 community interviews of the National Long Term Care Survey (NLTC) were queried about their ADL status, demographic and health characteristics. ED utilization was determined from linked Medicare records. A Cox proportional hazards model was computed to estimate the hazard of ED use for those with insufficient ADL assistance after adjustment for demographics, ADL level, and co-morbidities. **RESULTS.** All subjects had at least one ADL disability; 33% were less than 75 years old, 71% were female, 85% were white, 39% were living alone, and 22% of subjects reported insufficient help for one or more ADL disabilities. Rates of more than one ED admission were 28% and 34%, respectively, for those who did and did not report insufficient ADL help. Compared to those with sufficient ADL help, the hazard of subsequent ED admission for those who reported insufficient help was 1.15 (95% CI = 1.01- 1.44). **CONCLUSION.** Results suggest that self-reports of insufficient help are associated with health events that lead to ED utilization. Future studies are needed to determine whether interventions that reduce reports of insufficient help also reduce ED utilization.

## SOCIO-DEMOGRAPHIC RISK FACTORS AMONG MALAYSIAN OLDER ADULTS

S. Md. Yusof, A. Azhar, M. Zawi, *University of Technology MARA, Shah Alam Malaysia, Shah Alam, Malaysia*

**Background:** Falls are the leading cause of injury among people above 65 years old. Falls and the consequences are the major health-related problems among older adults. Everyone should be aware of fall risk and its contributing factors. **Objective:** This study is aimed to determine the socio-demographic factor variables related to falls among Malaysian older adults. **Methods:** 212 participants represented four zones in peninsular Malaysia were recruited. Participants were divided into three age groups: young old (65-74 years), mid-old (75-84 years) and oldest-old (>85 years). Fall risk was represented by Overall Stability Index (OSI) assessed by Biodex Balance System. Interviews were conducted to acquire factors related to socio-demographic variables. **Results:** A 2x2 ANOVA was performed to ascertain the socio-demographic factors on the fall risk. Significant effect for gender  $F(2, 206) = 185.5, p < .05$ , race,  $F(2, 206) = 165.4, p < .05$ , residency factors,  $F(2, 206) = 179.3, p < .05$  and educational attainment  $F(2, 206) = 137.2, p < .05$  with large effect size (partial eta squared = 0.64, 0.62, 0.64, 0.57 respectively) were observed. Tukey-HSD analysis demonstrated significant difference in all age groups. **Conclusions:** Understanding fall risk factors may provide a better insight in preventing falls among elderly which may promote a modification in activities. A objective national fall risk profiling would be important in addressing quality lifestyle issues among this population.

## UNMET NEED FOR ADL DISABILITY AND RISK OF UNDESIRED TRANSITIONS AMONG COMMUNITY-LIVING OLDER ADULTS

S. He<sup>1</sup>, H. Xu<sup>2</sup>, B.A. Craig<sup>1</sup>, P. Stallard<sup>3</sup>, L.P. Sands<sup>1</sup>, *1. School of Nursing, Purdue Univ, West Lafayette, Indiana, 2. Indiana University, Indianapolis, Indiana, 3. Duke University, Durham, North Carolina*

**BACKGROUND.** To assess whether self-reports of unmet need for ADL disability are prognostic of older adults experiencing multiple transitions from the community including admission to a hospital, skilled nursing facility, or death within one year. **METHODS.** Interview dates, demographics, ADL functioning and health status of community respondents and whether they have unmet need for ADL disability were determined from the 1994, 1999, and 2004 National Long Term Care Survey (NLTC). Dates of admission to and discharge from hospital and skilled nursing home, and dates of death, were obtained from linked Medicare and vital statistics data. **RESULTS.** Among 7226 respondents who reported at least one ADL disability during the NLTC community interview, 80% were 75 or older, 72% were female, 89% were white, 34% were hospitalized within one year prior to the interview, and 21% reported unmet need for ADL disability. The proportion of respondents experiencing at least one transition within one year after interview were 43% vs. 37% for those with vs. without unmet need for ADL disability. Furthermore, a respondent with vs. without unmet need for ADL disability underwent 1.00 vs. 0.78 transitions on average. A Poisson regression model that adjusted for demographics, ADL functioning and health status revealed that unmet need for ADL disability was associated with an increased risk for transitioning from the community (RR = 1.13, 95% CI: 1.01-1.26). **CONCLUSION.** For older adults with at least one ADL disability, self-reports of unmet need for ADL disability are prognostic of experiencing transitions from their community residences.

## PHYSICAL PERFORMANCE VERSUS DISABILITY IN A TRADITIONAL FORAGER-HORTICULTURALIST POPULATION

F. Wheaton, E. Crimmins, *Univ Southern California, Los Angeles, California*

Little is known about physical performance and disability and how these are related in traditional human populations. The Tsimane of

Bolivia are an indigenous forager-horticulturalist group with high physical activity and little obesity, but have high inflammation, low life expectancy, and limited access to medical care. Data on adults aged 50+ from the Tsimane Health and Life History Project (N=602) were used to examine differences in measured physical performance and self-reported disability between remote and more developed villages. Physical measures reflect poor physical functioning, and include a timed 3-meter walk (>9 seconds), a tandem stand with eyes closed (<10 seconds), and standing on one leg (<10 seconds). Disability was defined as having difficulty with or being unable to do one or more of the following activities of daily living (ADLs): dressing, bathing, eating, using the bathroom, or mobility. Controlling for age and sex, logistic regression results indicate that odds of disability did not differ between regions. In contrast, those living near San Borja had 1.97 times higher odds of performing poorly on the timed walk ( $p<.001$ ), and had 2.25 and 1.72 times higher odds of being unable to hold the tandem stand ( $p<.001$ ) and the one-leg stand ( $p=.025$ ). Selective mortality may be higher in remote areas, or those in remote areas may maintain higher levels of physical activity. Finally, the discrepancy between physical performance and perceived disability may be due to a lack of environmental modifications and assistive devices in remote areas and lower access to medical care.

### THE EFFECTS OF HIP FRACTURES ON DEBILITY AND DESTITUTION

M. Kilgore<sup>1</sup>, D.J. Becker<sup>1</sup>, T. Arora<sup>1</sup>, J.R. Curtis<sup>2</sup>, K.G. Saag<sup>2</sup>, E.S. Delzell<sup>1</sup>, M.A. Morrissey<sup>2</sup>, 1. *Health Care Organization and Policy, UAB School of Public Health, Birmingham, Alabama*, 2. *UAB School of Medicine, Birmingham, Alabama*

Hip fractures are devastating, with mortality and costs comparable to heart attacks and strokes. Osteoporosis medications are at least as effective as lipid lowering and antihypertensive medications, but not nearly as well utilized. The impact of hip fractures on functional status and patient costs has not been well characterized. This study estimates fracture effects on debility, as evidenced by subsequent nursing home (NH) residency, and destitution, as evidenced by entry into Medicaid. We obtained data for the 5% sample of Medicare beneficiaries from 1999 through 2009. Eligible subjects were continuously enrolled in traditional fee for service Medicare in the year prior to a hip fracture. We defined NH residency as the receipt of physician service for nursing facility care in the absence of Medicare claims for SNF services. We identified Medicaid enrollment using the Medicare code indicating State Medicaid buy-in for premiums. We identified 98,961 eligible hip fracture cases; of these, 20,100 occurred among individuals already NH residents. Excluding these, 56% of hip fracture cases were alive and community dwelling one year after the fracture, 26% died within the year and 18% had become NH residents. Among those who died, 21% spent some period of the year in a nursing home. Of the 68,027 community dwelling beneficiaries not enrolled in Medicaid prior to the fracture, 4.4% enrolled in Medicaid at some point in the year after the fracture. Of 17,767 beneficiaries already enrolled in Medicaid before the fracture, 39% were NH residents.

### SESSION 235 (POSTER)

#### ASSESSMENT (INCLUDING GERIATRIC ASSESSMENT, FUNCTIONAL ASSESSMENT, FUNCTIONAL STATUS INSTRUMENTS)

#### PREDICTORS OF TRANSITION AMONG OLDER ASSISTED LIVING RESIDENTS

T.B. Piggee, L. Morgan, *University of Maryland Baltimore County, Baltimore, Maryland*

In a longitudinal analysis of data from six assisted living (AL) sites in Maryland, proxy and performance-based measures of physical func-

tion (MDS-ADL, balance, chair rise, gait, and grip strength) and cognitive status (proxy - MDS-COGS, performance - MMSE) were used to examine the link between changes in functioning and transitions from AL. Seventy residents (mean age 85.4 years), were assessed at 6-month intervals over 18 months. Assisted living caregivers provided proxy data. Correlations between proxy-rated physical functions (ADL) and those for performance evaluated tasks found notable discrepancies. While most residents were notably limited in some or all physical functions, proxies rated a majority (80%) as independent in all ADL tasks. For cognition (MDS-COGS and MMSE), proxy and performance-based measures showed strong association ( $r = -.685$ ,  $p = .001$ ) in the expected direction. Neither baseline functioning of either type nor changes over time in physical or cognitive status predicted resident transitions. Findings suggest subjective assessments by proxies may result in inappropriate retention or transfer.

### DEVELOPMENT AND PSYCHOMETRICS OF HOME SAFETY SELF-ASSESSMENT TOOL (HSSAT) FOR COMMUNITY-DWELLING OLDER ADULTS TO PREVENT FALLS AND ITS EFFECTIVE DELIVERY METHODS

M.R. Tomita, *Rehabilitation Science, Buffalo, New York*

One in three older adults who are 65 years and older has a fall in a given year, and nearly half of this population fall again. Although falls can be preventable, an effective tool to identify home hazards and their solutions is lacking. The purpose of this study was to develop the Home Safety Self-Assessment Tool (HSSAT) and establish its psychometrics for the use of community-dwelling older adults. The Transtheoretical model and focus groups involving older adults guided to develop the HSSAT. It includes nine areas of home (illustration, a list of risk factors, corresponding solutions), local resources (home modification service providers, stores, free services), ADA guidelines, newest helpful products, other fall prevention tips, and an action log. Using 107 convenience samples, reliability, validity and responsiveness were tested. The HSSAT had high test-retest reliability (ICC=.99) and interrater reliability (ICC=.86). Construct validity applying hypothesis testing showed that those who fell in the past year removed on average nine hazards in construct to one by those who did not fall ( $p<.001$ ). The HSSAT is an easy-to-use and effective tool to reduce home hazards in older adults who had a fall.

### 'OTHERING' IN NEED ASSESSMENT PRACTICES: HOW UNDERSTANDINGS OF ETHNIC/CULTURAL 'OTHERS' CAN BECOME INSTITUTIONALIZED

S. Torres<sup>1</sup>, E. Forssell<sup>2</sup>, A. Olaison<sup>3</sup>, 1. *Uppsala University, Uppsala, Sweden*, 2. *Linköping University, Linköping, Sweden*, 3. *Ersta Sköndal University College, Stockholm, Sweden*

This presentation departs from the research gaps that exist in the debate on institutional categorization as far as the implications of ethnic 'otherness' are concerned. There is also a gap in the manner in which such understandings affect the political economy of care and there is also a lack of research on the intersection between ethnic 'Otherness' and old age. The project upon which this presentation is based departs from all of these debates and focuses on need assessment practice within the context of Swedish elderly care. As such, it aims to contribute to research on images of old age as these are constructed through welfare sector practices. At stake are the following research questions: do understandings of cross-cultural care interaction and ethnic 'Otherness' affect the manner in which need assessment processes legitimize and restrict access to certain elderly care services and if so, how. The data for this project is comprised of focus group interviews with need assessors (a total of 60 have been interviewed) as well as a total of 200 need assessment journals. The findings suggest that need assessors' understandings

of old age differ depending on which other social positions elderly people 'inhabit'. The presentation will contribute to the debate on institutional categorization and how lack of an awareness of the implications on ethnic/cultural 'Otherness' influence power differentials in old age.

### **COGNITIVE CAPACITY AND FUNCTION ASSESSMENTS IN HEALTHY ELDERLY ADULTS**

S.L. Schandler, J.V. Flowers, M. Bredice, *Psychology, Chapman University, Orange, California*

The burgeoning population of healthy adults aged 60 years through the early nineties places new demands on the assessment of function in these persons. Cognitive function is related directly to the person's ability to maintain acceptable quality of life as physical function reduces with advancing age. Most instruments designed to assess cognitive function in the elderly either provide a general yes/no verification of global deterioration (e.g., dementia) or are more precise existing instruments normed on younger populations and statistically extended to provide a very general idea of cognition function. Four instruments were used to examine cognitive function in two groups each of 50 healthy elderly adults without history of dementia. Using National Institute on Aging criteria, one group was classified as Young-Old (YO, 61-74 years) and the other Old-Old (OO, 75-92 years). The instruments were the Mini-Mental State Examination (MMSE); Blessed Information-Memory-Concentration Test (BIMC); Shipley Institute Living Scale (SILS); and Reynolds Intellectual Screening Test (RIST). RIST possesses norms extending to 94 years while SILS norms are statistically extended beyond 70. All subjects scored in the instruments' normal range. Lacking normative data and precision, MMSE and BIMC yielded similar, very general assessments of cognitive status. With their higher resolution, RIST and SILS showed age-related patterns in function. However, SILS scores were significantly elevated and more variable for OO subjects. The findings demonstrate the viability of assessing cognitive function in the elderly and emphasize the importance of applying assessment instruments with high resolution and actual norms rather than statistical extrapolations.

### **THE FUNCTIONAL ASSESSMENT QUESTIONNAIRE: MEASUREMENT PROPERTIES IN HISPANICS AND NON-HISPANIC WHITES**

P. Sayegh, B.G. Knight, *Department of Psychology, Univ Southern California, Los Angeles, California*

Functional decline is one of the hallmark symptoms of dementia and is frequently assessed as part of the dementia diagnostic process. The Functional Assessment Questionnaire (FAQ) is frequently used as a measure of the ability to carry out independent activities of daily living, yet this scale has not yet been assessed for cross-cultural factorial invariance. The aim of this study was to test the measurement invariance of the FAQ among 444 Hispanic and 11,081 non-Hispanic White outpatients assigned a diagnosis of either normal cognition or dementia at their initial evaluations at 33 Alzheimer's Disease Research Centers across the US. Using confirmatory factor analyses, we tested the cross-cultural measurement properties of our hypothesized one-factor (i.e., dementia severity) model of the FAQ. Results of our analyses confirmed the cross-cultural invariance of the one-factor FAQ structure ( $\chi^2/df = 38.39$ , CFI = .895, TLI = .865, RMSEA = .057), pattern of factor loadings ( $\Delta\chi^2(9) = 10.33$ ,  $p = .32$ ,  $\Delta CFI = .00$ ), and intercepts ( $\Delta CFI < .01$ ). Given this evidence of cross-cultural invariance, we were able to compare the latent mean estimates for the dementia severity factor across groups and did not find a significant difference,  $p = .16$ . Our findings suggest that the FAQ can be used to make meaningful interpretations and comparisons of the dementia severity factor mean estimates across these groups. In addition, the similarity of latent mean estimates across groups in this study suggests that these patients presented with comparable levels of dementia severity as measured by the FAQ.

### **DETERMINING SUICIDE RISK IN GERIATRIC POPULATIONS: A REVIEW OF THE CURRENT LITERATURE**

J. Sibson, N. Porta, S.A. Ogbeide, *School of Professional Psychology at Forest Institute, Springfield, Missouri*

Suicide prevalence rates are higher among adults 65 years of age and older compared to any other age group. In addition to risk factors such as depression, challenges such as age-related physical and cognitive impairments and sudden breaches in family and social support are of particular importance. The current paper proposes that primary care is the most suitable setting to enact suicide prevention strategies with this population. Evidence across many studies reveals that the majority of older adults who die by suicide meet with their primary care providers (PCP) within one year of suicide, and a significant portion of these individuals meet with their PCPs within 1 to 6 months of suicide. Suicidal ideation, however, is rarely reported by the patients or identified by the practitioners during these final consultations. The current paper introduces empirically supported considerations for suicide risk assessment among geriatric populations, and highlights the importance of creating intervention strategies within primary care settings. The potential utility of applying generalized suicide risk assessment models (e.g., the H.E.L.P.E.R. model) to geriatric populations is proposed. The current paper also highlights the current literature on potential measures for preventing geriatric suicide. As the percentage of Americans 65 years of age or older increases significantly, rates of suicides are expected to rise significantly. Increasing awareness of geriatric suicide risk and implementing proper assessment strategies, particularly in primary care settings, can significantly reduce the number of preventable deaths among this growing population.

## **SESSION 240 (POSTER)**

### **ATTITUDES ABOUT AGING**

#### **AN ANALYSIS OF MODELS OF AGING PRESENTED IN A WOMAN'S MAGAZINE**

A.M. O'Hanlon<sup>1</sup>, B. Brookover<sup>2</sup>, *1. University of New Orleans, New Orleans, Louisiana, 2. Xavier University of Louisiana, New Orleans, Louisiana*

Research has shown that older women are rarely featured in fashion magazines. Published statistics of images of older women range from three to nine percent. These kinds of trends have also been found in the MORE, a magazine targeting women aged 40 and older. One study found that MORE, similar to other fashion magazines, included many ads that focused on "anti-aging" products, with the message that aging should be fought. Yet, how does MORE present images of woman over 40 in its editorial content? To address MORE's representation of women, the current study analyzed a series of photos from a monthly feature called "This is What (Actual Age over 40) Looks Like." This feature presents a photo of the woman, her age, and a brief description. The study used a sampling frame of 30 cases from this feature selected and posted on the website by the MORE editors. The women in the photos ranged from 40 to 54 years old. Each photo was coded for type of photo, clothing, and markers of aging. The accompanying text was also analyzed. The two coders had high agreement. Findings indicate that while there was some diversity in images, the majority of the women featured would be considered youthful in appearance (67%), thin (73%), and displayed relatively few outward signs of aging. The feature was also often used to promote and sell beauty products as the women identified which products they used. The implications of these findings are discussed.

## FEELINGS TOWARDS OLDER VS. YOUNGER ADULTS IN EUROPE

L. Ayalon, Bar Ilan University, Ramat Gan, Israel

The present study evaluated the association of modernization (at the macro/societal-level) and modernity (at the micro/individual-level) with feelings towards older vs. younger adults. The European Social Survey is a biennial multi-country, cross-sectional survey. Analysis was based on the fourth wave, which included a rotated module on ageism. The sample consisted of 28 countries and a total of 54,988 respondents. The outcome was based on two affective items measuring explicit feelings towards older vs. younger adults. Hierarchical linear modeling was used in the analysis. Only a small portion of the variance was attributed to cross-country differences. Results suggest that overall respondents tend to report positive feelings towards both older and younger adults, with a general trend towards more positive feelings towards older adults relative to younger adults. More educated and less religious individuals tended to report more negative feelings towards older vs. younger adults. In less urban countries, respondents were more likely to report negative feelings towards older vs. younger adults. The findings provide some support to the claim that modernity is associated with reports of affective ageism, but no support to a relationship between modernization and affective ageism.

## WALK IN THEIR SHOES: AN EXPERIENTIAL LEARNING OPPORTUNITY IN AGING

J. Gossard<sup>1</sup>, M. Dever-Bumba<sup>1</sup>, R. Gajadhar<sup>2</sup>, 1. *Internal Medicine, Div. of Geriatrics, USC School of Medicine, Columbia, South Carolina*, 2. *Palmetto Health Richland, Columbia, South Carolina*

While the population in the United States is aging, there are an inadequate number of geriatric health care practitioners to meet this rising need. How can we educate and sensitize healthcare professionals to the aging process? The "Walk in Their Shoes" experience was first used in conjunction with the Chief Resident Immersion Training (CRIT) in Geriatrics program to allow residents experience "old age", and to create a foundation for understanding the aging process. The participants experience everyday activities and medically-related tasks from the vantage of an older adult with various impairments in several physiological systems. Participants are asked to perform typical activities that older adults carry out on a regular basis - dressing, walking, cognitive tasks, balance, as well as some medical tasks such as mental status evaluation, medical consents, medication management and use of hearing aids. Impairment examples include vision change via "Drunk Goggles" and other limitations from glaucoma and yellowing of the lens; splints to impair mobility; gloves that simulate arthritis; timed up-and-go testing, and an Empathy Belly to demonstrate decreases in muscular strength and changes in balance as well as the threat of falls. Participants have been evaluated on the basis of attitude, knowledge and identification of practice changes. Preliminary data suggests that the training results in a significant change in attitude towards the aging process, improved knowledge of the physiological changes that occur with aging, and a more empathetic understanding of function in older adults. Participants additionally have identified relevance to their personal clinical practice.

## PSYCHOSOCIAL ISSUES OF AGING

D. Ajuluchukwu, HPE & GSS, York College, CUNY, Jamaica, New York

Even though the elderly population currently represents only about 12.5% of the general population, this is the fastest growing segment of our population and by the year 2050 it is projected that they will represent 22.9% of the entire United States population. In this study the investigators have compared four different nursing homes' patients in New York City (private funded and Medicaid funded). Our specific aims were to: Examine psychological issues defined as nutrition, transportation, housing, legal issues, access to primary care, financial and

recreational activities, and obtaining patient's perception on how these variables impact on their daily activities. Chi-squares on the completed questionnaires indicated the following significant findings: The average Nursing Home resident is a white female age 81. The majority of the residents prefer to be in their homes. The average daily cost of a Nursing Home is about \$350.00 per night. The typical widowed resident is not lonely. 97% of the residents agree that their kids and or family members are helping them finance their stay at the Nursing Home. 93% of the residents agree that their life savings have been used to finance their stay at the Nursing Home. Only 44% of the residents interviewed agreed that Medicaid pays for their Nursing Home.

## AS DAYS GO BY: AN EXAMINATION OF INTRA-INDIVIDUAL VARIABILITY IN SUBJECTIVE AGING AND SELECT CORRELATES

A. Stripling<sup>1</sup>, N.D. Dautovich<sup>2</sup>, M.(. Heesacker<sup>3</sup>, 1. *Psychology, Department of Veteran Affairs San Francisco VA Medical Center, California, California*, 2. *University of Alabama, Tuscaloosa, Alabama*, 3. *University of Florida, Gainesville, Florida*

Subjective age is the perception of how old or young people experience themselves to be. This research area has made great strides since the 1950s, when it was first examined. However as the field continues to develop, the issue of the stability in subjective age perceptions has grown in importance. Research has revealed that inter-individual differences in subjective aging are correlated with the circumstances of life transition people undergo. However, advances in understanding subjective aging also require consideration of intra-individual variation, or fluctuations that occur within the same individual on a day-to-day basis. The current study examines the relationship between intra-individual variation in subjective aging, anxiety, aging satisfaction and self-esteem in 78 community dwelling adults ages 18-77 (M=42.84;SD=16.42). A null, predictor-free multilevel model was run to calculate the intraclass correlation coefficient (ICC) for each variable of interest. Based on the ICC, the percent of total variability attributed to fluctuations within-persons ranged from 15-32%. After detrending for time trends (linear, quadratic, cubic), intraindividual standard deviations (ISD) were calculated for each individual representing within-persons variability. Bivariate correlations revealed variability in subjective aging was correlated with variability in: anxiety [ $r(70) = .32$ ,  $p = .006$ ], satisfaction with aging [ $r(70) = .55$ ,  $p < .001$ ], and self-esteem [ $r(70) = .58$ ,  $p < .001$ ]. In short, more variable perceptions of subjective age were associated with greater fluctuations in anxiety, satisfaction with aging, and self-esteem. Implications include an increased understanding of subjective age perceptions, as well as, a more complete understanding of the variability in these perceptions and the relationship this variability has on mood.

## AGING PERSPECTIVE OF A MALE LATINO FORMER GANG MEMBER

D. Lien, California State University, Long Beach, Long Beach, California

**PURPOSE:** This qualitative study aimed to examine the perspective of aging held by a male Latino former gang member. **BACKGROUND:** Research on gangs has focused on violence, the nature, and membership encompassing gangs. The body of knowledge has been significant to the aims of gaining a better understanding of gangs on many different levels. One area of gang research where little attention has been paid to is the aging perspective of gang members. **METHODS:** Purposive, non-random sampling was used in this case study. The interview was guided by a list of question and recorded. It was transcribed verbatim, coded, and analyzed for major themes and concepts. **RESULTS:** Major themes that were prevalent include skipped life stages, early maturation, disjunctive physical and mental age, transitions in life roles, familial influences, gang deviant life style, and religion. **DISCUSSION:** Aging is a continual process defined by many factors like social environment,

biology, and psychology. This process is idiosyncratic for a former gang member, but threads of commonality can still be drawn to general aging concepts. Themes of skipped life stages and early maturation become poignant to his aging process, which itself has definitively changed as he has chronologically aged. As he has “matured out”, major themes in his gang years has changed; family no longer means other gang members, but family comes to mean wife, children, and mother. Aging for this male Latino former gang member is defined by his life experiences and changes, changes that are not exclusive to the numerical age.

### THE UNIQUE JOURNEY OF AGING

J.N. Stone, *University of Southern California, Los Angeles, California*

It is generally thought that all old people are the same. They are slow, set in their ways, and lack that vibrant exciting essence of youth. Our society has a stigma against aging and we have come to believe that “getting old” is something that everyone should try to avoid. This is the very reason ageism exists. However, there is no clear cut answer to what “getting old” actually means. Aging is unique to every individual and there is more heterogeneity in the older population than among the middle aged. As the life-span perspective shows, aging is a lifelong process that continues until the day we die. Each person experiences aging in their own way based on biopsychosocial forces. The purpose of this qualitative study was to interview women over age 45 about their experience of aging. Ten women who varied in ethnicity, social class, and age were asked open-ended questions about their attitudes toward aging. The results revealed that each woman aged in a different way because of differences in culture, socioeconomic status, the cohort they grew up in, and their own personal choices in life. The results also allowed a deeper analysis of aging by looking at how sisters from the same family differed in their views, as well as how caregivers in a nursing home versus private homes viewed aging. The results are discussed in terms of the life course perspective.

### BABY BOOMERS, COMPLEMENTARY/ALTERNATIVE MEDICINE, AND AGING ANXIETY

N. Millman, *1. Columbia University, New York, New York, 2. University of Southern California, Los Angeles, California*

Complementary/Alternative Medicine (CAM) is on the rise in the United States. However, the relationship between CAM and health in the older population is complicated; recent research suggests that the Self-Rated Health (SRH) levels of CAM users in the United States tend to be higher than those of non-CAM users, a trend deeply associated with race, education, income, and age. The association with age is significant in that it shows a distinction along generational lines. This study focuses on the relationship between aging anxiety, CAM use, and the meaning of aging among the members of the Baby Boomer cohort and the Preboomer cohorts. This study seeks to demonstrate whether aging anxiety, self rated health quality, and alternative healthcare seeking are correlated in adults older than 48 years old. The hypothesis, based on research, is that older adult individuals who seek complementary / alternative healthcare approaches seek such healthcare for different reasons. These reasons differ based on ‘whiteness’ / immigration status, generational solidarity, and income, among other factors. The respondents are drawn from UC Irvine’s and CSU Bakersfield’s Osher Lifelong Learning Institutes, and the survey was administered over Qualtrics. The interviews were conducted over the phone. This study’s aim is to form a foundation upon which to build a proposal for a health intervention program and answer these questions: what does aging mean to Baby Boomers who use CAM, and does aging mean something different to Baby Boomers who do not use CAM? And, what role is played by a sense of control over personal health, lay initiative, “magical thinking,” and other aspects that characterize the meaning of illness and health?

## SESSION 245 (POSTER)

### CANCER SCREENING & TREATMENT

#### DECISION-MAKING ABOUT BREAST CANCER TREATMENT AMONG OLDER AFRICAN AMERICAN WOMEN

S.S. Martin<sup>1</sup>, E.L. Csikai<sup>1</sup>, D. Batey<sup>1</sup>, T.L. Peterson<sup>3</sup>, D.K. Harmon<sup>2</sup>, C. Broussard<sup>1</sup>, J.K. Taylor<sup>1</sup>, *1. School of Social Work, The University of Alabama, Tuscaloosa, Alabama, 2. University of West Alabama, Livingston, Alabama, 3. Western Kentucky University, Bowling Green, Kentucky*

Although mortality rates from breast cancer increase for all women with age, the mortality rates are highest among older African American women. The combination of age and ethnicity puts older African American women at high risk for poor cancer outcomes. Treatment decision-making, particularly with a life-threatening illness such as cancer, can be confusing and stressful for patients and families. The primary aims of this study were to understand the treatment experiences and decision making processes among older African American women diagnosed with breast cancer and explore the influence of family on treatment adherence, satisfaction with decision-making processes and overall cancer experience. A qualitative phenomenological approach was utilized in this study. In-depth interviews were conducted with 23 older African American women (45 and older) who had been diagnosed with and received treatment for breast cancer. Interviews were semi-structured, audio-taped, transcribed, and data organized with Atlasti software. Meaning units and themes were extracted from the transcripts illuminating the participants’ lived experiences. Respondents described emotional reactions to discovery/diagnosis of breast cancer, decisions about sharing diagnoses with family and friends; perceptions of discussions with medical professionals; support from family members; and the strong spiritual connection that many depended upon throughout treatment and beyond. Themes that emerged included: Diagnosis Experience; Reactions to Diagnosis; Decisions to Tell Family/Others; Beliefs about Health Care System; Treatment Decisions; Coping; Importance of Church/Higher Being; and Survivorship/Follow-up Care. The experiences of these women may help to develop comprehensive shared decision-making models that account for and incorporate the importance of family.

#### A MIXED METHOD STUDY OF THE RELATIONSHIP BETWEEN MULTIPLE MORBIDITY AND COLORECTAL CANCER SCREENING

N.E. Schoenberg<sup>1</sup>, S.T. Fleming<sup>1</sup>, Y.N. Tarasenko<sup>2,1</sup>, S.H. Bardach<sup>1</sup>, *1. Behavioral Science, University of KY, Lexington, Kentucky, 2. National Center for Health Statistics, Hyattsville, Maryland*

Researchers, providers, and patients have often described the competition between multiple morbidity (MM) management and disease prevention, particularly among vulnerable low SES populations. To empirically examine and explain this relationship, we conducted a telephone survey and follow up focus groups using colorectal cancer screening (CRCS) as an index prevention behavior. In the telephone survey of 1,153 Appalachian residents aged 50–76, 38% reported two-three MM, 25% indicated 4-5 MM, and 15% reported six or more MM. Only 8% had no MM and 15% indicated one MM. Nearly 2/3rds reported receipt of CRCS according to guidelines. White race, post high school education, and perception of having more than enough income on which to survive were associated with higher rates of any guideline concordant CRC screening. Statistically significant trends in the outcome of adjusted odds ratios for colonoscopy with greater number of morbidities ( $P < 0.05$ ) were noted; the higher number of morbidities, the higher rates of screening. To improve our understanding of this dose response relationship, we also conducted 13 focus groups, six with providers and seven with patients. A main explanation offered by both groups involved



greater exposure to medical care resulting in greater opportunity for screening; in a low income population that otherwise may not receive prevention counseling, having chronic conditions requiring medical attention also facilitates exposure to prevention. These results, the first known characterizing the relationship between MM and CRCS among a vulnerable population, provide evidence that multiple morbidity may enhance rather than obstruct but rather prevention behaviors.

### **CANCER SCREENING, INFORMATION SEEKING, AND LIFESTYLES AMONG WOMEN**

Y. Yeo<sup>1</sup>, E. Lee<sup>2</sup>, S. LevKoff<sup>1</sup>, *1. College of Social Work, University of South Carolina, Columbia, South Carolina, 2. University of North Carolina at Charlotte, Charlotte, North Carolina*

Overview: Understanding factors associated with routine cancer screening is critical, given that breast and cervical cancers are both treatable diseases, particularly when detected in early stages. This study examined the factors associated with routine cancer screening in a nationally representative sample of women aged 40 and older. Understanding the factors associated with adherence to cancer screening guidelines is critical, given that breast and cervical cancers are treatable. Given the undisputed value of mammogram and pap test in reducing morbidity and mortality, this study examined characteristics associated with maintaining regular cancer screening in a nationally representative sample of women aged 40 and older (n=2113). Our data source was the National Cancer Institute's 2005 Health Information National Trends Survey (HINTS), a cross-sectional survey that captures cancer-specific items. Logistic regression analysis was used to identify the correlates of two outcome variables: whether respondents have adhered to recommended mammography and pap test. Women were considered adherent to screening guidelines if they had two consecutive, on-schedule screenings and planned to have another within the next 3 years. The most consistent predictor of adhering both pap test and mammography was employment, health insurance, nonsmoking status, and getting health information from community organizations. Women who are older, unmarried, and overweight were less likely to adhere pap test. Women who search health information from health care providers and internet were more likely to meet recommended pap test. Those who lived in urban areas, had family supports to get a ride to visit doctors, and attended religious services were more likely to adhere to their regular mammography. Findings of this study suggest that healthcare providers pay particular attention to the screening needs of older women. Learning about older women's preferred information sources may help to guide future interventions.

### **A YEAR IN THE LIVES OF PATIENTS DIAGNOSED WITH ADVANCED STAGE CANCER**

G. Kyriotakis<sup>1,2</sup>, J. Kelley-Moore<sup>2</sup>, J.H. Rose<sup>2</sup>, *1. Geriatric Research Education and Clinical Center (GRECC), Louis Stokes VAMC, Cleveland, Ohio, 2. Case Western Reserve University, Cleveland, Ohio*

Lack of understanding of trajectories of well-being of patients diagnosed with advanced stage cancer is the Achilles heel of interventions and programs that seek to improve quality of life at end-of-life. In order to become more effective in improving the quality of life we need to provide decision-makers and clinical staff an evidence-based account of how patients traverse the course of their illness. To this end this study aims to: 1. identify trajectories and model the patterns of change of six different domains of well-being; 2. capture variation in well-being outcomes attributed to modifiers such as demographics and utilization; 3. examine the interplay of different domains of well-being over time. Five hundred seventy six patients at baseline are analyzed who have data until death or for up to one year. Longitudinal variables are analyzed using generalized latent growth models. The results from these analyses suggest that patients' well-being is compromised in the first 3-6 months after diagnosis followed by an improvement in the psychoso-

cial domains but not in the physical. Treatment types at baseline (~8 weeks from diagnosis) have differential effects on the initial level and rate of change among the different domains of well-being. Finally, changes in social support and in spirituality are not related to physical or to mood changes throughout the illness experience. On the contrary, changes in the psychological domains are closely related to changes in the physical well-being. Results can be used to identify times of increased need where interventions may be needed most

### **ACTIVE SURVEILLANCE, PHYSICIAN PARTNERED MONITORING OR WATCHFUL WAITING: VARIATION IN LABEL EFFECT OF MONITORING PROSTATE CANCER**

D. Bailey<sup>1</sup>, A. Cooper<sup>1</sup>, M. Luce<sup>1</sup>, K. Weinfurt<sup>1</sup>, M. Kazer (Wallace)<sup>2</sup>, *1. Duke University, Durham, North Carolina, 2. Fairfield University, Fairfield, Connecticut*

The NIH recently convened a State-of-the-Science Conference on the role of Active Surveillance in the management of men with low risk prostate cancer and confirmed that active surveillance is a viable option that should be offered to patients with low-risk prostate cancer. However, many men diagnosed with disease undergo aggressive treatments that have significant, deleterious effects on their quality of life (QoL) but do not necessarily prevent problems or prolong life. Close observation for appropriately selected patients may maintain QoL without increasing the chance of the cancer spreading. However, this option is underutilized and men and their families need support in the decision making process related to acceptance of and adherence to active surveillance. We used a randomized experimental exposure administered via an online questionnaire to examine the way in which three labels made monitoring (rather than invasive treatments) more appealing to 620 men at risk for prostate cancer, and to track how men reacted to potential pros and cons of different treatment options, including monitoring (with the different labels). In this paper we present our findings, which include variation across monitoring labels (active surveillance, physician partnered monitoring and watchful waiting) and between monitoring and more invasive treatments. We will discuss the implications of these findings for further research and clinical practice.

### **QOL AND AFFECTING FACTORS IN PROSTATE CANCER SURVIVORS AND NON-CANCER CONTROLS AND RACIAL DISPARITY**

L. Song<sup>1</sup>, Y. Ji<sup>2</sup>, *1. University of North Carolina-Chapel Hill, Chapel Hill, North Carolina, 2. Asia Research Institute, National University, Singapore*

The adapted Stress-Coping model guided the development of this descriptive, cross-sectional study. Prostate Cancer survivors (N=219) and non-cancer matched controls (N=2,892) were selected from a population representative survey dataset, i.e., Medical Expenditure Panel Survey. Descriptive analysis and multiple regression models were used to achieve the research aims. The outcome variable, QOL, was measured using SF12. The mental and physical component scores (MCS and PCS, respectively) were used in the analysis. Potential influencing factors of QOL, selected based on literature review, included activity of daily living (ADL), depression, co-morbidities, and socio-demographics. Results: MCS was similar between survivors and controls or between Blacks and Whites in bivariate and multivariate analyses. Better MCS was associated with better ADL, less depression, fewer co-morbidities (all ps<.001), being non-Hispanics (p<.05), older age (p<.001), and middle to high income (p<.01), and being married (p<.05). In bivariate analyses, PCS in survivors was worse than in controls (p<.0001); PCS in Whites was marginally better than in Blacks (p=.09) but worse than in Hispanics (p=.08). In multiple regression, PCS did not vary between survivors and controls or between Blacks and Whites. Better PCS was associated with better ADL, less depression, fewer co-morbidities, older age, college or higher education (all ps<.0001), being Hispanics (p<.01), and higher income (p<.0001). About 49% and 36% of the variance of

MCS and PCS, respectively, was explained by these factors. Conclusion: QOL of men 50 years and older is affected by physical, psychological, and social factors (including race) but not by whether having had prostate cancer.

### **IMAGES OF REACTION: CHRONICALLY ILL OLDER ADULTS AND CANCER DIAGNOSES**

S.M. Hannum, R. Rubinstein, *Sociology and Anthropology, University of Maryland, Baltimore County, Baltimore, Maryland*

Chronically-ill older adults (age 65+) who receive a new cancer diagnosis face many unique challenges (e.g., medication management, fractioning of care, etc.), yet little is known about how individuals come to an understanding of and attach meaning to this experience. This qualitative study seeks to describe, in part, how older individuals experience a new cancer diagnosis and the effects this might have on their overall healthcare trajectories and their notions of personal health, well-being, and life satisfaction. Interviews were analyzed thematically to describe how a subsample of individuals in the study presented and described the personal meaning of the cancer experience through descriptions of their diagnosis and the events preceding it: the stories of illness, its meaning, and its consequences. Understanding this enhances illness management quality by eliciting common areas of stress within the diagnosis and illness experience for the older individual, particularly in light of multimorbidity.

## **SESSION 250 (POSTER)**

### **CARE VALUES AND PREFERENCES**

#### **MEASURING PREFERENCE CONGRUENCE FOR RECREATIONAL ACTIVITIES: A FIRST LOOK AT A POTENTIAL QUALITY INDICATOR**

K. VanHaitsma<sup>1,2</sup>, K. Eshraghi<sup>1</sup>, C. Duntzee<sup>1</sup>, M.H. Kleban<sup>1</sup>, S. Crespy<sup>1</sup>, S. Humes<sup>1</sup>, M. VanValkenburgh<sup>1</sup>, *1. Polisher Research Institute, North Wales, Pennsylvania, 2. University of Pennsylvania, Philadelphia, Pennsylvania*

CMS has increasingly embraced person-centered care, encouraging providers to enhance their ability to demonstrate that their care addresses the needs and preferences of frail elders. In addition, new “meaningful use” requirements have emerged out of health care reform encouraging providers to make maximum use of electronic medical records (EMRs). This paper reports on research that attempts to create a new quality indicator (QI) measure that allows providers to document and track their level of person-centered care in recreational activity delivery using EMR data. Pilot study subjects were 40 cognitively impaired skilled nursing residents, selected based on the MDS 3.0 staff assessment for mental status scores. The new QI indicator- “% Activity Preference Congruence (%APC)”- was calculated by extracting the 7 MDS 3.0 Section F “Preference for Activities” items and matching the extent to which activity attendance records were congruent for each resident’s most important preferences. Overall mean %APC for recreational activities was 52.62% (sd= 27.09). Using theories of person-environment fit, we examined hypothesized relationships between %APC and potential barriers to preference fulfillment. Analyses indicated significant relationships between %APC and MDS 3.0 items of “makes self understood” (r=.38, p<.01), “ability to understand others” (r=.31, p<.05), “cognitive skills for daily decision making” (r=.51, p<.001), and overall ADL impairment (r=.36, p<.02). In all cases, more impairment was related to less activity preference congruence. Discussion will include implications for use of this new quality indicator as a tool for measuring one aspect

of person-centered care delivery and the barriers to preference fulfillment

### **INFORMATION MODALITIES FOR OLDER ADULTS: A REVIEW**

J.M. Sjostedt, M. Bull, *Nursing, Marquette University, Milwaukee, Wisconsin*

Background: Communicating information to older adults is a vital aspect of patient education and clinical research. With the advances in technology new modalities are available to aid communication. The questions posed for this literature review were: 1) what are older adults’ attitudes and preferences regarding current modalities and 2) what factors influence older adults’ modality preferences. The answer to these questions is essential to guide clinicians and researchers in obtaining quality information. Method. Data bases searched for the years 2005 to 2011 included PubMed, CINAHL, and Google Scholar. Key terms used were elderly, geriatric, octogenarian, older adults, questionnaire, paper and pencil, computer, computer-assisted, telephone, survey, preferences, reliability, modalities, and disability. Criteria for inclusion were articles in English, and those addressing different methods for evaluating older adults’ performance on questionnaires, response rates, preferences and potential barriers. Results. A total of 28 articles and two books met the inclusion criteria for the review. The majority of studies were descriptive or quasi-experimental cohort studies; and two were meta-analysis comparing different modalities. The four modalities reported in the literature were paper and pencil, in-person interviews, telephone-based interviews, and computers or other electronic devices. Response rate, reliability and validity of the modalities was influenced by multiple factors, including the older adult’s gender, race, presence of a disability, time commitment, information content, compensation, location, and whether or not the modality was self-administered. Conclusions. The findings suggest factors clinicians and researchers might consider in deciding on the most appropriate modality for their projects.

### **PERSONAL PRIVACY AND AUTONOMY: BATHING IN ASSISTED LIVING**

R. Hrybyk, A. Frankowski, A.D. Peebles, *Center for Aging Studies, UMBC, Baltimore, Maryland*

In assisted living (AL) residents’ preferences may be at odds with management’s policies. This becomes problematic when considering preferences in personal activities such as bathing. In some AL settings, shower enclosures are not included in residents’ private bathrooms, and having to bathe in a centralized shower room becomes a public activity as residents walk through the AL in their slippers and robes. Combining this with the presence of a care aide while showering can contribute to a resident’s discomfort. Increasing frailty of older adults often necessitates giving up independence for assistance. The gradual erosion of control over one’s body heightens vulnerability making it difficult to hold onto one’s sense of self. Dignity, autonomy, and privacy are often compromised in collective living settings. In this poster we explore the relationship between bathing and autonomy in AL. We examine: (1) the range of personal choice related to showering permitted to residents; (2) facility rules on bathing and how these rules are interpreted by staff; and (3) acceptance or resistance by residents to assistance with bathing. We conclude with practical suggestions for direct care staff. Data are drawn from an on-going, multi-year ethnographic study. Textual analysis using the software program Atlas.ti identified thematic codes relating to body care, decision making, home operations, personal preferences, and power and control. Extensive fieldnotes and in-depth interviews offer an insider’s view of the lived experience of assisted living. Literature related to person-centered care and its emphasis on autonomy of the individual also informs this poster.

CAREGIVING

**ATTITUDES AND KNOWLEDGE ABOUT ALZHEIMER'S DISEASE AMONG ASIAN INDIAN SERVICE PROVIDERS, CAREGIVERS AND ELDERLY**

R. Gupta, V. Pillai, *School of Social Work, San Francisco State University, San Francisco, CA, California*

Objective: The purpose of this study was to gauge the attitudes and knowledge about Alzheimer's disease from primary care physicians, caregivers and the older adults. Methods: Eight primary care physicians, 30 caregivers and 29 older adults participated in in-depth interviews. These in depth interviews were conducted by first author and trained graduate students from Allahabad University. Results: Asian Indian caregivers, older adults as well as the physicians viewed memory loss as normal part of aging. Participants who had witnessed older adults with AD viewed it as a mental illness. Most of the participants lacked knowledge about the diagnosis, and treatment of AD. A large proportion of the caregivers and older adults did not make health care decisions and left it for the physicians. Conclusions: There is a need to expand the education about AD to Asian Indian physicians as well as the general public. The normalization as well as stigma combined with Asian cultural norms can be barriers to early assessment and intervention with AD patients and the caregivers. Further research on symptom recognition by the disease stages and causal attitudes is needed to better understand the existing knowledge about AD among Asian Indians.

**HEALTH IMPACT OF CAREGIVING: RESULTS FROM THE SINGAPORE SURVEY ON INFORMAL CAREGIVING**

C. Malhotra, A. Chan, R. Malhotra, J. Rush, T. Ostbye, *Duke-NUS Graduate Medical School, Singapore, Singapore*

Caregivers of older adults with limitations in Activities of Daily Living (ADLs) often experience significant health problems themselves. The purpose of this study was thus to compare the prevalence of clinically relevant depressive symptoms, self-rated health and number of outpatient visits between caregivers and non-caregivers. Data from Singapore Survey on Informal Caregiving (2010-2011), involving interviews with 1190 older adults (>75 years) with at least 1 ADL limitation and their caregivers, and 379 older adults (>75 years) with no ADL limitations and their potential caregivers, was used. Depressive symptoms assessed using the 11-item CES-D (Center for Epidemiologic Studies) scale, self-rated health and number of outpatient visits in the last one month was compared between caregivers and non-caregivers. Binary logistic regression model was used to compare clinically relevant depressive symptoms, ordinal logistic regression model compared self-rated health and zero-inflated negative binomial model was run for comparing number of outpatient visits among caregivers and non-caregivers adjusting for various characteristics of the caregiver/non-caregiver and care-recipient/ potential care recipient. Analysis showed that caregivers were more depressed, had poorer self-rated health and had greater number of outpatient visits compared to non-caregivers. The study indicates the need for support services to the family caregivers of older adults with ADL limitations.

**CHINESE DAUGHTERS' EMPLOYMENT OF FOREIGN HELPERS AS SURROGATE CAREGIVERS FOR AGEING PARENTS: IMPLICATIONS**

P. O'Neill, *Sociology, University of Oxford, Oxford, United Kingdom*

Historically, Chinese normative values have deprived daughters of education, freedom of choice and financial independence, relegating them to the roles of housekeeper, cook and caregiver within a rigid family hierarchy. Today however, that paradigm has shifted. Chinese daughters are widely educated, working outside the home, and are often self-sufficient. Though independence is on the ascent, obligations associated

with family membership have, nonetheless, not abated. Domestic activities remain within the woman's purview. However, because time is at a premium, many Chinese women employ foreign domestic workers (FDWs) to manage these responsibilities. This construct has, in turn, generated its own set of problems and complaints on both sides. The purpose of this paper is to explore issues related to the employment of FDWs with respect to caregiving of ageing parents. Thirty-eight Chinese women age 31-65 and six FDWs participated in semi-structured interviews in Singapore and Hong Kong during 2011-2012. Fourteen of the women interviewed currently employ FDWs. Qualitative analysis is being conducted using the Critical Incident Technique and Thematic Analysis to identify the issues and their implications. Initial analysis suggests there is discontent with this arrangement by both employers and FDWs. In this sample, mistrust and unmet expectations were issues for employers and their elderly parents. Mistreated FDWs were resentful, angry, exhausted, underpaid, homesick, dealing with a high degree of stress and living in fear.

**POSITIVE EMOTIONS AND PSYCHOLOGICAL RESILIENCE IN ADAPTATION TO DEMENTIA CAREGIVING AMONG FAMILY CAREGIVERS IN SOUTH KOREA**

Y. Kwon<sup>1</sup>, I. Park<sup>2</sup>, E. Kim<sup>3</sup>, *1. Stanford University, Los Altos Hills, California, 2. Chungnam National University, Daejeon, Republic of Korea, 3. Daejeon University, Daejeon, Republic of Korea*

The present study examined the stress-adaptation process of dementia caregiving over time using a weekly follow-up design. This adopted design (once a week over a month, a total of 4 times) was a good fit with the characteristics and demands of family dementia caregiving. Eighty-eight Korean family caregivers who were providing hands-on care for a family member diagnosed with dementia-related disease (e.g., Alzheimer's disease), were recruited through the District Public Health Center Registries in South Korea. They were mostly adult children or daughter-in-laws (90%; spouse and other 10%), ages 25-78 years (M = 52.8, SD = 9.1), mostly women (80%; men, 20 %). In regression analyses, we investigated the effects of chronic and daily caregiving-related stress on caregivers' depressive mood, and the role of psychological resilience and positive emotions in adaptive process to dementia caregiving. Across all caregivers, chronic caregiving-related stress (e.g., severity of dementia symptoms, perceived caregiving burden) was significantly related to caregivers' depressed mood. However, daily-level depressive mood was only marginally related to the daily exposure to caregiving strain (e.g., care receivers' problem behaviors). As between-person variables, positive emotions and psychological resilience seemed to have an adaptive benefit to caregiving stress. Positive emotions mediated the effect of daily stress on daily depressive mood. Higher level of psychological resiliency significantly predicted lower caregiving-related stress, more daily positive emotions, and lower depressive mood scores. These results support the important role of positive emotions in adaptation to life stress.

**END OF LIFE FOR OLDER ADULTS: FAMILY MEMBERS' EXPERIENCES**

S. Izumi, C.R. Van Son, *College of Nursing, Washington State University, Spokane, Washington*

End-of-life (EoL) trajectories of older adults with chronic conditions are difficult to anticipate posing challenges for involved family members. The purpose of this presentation is to describe the experiences of family members of older adults facing the last months, weeks and/or days of their life. Twenty-three family members of deceased older adults were interviewed. All family members described their persistent pursuit of information to discern the fluctuating status of their loved one. Information was needed so that they could plan for their older adult's care and continue to manage their own lives. Once the older adult was

in the health care system, the course of care was often based on institutional protocols or common practice of the care providers. Family members expressed frustration that care providers often failed to acknowledge the individuality/independence of the older adult. On the other hand, family members needed to keep the delicate balance between respecting older adults' autonomy and advocating for them while steering the nuances of their older adults' condition, providers' recommendations and institutional settings. Due to uncertain trajectories, palliative care options and EoL plans of care were frequently not brought up until death was imminent leaving family members feeling unprepared and angry. Family members felt that not being included in the process made them passive observers and then regretting later that they "could have or should have done more."

#### **SELF-EFFICACY FOR SURROGATE DECISION MAKING: A NEW FRONTIER FOR SUPPORTING FAMILY CAREGIVERS**

R.P. Lopez<sup>1</sup>, K. Rose<sup>2</sup>, I. Canty Williams<sup>2</sup>, A.J. Guarino<sup>1</sup>, 1. *School of Nursing, MGH Institute of Health Professions, Boston, Massachusetts*, 2. *University of Virginia School of Nursing, Charlottesville, Virginia*

Surrogate decision making is an arduous task for many families caring for individuals with dementia. While self-efficacy for managing dementia may shelter against burden and depression, there is paucity on self-efficacy for surrogate decision making. The primary purpose of this study was to assess the following correlates to Surrogate Decision Making Self-Efficacy: (a) age, (b) education, (c) income, (d) advance directive, (e) family support, and (f) family resources. Participating surrogate decision makers (N = 125) ranged in age from 27 to 91 and were mostly Caucasian, female, and college educated. Approximately half reported incomes above \$50,000 and had Advanced Directives. This study employed the following instruments, (a) The Family APGAR, (b) The Family Resource Scale, and (c) The Surrogate Decision Making Self-Efficacy Scale. Four demographic items were included, (a) Age of the Caregiver, (b) Household Income, (c) Education level, and (d) Presence of an Advance Directive. Results of the simultaneous multiple regression analysis indicated a coefficient of .58,  $p < .001$ . Whereas Family Resource, Family APGAR, and Advanced Directives were positively correlated, Household Income was inversely related to Self-Efficacy. These findings strongly suggest that families who lack social support, resources, and cannot rely on an Advance Directive are less likely to feel efficacious in their role as surrogate decision maker. Further studies are needed to explore the negative relationship with household income and the influence of self-efficacy on measures of quality of care, quality of decision making, and psycho-social outcomes for surrogate decision makers.

#### **SUPPORTING INFORMAL CARE PROVIDERS THROUGH EDUCATIONAL CONFERENCES**

D. Martin<sup>1</sup>, N. Ensor<sup>2</sup>, M. Fennelly<sup>1</sup>, 1. *The Center for the Study of Aging, McDaniel College, Westminster, Maryland*, 2. *Carroll County Department of Aging & Disabilities, Westminster, Maryland*

While much of the focus on our growing senior population has centered on the economic costs of providing healthcare to this group, little attention has been paid to educating informal care providers about the aging process. As a result, family care providers suffer from burn-out and often become isolated, depressed and lose some sense of self due to the care needs of their loved one. Although there are alternatives to familial care, the vacancy and turnover rates in the direct care industry are high. Poor wages and benefits are the primary reasons for industry turnover; however, another commonly cited reason is the lack of understanding of the unique challenges presented by older adults (physical, mental health, and social challenges) while completing the care tasks. In response to these concerns, a day-long conference on the bio-psycho-social processes of aging was held. Eighty-five informal care

providers attended the conference and completed surveys regarding their reasons for attending, satisfaction with content presented and suggestions for future conferences. The primary reason identified for attending the conference was "lack of knowledge about the aging process." This was followed by "a lack of resources available/resources unknown to me that support me in my care-giving role." The attendees reported high rates of satisfaction with all of the material presented, expressed an interest in future events and provided a laundry list of topic suggestions for future conferences. The results underscore the need to provide age-related education to family and direct care workers.

### **SESSION 260 (POSTER)**

#### **CAREGIVING IN FAMILY CONTEXT**

##### **IN-HOME CARE COORDINATION AND INTENSIVE CAREGIVER SUPPORT FOR CAREGIVERS OF VETERANS WITH DEMENTIA**

J. Tomko, A. Lloyd, J.G. Hennon, S.B. Hall, J. Husted, K. Zana, D. Sykes, *VA Pittsburgh Healthcare System, Pittsburgh, Pennsylvania*

Caregivers of persons with dementia are often at significant risk for depression, burden, declining physical health, and cognitive impairment. Caregiver support interventions have been shown to increase the caregiver's knowledge about the disease, decrease the care recipient's disruptive behaviors, lessen the negative effects on the caregiver, as well as delay nursing home placement and reduce overall healthcare costs. The current study within the VA Pittsburgh Dementia Caregiver Support Program examines the effects of a caregiver support intervention delivered utilizing an interdisciplinary team approach and a telehealth device. The participants during the first year of the program included 118 informal caregivers living with veterans with dementia. Measures assessing caregiver burden, depression, self-reported health, cognition, satisfaction with the program, care recipient's behavior, and care recipient's functional status were obtained at baseline and 6 month intervals. Caregivers were provided educational information disseminated by the telehealth device, ongoing case coordination by registered nurses, optional individual and group psychotherapy, and resource identification by a licensed clinical social worker. Preliminary findings indicated that after six months, caregivers (n=56) reported a high degree of satisfaction with the program, significant decrease in burden, and improved cognitive status. Despite reports of ongoing experiences with disruptive behaviors, caregivers endorsed a reduction in associated distress. Challenges and limitations in implementing the program are reviewed.

##### **THE NEEDS OF GRANDPARENTS RAISING GRANDCHILDREN AS PORTRAYED BY THE POPULAR PRESS**

E.L. Houston, C.A. Fruhauf, *Human Development and Family Studies, Colorado State University, Fort Collins, Colorado*

Grandparents raising grandchildren have received great attention in the gerontological literature. Researchers' have explored the service needs of grandparents raising grandchildren. Despite researchers' interest, little is known about the focus on grandparents raising grandchildren in popular press articles. This is important, as most grandparents read popular press articles instead of referred journal articles. The purpose of this research was to analyze online popular press articles to answer the research question - What areas do journalists address related to the service needs of grandparents raising grandchildren? We examined online articles from the years 2010 and 2011 from *Generations United*, *AARP*, and *USA Today's*. All articles were accessible to the general public, were not password protected, and did not require a subscription to access. A total of 35 articles from 2010 and 43 articles from 2011 were collected. Using grounded theory techniques, we analyzed articles to develop patterns and codes. Findings revealed there were

three categories addressing service needs of grandparents who parent grandchildren: (a) services for grandparents, (b) financial support, and (c) statewide initiatives. Overall, there is a lack of accessible services and financial support to help grandparents and service providers. Journalists should consider increasing awareness about grandparents raising grandchildren through writing about the supports and services that are needed or are already available in their community. Future researchers examining online articles addressing grandparents raising grandchildren might consider looking at different popular press venues (e.g., other newspapers and websites) and consider examining grandparent blogs to understand what grandparents are discussing.

#### **MASTERY: A COMPARISON OF WIFE AND DAUGHTER DEMENTIA CAREGIVERS**

C. Simpson, P. Carter, *School of Nursing, University of Texas, at Austin, Austin, Texas*

**Purpose:** To understand the female dementia caregiving experience in the context of kinship. **Aims:** 1) describe the differences and similarities in wife and daughter caregivers; 2) analyze global and caregiving mastery as moderators of stressors and caregiver's perceived stress and depression. **Methods:** Sixty-four female caregivers participated in a cross-sectional study. Student *t* tests identified differences between wives and daughters. Correlations explored the relationships between stressors (frequency of symptomatic behaviors and dementia severity), mastery (global and caregiving), stress and depression. Multiple linear regression tested moderating effects of mastery on the relationship between stressors and stress and depression. **Findings:** Wives spent more hours per week caregiving. Daughters reported higher levels of dementia severity. Daughters reported more days of poor mental health. Mastery, stress, and depression scores were not statistically different between wives and daughters. Global mastery had a direct effect on perceived stress and depression for both wives and daughters. Caregiving mastery contributed to the variance in wives' stress and depression but only for daughter's stress in relation to frequency of symptomatic behaviors. Global mastery approached significance in moderating the effects of behavioral symptoms on wives' depression. Caregiving mastery did not demonstrate a moderating effect in this sample. **Conclusions:** This study provides new information on the moderating effect of mastery and the differences between wife and daughter caregivers. Recognizing differences in the caregiving experience is important for effective interventions. Interventions building on both types of mastery would benefit wives, while interventions focusing on developing caregiving mastery could decrease daughters' stress.

#### **FAMILY CAREGIVERS' APPRAISAL OF AGGRESSIVE BEHAVIOR**

H. Hirata<sup>1</sup>, T. Harvath<sup>1</sup>, L. Miller<sup>2</sup>, *1. Oregon Health & Science University, Portland, Oregon, 2. University of California, Davis, California*

**Background:** Caring for elderly people with dementia can be burdensome for family caregivers (CGs), especially when an elderly person exhibits aggressive behavior (AB). Caregivers' appraisal of the cause of ABs and whether they think the person with dementia can control these behaviors may have an impact on how upsetting the behaviors are to CGs. **Purpose:** The purpose of this secondary analysis was to examine the relationship between CG's appraisal of how upsetting ABs were, whether a care receiver (CR) can control AB, and what CGs think is the cause of ABs. **Method:** CG's appraisal of dementia-related AB was examined using the Caregiver Appraisal of Behavioral Symptoms in Dementia (Harvath & Miller, 1999). ABs included in the analysis were: "curse or use other foul language," "tear things or destroy property," "making threatening statements," "become aggressive," and "accuse you." **Findings:** There was a significant relationship between 1) the frequency of ABs and the level of caregiver's distress, e.g., "cursing" ( $\beta = 6.41, p < 0.001$ ), and 2) appraisal that the CR could control

the AB and the level of CG upset e.g., "become aggressive" ( $\beta = 0.93, p < 0.001$ ). CG who thought that CRs could not control AB such as "cursing" were 63% more likely to think that the cause of AB came from dementia (OR = 0.37,  $p < 0.01$ ). **Discussion:** Findings illuminate the importance of interventions for CGs' appraisal of ABs.

#### **THE EFFECT OF CAREGIVING ON THE MARITAL SATISFACTION OF ARMENIAN-AMERICAN WOMEN**

G. Mkrtchian, R. Giarrusso, *Sociology, California State University, Los Angeles, Los Angeles, California*

While research has shown that caregiving negatively influences the marital satisfaction of white women, little is known about the link between caregiving and marital satisfaction of Armenian-American women. Among traditional Armenian women, caregiving is an expected part of the marital role; consequently, caregiving may not have a negative impact on their marital relationship. The purpose of this research was to examine the relationship between caregiving and marital satisfaction for Armenian women in the U.S. who were either acculturated or non-acculturated. A convenience sample of 110 Armenian women, between the ages of 35 to 65, who are married and providing care to a parent and/or a parent-in-law, was selected from two Armenian Christian churches in southern California. The results of the study revealed that acculturation had less of an effect on caregiving and marital satisfaction that would have been expected. Acculturation did not have a direct effect on women's evaluation of their marital quality; however, it did have an indirect effect on marital quality through its effect on caregiving. Caregiving that involved direct physical contact (assisting with ADLs) led to increased perceptions of inequity and stress; however, contrary to prediction, even less intrusive forms of caregiving (assisting with IADLs and providing emotional support) were also associated with increased perceptions of inequity and stress. Only feelings of stress had a direct effect on marital quality. The results are discussed in terms of their implications for stress theory.

#### **MALE CAREGIVERS OF OLDER ADULTS: THEIR FINANCIAL STRAIN, EMOTIONAL STRESS, AND SELF-REPORTED HEALTH**

A. Schwartz, *Boston College, Graduate School of Social Work, Chestnut Hill, Massachusetts*

Women have traditionally assumed the role as primary caregiver in families (Delgado & Tennstedt, 1997), but as the number of older adults and their needs increase, and within the context of changing gender roles (Sanders, 2007), it is expected that more men will become primary caregivers. Between 1990 and 2050, the ratio of potential caregivers is projected to decrease from 11:1 to 4:1 (RWJF, 1996), and joined with the continued increases of women in the work force (Galinsky, Aumann, & Bond, 2011), there is a growing demand for male caregivers. Therefore, further exploration of the men's needs is warranted. This study examined age, race, and employment status as predictors of self-reported health, financial strain, and emotional stress of male caregivers of individuals age 50 and over. Potential moderators tested included: choice in becoming a caregiver, co-residence, relationship to the care recipient, and if the care recipient received paid help. Data was from the Caregiving in the U.S. Study: 2009, conducted by the National Alliance for Caregiving in collaboration with AARP, with funding from MetLife. The present sample included 463 male caregivers, with a mean age of 49 years. In regard to self-reported health, ordinal regression analyses revealed that the older a participant was, the poorer their self-reported health. Moderation analyses revealed minority caregivers as having higher self-reported health when caring for someone other than a parent or parent in-law compared to whites caring for a parent or parent in-law. Underlying cultural differences influencing the outcomes of interest are explored.

## EFFECTS OF COMMUNITY CARE RESOURCE ENVIRONMENTS ON CAREGIVING BURDEN

T. Wakui<sup>1,2</sup>, T. Saito<sup>2</sup>, E.M. Agree<sup>1</sup>, I. Kai<sup>2</sup>, *1. Population, Family and Reproductive Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, 2. School of Public Health, the University of Tokyo, Tokyo, Japan*

Long-term care services and support networks are important for family caregivers as individual resources. However, the effects of the community care resource environments on the caregiver's burden remain overlooked. In this study, we examine how the community environments impact caregiving burden with a multilevel analysis after controlling for the individual risk factors. Cross-sectional data was collected from a family caregiver survey conducted in 17 municipalities in north-western Japan in 2010 (N = 2405). Community environments were measured as aggregated mean scores in each municipality based on individual self-reports about the efficiency of long-term care services, caregiver support, support networks, and information. The Zarit Burden Inventory was used to assess the caregiving burden. The final sample comprised caregivers who were spouses (N = 703), daughters (N = 516), sons (N = 375), and daughters-in-law (N = 704) of the care recipients. The community environments did not have significant effects on the burden of spouse and daughter caregivers. However, son caregivers reported lower burden in areas where long-term care service, caregiver support, and support networks were deemed more than adequate. Contrastingly, daughters-in-law with a better support network environment reported higher burden. Findings suggest that improving the community environment would mitigate the burden of the individual caregiver, particularly when the caregiver is the family's son. The details of our findings not only provide an in-depth look at the current state of the community environment, but also provide policy makers with the information to create a more efficient community support environment.

## CONCERNS OF JAPANESE CAREGIVERS WAITING PLACEMENT OF FAMILY MEMBERS IN LONG-TERM PUBLIC FACILITY

T. Ikeuchi, H. Komiya, H. Osada, *J. F. Oberlin University Graduate School, Tokyo, Japan*

Japanese older adults who require care often rely heavily on informal supports of their family members at home. Many caregivers become overburdened with the care and contemplate moving their family members into a long-term public facility. However, due to a shortage of such facilities, there are approximately 420,000 older adults on the waiting list across the nation. This study focuses on family caregivers and investigates necessary social support in providing long-term care during the period of waiting and transition to a long-term public facility. We used a grounded theory approach and audio recorded interviews with six female caregivers aged 46-77 who self-identified as the primary caregiver. We asked about difficulties in providing informal care. The following three concerns were revealed: (a) financial strain of managing the long-term care expenses; (b) insufficient resources for social and instrumental support; and (c) toileting assistance. All participants reported serious financial concerns due to the lingering care, while three of them were living on the pension themselves and two of them were on welfare. All participants also reported a lack of resources and the accessibility of existing formal supports, including the benefits of the national long-term care insurance (LTCI). Further, toileting was considered the most difficult physical support in care. It is concluded that developing a system to provide sufficient social and instrumental support for family caregivers will be necessary in order to lighten the burden and the cost of care.

## HISTORICAL CHANGES IN FAMILY TRANSNATIONAL CAREGIVING: THE CASE OF NEW ZEALAND SETTLERS

D.B. Bradley, *Center for Gerontology, Western Kentucky University, Bowling Green, Kentucky*

Viewed historically, family policy, as well as policy for older people, has often been analyzed within a national or regional framework,

concerning itself with state legislation and the provision of services. Significant social, political and economic changes on the global level challenge this national focus. Given that more people 'permanently' migrate than in the past, migration has taken on greater policy prominence. But beyond families relocating from 'here to there' and generating new social needs and issues, an important consideration is how increased migration has contributed to a family being extended beyond national boundaries to become dispersed, global, or transnational families. This poster explores family communications undertaken in a transnational context within a perspective that accounts for multiple exchanges between migrants and non migrants, and between historical generations. Data for this presentation are drawn from the correspondence records (1852 – 1900) of the Heath and McBride families held in the Hocken Collection Archives, University of Otago, New Zealand. Qualitative methods focused on the 'actors point of view' was used to analyze these historical records between relatives who lived in New Zealand and their relatives who migrated between 3 countries. Families were challenged by the financial, practical, and emotional support aspects of caregiving and employed diverse strategies to manage caregiving over great geographic distances. The most common strategy, present in 65% of the correspondence, was to pay another individual to provide care. Others either moved their older relative in closer proximity (15%) or provided emotional support through correspondence exchange.

## TRANSLATIONAL RESEARCH: DOING IT BEST IN THE COMMUNITY FOR CAREGIVER HEALTH

L. Easom, L.B. Granberry, *Rosalynn Carter Institute for Caregiving, Georgia Southwestern State University, Americus, Georgia*

Translational research drives the improvement of health for caregivers who are caring for the older adult population today. In clinical research, substantial headway has been made in developing interventions that result in improved caregiver outcomes. Translational research involves moving these positive outcomes to benefit individuals in a community while maintaining fidelity to the original research. This poster will portray the successful experience of the Rosalynn Carter Institute for Caregiving (RCI) in identifying the elements that are necessary for taking an evidence-based caregiving intervention from a randomized control trial into community use effectively, and with fidelity. Over the past 4 years, the RCI has directed translational projects across the country utilizing the NIRN (National Implementation Research Network) model for evidence-based implementation in varied community settings such as hospitals, rehabilitation facilities, and aging services. Lessons learned from this unique experience plus best practices and tips for both clinical and practice researchers will be shared.

## RELIABILITY AND VALIDITY OF THE SPANISH VERSION OF THE REVISED COGNITIVE FUSION QUESTIONNAIRE IN DEMENTIA CAREGIVERS

R. Romero-Moreno<sup>1</sup>, M. Marquez Gonzalez<sup>2</sup>, A. Losada<sup>1</sup>, D. Gillanders<sup>3</sup>, V. Fernández-Fernández<sup>1</sup>, *1. Universidad Rey Juan Carlos, Madrid, Spain, 2. Universidad Autónoma de Madrid, Madrid, Madrid, Spain, 3. University of Edinburgh, Edinburgh, Edinburgh, United Kingdom*

Introduction Cognitive fusion or the extent to which we are psychologically tangled with and dominated by the form or content of our thoughts has been proposed as a key psychopathological dimension from the Acceptance and Commitment therapy perspective. The objective of this study is to explore the psychometric properties of the Spanish Version of the Cognitive Fusion Questionnaire (SRCFQ). Method and results The SRCFQ consists of 13 items with responses ranging from 1 "never true" to 7 "always true". Individual interviews were conducted with 102 family caregivers. Principal components analyses were conducted and two factors were obtained for the SRCFQ, namely, cognitive fusion and cognitive defusion, which explained 43.61% and 11.69% of the variance, respectively. The total scale and the subscales pres-

ent appropriate internal consistency (Cronbach's  $\alpha = .76$ , for the total scale, .91 for cognitive fusion, and .58 for cognitive defusion). Additionally, significant associations in the expected directions between cognitive fusion (global scale) and other coping and outcome variables related theoretically and have been found, such as experiential avoidance ( $r = .63$ ,  $p < .001$ ), rumination ( $r = .56$ ,  $p < .001$ ), depression ( $r = .35$ ,  $p < .001$ ), anxiety ( $r = .44$ ,  $p < .001$ ), guilt ( $r = .43$ ,  $p < .001$ ) and satisfaction with life ( $r = -.38$ ,  $p < .001$ ), suggesting an adequate construct validity. No associations between CF and care-recipient functional capacity ( $r = .06$ ,  $p = .57$ ) were found, suggesting an adequate discriminant validity. Discussion The SRCFQ may be a useful questionnaire to assess cognitive fusion in dementia caregivers. Results suggest that cognitive fusion seem to be a maladaptive coping strategy which may influence negatively in the caregiving stress process.

#### **FACTORS AFFECTING CAREGIVING BURDEN OF FEMALE CAREGIVERS CARING COMMUNITY DWELLING FRAIL OLDER ADULTS USING POULSHOCK AND DEIMLING MODEL**

Y. Ahn<sup>1</sup>, Y. Lim<sup>2</sup>, 1. Department of Nursing, Yonsei University Wonju College of Medicine, Wonju, Republic of Korea, 2. Yonsei University Wonju College of Medicine, Wonju, Republic of Korea

The purpose of the study was to examine a staged causal model as a theoretical base to explain caregiving burden of female caregivers caring community dwelling Korean frail older adults. The model contained three stages including antecedents (Stage 1), burden perception (Stage 2), and impact (Stage 3). The antecedents included gender, ADL impairment, cognitive impairment, self-efficacy, and familism. Stage 2 focused on disruptive behavior burden and social functioning burden. In Stage 3, the outcome variable was social activity restriction and negative change of family relationships. The total sample was 157 primary female caregivers caring community dwelling frail older adults over 65 year-old. Instruments were Caregiving Burden Scale, Self-Efficacy and Family Scale. Results show that ADL impairment ( $\beta = .14$ ,  $p < .05$ ), cognitive impairment ( $\beta = -.30$ ,  $p < .01$ ), self-efficacy ( $\beta = -.31$ ,  $p < .01$ ), and familism ( $\beta = .25$ ,  $p < .01$ ) explained 33.3% of the variance in disruptive behavior burden. For social functioning burden, ADL impairment ( $\beta = .36$ ,  $p < .01$ ), cognitive impairment ( $\beta = 0.25$ ,  $p < .01$ ), self-efficacy ( $\beta = -.31$ ,  $p < .01$ ), and familism ( $\beta = .18$ ,  $p < .01$ ) explained 39.2% of the variance. ADL impairment ( $\beta = .47$ ,  $p < .01$ ), self-efficacy ( $\beta = -.17$ ,  $p < .01$ ) and social functioning burden ( $\beta = .35$ ,  $p < .01$ ) explained 45.7% of the variance in social activity restriction. Only disruptive behavior burden ( $\beta = .64$ ,  $p < .01$ ) explained 64.6% of the variance in negative change of family relationship. Results indicate that physical and cognitive impairment of older adults, self-efficacy and familism of caregivers had an indirect influence on social activity restriction of female caregivers through social functioning burden, and had an indirect influence on negative change of family relationship through disruptive behavior burden. The findings showed that burden perception mediates the relationship between burden impact as a negative outcome and older adults' impairment as well as caregivers' belief and values.

#### **PREDICTING PERMANENCY PLANNING BEHAVIOR IN PARENTS OF ADULTS WITH INTELLECTUAL DISABILITIES**

H. Layton, S. Qualls, University of Colorado Colorado Springs, Colorado Springs, Colorado

Most adults with intellectual disabilities (ID) living in their home in the state of Colorado are not receiving government-funded services and face a crisis in care if and when their families become unable to care for them. Aging of the person with ID and the family caregiver both increase the probability that aging-related changes or death will provoke the transition in care from the family home to government funded housing and other services. One variable identified to off-set a crisis is long-term or permanency planning for the individual with ID. Along

with age, a profile of risk factors relating to the parent caregiver and the individual with ID were created to predict permanency planning. Ninety-seven family caregivers of persons with ID identified their individual risk factors, as well as their adult child's risk factors previously found to be related to long-term planning. These factors included demographic variables, health status, functional abilities, caregiver burden, level of ID, and problem behaviors. Hierarchical multiple regression was used to predict planning, and parental age was the only variable that predicted permanency planning for the individual with ID. Functional and health variables associated with old age, such as poor health and frailty, were not significant predictors to permanency planning, suggesting that awareness of age rather than health risks may induce planning. Service providers need to consider what prompts long-term planning, especially when other factors relating to old age do not signal a time to plan.

#### **FACTORS ASSOCIATED WITH FATIGUE IN DEMENTIA FAMILY CAREGIVERS**

Y. Chang<sup>1,4</sup>, H. Jing<sup>1</sup>, L. Hsu<sup>2</sup>, I. Chen<sup>3</sup>, L.O. Wray<sup>4,1</sup>, 1. School of Nursing, The State University of New York, University at Buffalo, Buffalo, New York, 2. Kaiser Permanente, Santa Clara, California, 3. University of Wisconsin- Madison School of Nursing, Madison, Wisconsin, 4. Buffalo VA Medical Center, Center for Integrated Healthcare, Buffalo, New York

Background: Family caregivers often take primary responsibility and manage all aspects of the care for their care-recipients with dementia. Family caregivers are at high risk of experiencing physical and psychological health issues. Fatigue is a prevalent symptom reported by cancer family caregivers. Family caregivers under uncontrolled fatigue for long time may have poor health, low quality of life, and poor functional status. However, little is known about fatigue and factors associated with fatigue in dementia family caregivers. Purpose: This study aimed to examine factors associated with fatigue in dementia caregivers. Methods: This study used a cross-sectional design. Participants were recruited from San Francisco Bay Area and the Alzheimer's Association Northern California and Northern Nevada Chapter. Measures included the Lee Fatigue Scale (fatigue and energy scales), burden (Caregiver Burden Inventory) and depression (Center for Epidemiologic Studies Depression), and a demographic questionnaire. Results: A total of 112 family caregivers participated in the study. Participants reported experiencing a moderate level of fatigue. Significant associations were found between fatigue and caregiver burden ( $r = 0.55$ ,  $p < 0.01$ ), fatigue and depression ( $r = 0.63$ ,  $p < 0.01$ ), energy and caregiver burden ( $r = -0.31$ ,  $p < 0.01$ ), and energy and depression ( $r = -0.48$ ,  $p < 0.01$ ). However, caregiver age and health problems were not associated with fatigue and energy. Conclusion: The findings revealed that fatigue is a common symptom in dementia caregivers. Due to the high inter-correlations between depression, burden, and fatigue, clinicians should routinely screen those issues when working with family caregivers.

#### **SESSION 265 (POSTER)**

##### **CHRONIC DISEASE MANAGEMENT**

##### **CONCORDANCE IN VASCULAR HEALTH TRAJECTORIES AMONG MARRIED OLDER ADULT COUPLES**

N. Dmitrieva<sup>1</sup>, C.F. Pieper<sup>1</sup>, M.C. Norton<sup>2</sup>, 1. Center for the Study of Aging and Human Development, Duke University Medical Center, Durham, North Carolina, 2. Utah State University, Logan, Utah

The lifespan developmental perspective posits that spouses play an important role in individual development of older adults (Baltes, 1996). Indeed, previous research had established cross-sectional within-couple concordance on a number of chronic illnesses, particularly within the domain of vascular health. To extend this work, we examined spousal concordance on an aggregate measure of vascular health conditions and

risk factors and change over time over 12 years from 1,369 older adult couples participating in the Cache County Memory Study. At each of four waves of data collection, self-reports of the following eight conditions and risk factors were summed (0-8 possible): myocardial infarction or coronary artery bypass surgery, cerebrovascular accident, diabetes mellitus, hypertension, obesity, hyperlipidemia, smoking, and use of antihypertensive medications. Results of multilevel models demonstrated that at the initial wave of the study participants reported nearly two vascular conditions and risk factors ( $B=1.91$ ,  $SE=0.16$ , 95% CI [1.60, 2.22]). Decomposition of variance showed that the average correlation between residuals for an average couple in the study was .38, indicating that over one-third of the variance in initial vascular burden level was due to differences between couples. Moreover, every additional decade of life corresponded to a gain in 1 vascular condition or risk; however, there was minimal evidence for correlated change within couples over time, and no significant effect of spouse gender on level or change in vascular conditions. These results underscore the role of within-couple processes in vascular health among married older adult couples.

### **MARITAL QUALITY AND SELF-EFFICACY: INFLUENCE ON DISEASE MANAGEMENT AMONG INDIVIDUALS WITH RHEUMATOID ARTHRITIS**

S. Tewary, *NovaSoutheastern University, FtL, Florida*

**Purpose:** The results presented here are part of the dissertation that examined the overarching research question: What is the direction of relationships between marital quality and disease management self-efficacy controlling for the moderation of age, household income, education, disease severity, and marital age? **Methods.** Ninety-one married participants; above age 30, diagnosed with RA completed a survey including demographic profile and 4 standardized instruments. Sample was recruited from hospitals and private practitioners from Florida and South Carolina. Data was collected from 2006-2007 and analyzed through Multiple Regression using SPSS software. **Results:** Relationships were not observed between marital quality, length of marriage and disease management self-efficacy as predicted by the first hypothesis. Additional regression analysis examination found that marital quality, length of marriage, pain, and health assessment together reported significant variance in disease management self-efficacy. However, only health assessment significantly predicted disease management self-efficacy. Other nonexamined variables could have influenced the independent marital quality effects. In brief, from this data it cannot be argued marital quality predicts perceived self-efficacy. **Implications for Education, Research and Practice:** The findings of this study were underpowered due to limited sample size of 91 participants and low statistical power of 0.54. Future studies with larger sample size can further validate the current findings. Health care providers should evaluate other available support systems that can help patients with RA. A mixed method approach with qualitative assessments is recommended for measuring marital quality for individuals with RA as they have modified their day-to-day activities due to the disease.

### **IMPROVING ACCESSIBILITY TO TECHNOLOGICAL DEVICES FOR PEOPLE WITH DISABILITIES IN UPPER LIMBS: IMPLICATIONS FOR PEOPLE WHO BECOME OLDER WITH A PHYSICAL DISABILITY**

E. Urdaneta<sup>1</sup>, U. Diaz-Orueta<sup>1</sup>, A. Garcia<sup>1</sup>, B. Morales<sup>1</sup>, C. Veigl<sup>2</sup>, K. Pecyna<sup>3</sup>, R. Ossmann<sup>4</sup>, G. Nussbaum<sup>4</sup>, 1. *Fundacion INGEMA, Donostia-San Sebastian, Gipuzkoa, Spain*, 2. *FHTW, Vienna, Austria*, 3. *HARPO, Poznan, Poland*, 4. *KI-I, Linz, Austria*

**Objective:** In Europe, development of technical solutions for people with long-term motor disabilities is increasing, but little attention is put to those with a disability approaching old age. The EU-funded AsTeRICS project is developing a supporting PC-based platform to help people with upper limbs disabilities, regardless of their age, access any

type of technological device (computers, cell phones, domotic devices), by means of personalized combinations of sensors-actuators. **Methods:** From a sample of 50 users from Austria, Poland and Spain, eight participants (5 male, 3 female) were above 50+ years old (age range: 50-61,  $x=54.63$ ,  $SD=3.92$ ), hence, they will face old age together with a physical disability. Three had a diagnosis of multiple sclerosis, three had cerebral palsy, and the others had hemiplegia and Parkinson disease. They controlled the computer mouse using a 5-switches combination, a blowing device, or a webcam tracking their head movement, and controlled Radio CD Player by means of a virtual keyboard and an IR transmitter. **Results:** PC cursor control using a webcam tracking head movement was the preferred device and suggestions were made to combine it for controlling other electronic devices. However, users still able to move hands would use it only when no other options were available for them. **Conclusions:** AsTeRICS is an open flexible platform adaptable to any motor disability and may also address needs for those people with disabilities who enter older age. Further in-depth studies are required to integrate older people with severe physical disabilities in the ageing society.

### **MEDICATION ORGANIZERS AND NON-ADHERENCE AMONG OLDER ADULTS**

A.N. Vidrine<sup>1</sup>, K. Insel<sup>1</sup>, K.M. Koerner<sup>1</sup>, G.O. Einstein<sup>2</sup>, J.C. McHenry<sup>1</sup>, D. Morrow<sup>3</sup>, 1. *University of Arizona, Tucson, Arizona*, 2. *Furman University, Greenville, South Carolina*, 3. *University of Illinois, Urbana-Champaign, Illinois*

Only 55 to 60% of older adults take medication as prescribed. Medication organizers are recommended, but there is little evidence that organizers improve adherence. This analysis is based on 249 older adults (age  $\geq 65$  years) taking at least one anti-hypertensive medication in the study, "Multifaceted Prospective Memory Intervention to Improve Medication Adherence." Self-report was used to obtain information on organizer use and number of prescribed medications. Physical function was determined with the SF-36 subscale. Medication electronic monitoring was used to obtain adherence to the inter-dose interval. Mean age was 76.2 years, with 188 women and 61 men. Organizer users had lower adherence ( $M_{users}=73.6\% \pm 31.1$ ,  $M_{non-users}=84.5\% \pm 22.4$ ,  $t(247)=3.22$ ,  $p<.01$ ), took more prescription medications ( $M_{users}=8.67 \pm 4.66$ ,  $M_{non-users}=6.99 \pm 4.00$ ,  $t(247)=-2.98$ ,  $p<.01$ ), and had lower physical functioning ( $M_{users}=59.0 \pm 26.4$ ,  $M_{non-users}=70.4 \pm 24.7$ ,  $t(247)=3.47$ ,  $p<.01$ ) than non-organizer users. Medication organizer use does not indicate adherence.

### **CHRONIC CARE AND OLDER BREAST CANCER SURVIVORS: HOW DO HEALTH BELIEFS AFFECT SELF-CARE DECISIONS?**

M. Rosenthal<sup>1</sup>, A. Tan<sup>2</sup>, E.A. Leventhal<sup>2</sup>, S. Hudson<sup>2</sup>, 1. *Institute for Hlth, Hlth Care Pol, Aging Rsch, New Brunswick, New Jersey*, 2. *University of Medicine and Dentistry of New Jersey, New Brunswick, New Jersey*

The U.S. has an increasing number of cancer survivors over age 65, including over 800,000 breast cancer (BC) survivors. Older BC survivors live with an average of four additional chronic conditions. Their feelings of vulnerability or vigilance may cause survivors to neglect preventive and health maintenance behaviors for their cancer and other comorbid conditions. They and their doctors face the complex challenge of managing these conditions and health beliefs affecting patients' decisions. We use Leventhal's Common Sense Model, a self-regulation behavioral model, as a framework to investigate how cancer experiences of older BC survivors influence their health beliefs and decisions. We surveyed BC survivors over 65 who are hypertensive (a prevalent chronic condition), their family members and physicians ( $n=95$ ). We also interviewed a subsample of patients and family members ( $n=30$ ), triangulating data to compare patients' beliefs, decisions and behaviors with expectations of family members and physicians. Examining beliefs,



survivors perceive different timelines for BC vs. hypertension, for themselves vs. others with these conditions, and differently from family members. Examining self-care behaviors, women who think they can affect their condition are more likely to use diet and exercise, but differently for hypertension from BC, and rarely see it as a physician's recommendation. Examining preventive care decisions, survivors say they have family support, but family members say the survivor doesn't need it. This research will provide an evidence-based foundation for a future intervention with providers to optimize survivors' overall health behaviors.

### **THE RELATIONSHIP BETWEEN PAIN SEVERITY, SELF-EFFICACY AND PERSONALITY IN OLDER CANCER OUTPATIENTS**

J. Krok, T. Baker, *School of Aging Studies, University of South Florida, Tampa, Florida*

It is well-established that personality not only affects physical health and longevity, but also mental health and preferred coping mechanisms. One area of limited research is the relationship between cancer pain severity, self-efficacy, and personality among older adults. This study aimed to examine how personality traits and self-efficacy affect cancer pain severity in older patients receiving outpatient treatment at a comprehensive cancer center. Symptom data was collected from the Brief Pain Inventory (BPI) and the Chronic Pain Self-Efficacy Scale (CPSE), while personality data was gathered from the Ten Item Personality Inventory (TIPI) and the Positive and Negative Affect Scale (PANAS). The mean age of the sample was 65.4 years ( $SD \pm 7.72$ ). Eighty-two percent of the sample was white. Preliminary data indicated that the average pain was 4.15 (0-10 scale; with 10 being worst pain), with the sample recording as mean of 6.53 and 2.45 on worst and least pain, respectively. Regression analyses showed that lower education ( $\beta = -.22, p < .05$ ), more chronic conditions ( $\beta = .21, p < .05$ ), and greater pain interference ( $\beta = .54, p < .001$ ), was associated with greater pain severity ( $F(18, 108) = 4.14, p < .001$ ). Higher agreeableness ( $\beta = .20, p < .05$ ) and better mental health ( $\beta = .30, p < .01$ ) were also found to be associated higher self-efficacy. These findings indicate that different personality types may influence perceptions of pain while receiving outpatient cancer treatment. More empirical research is needed to understand the impact of pain and its relationship with personality in more diverse cancer populations across the age continuum.

### **OLDER PARTICIPANTS IN A REGIONAL INTERDISCIPLINARY PROGRAM FOR CHRONIC PAIN**

C. Poon, R.L. Schmidt, R.L. Southerland, B.J. Wilson, *Department of Pain Management, The Nebraska Medical Center, Omaha, Nebraska*

Purpose: Despite the benefits of interdisciplinary programs in treating chronic pain, few older adults participate in these programs. This study examined the pattern of referral and participation of older adults in one such program in Nebraska. Design and Methods: Administrative records of 1,431 referrals between June 2003 and January 2012 were matched to 414 clinical records. Sociodemographic variables, pre- and post-program pain behaviors, pain beliefs, depressive symptoms, and internal locus of control were recorded. Reasons for non-participation were coded. Percentages were calculated to identify referral patterns. Dependent t-test was performed to examine program effectiveness. Results: Only 9% of referrals involved adults aged 60 and above. Pre-treatment evaluation completion rates were comparable among younger and older adults (45% vs. 49%). Appropriateness for admission and program attendance were higher among younger than older adults (86% vs. 73%; 66% vs. 53%). Program completion rate was significantly higher among older than younger adults (83% vs. 74%). The primary reason of non-participation among older adults was medical or cognitive problems. Upon program completion, there was a significant reduction in pain behaviors ( $t(27) = 8.24, p < .001$ ), pain beliefs ( $t(27) = 6.86, p < .001$ ), depressive symptoms ( $t(27) = 6.40, p < .001$ );

and a significant increase in internal locus of control ( $t(27) = 4.30, p < .001$ ). Implications: Interdisciplinary pain management programs should be tailored to meet the specific physical and cognitive needs of older adults. More healthcare providers need to be made aware of the potential benefits of these programs to older adults.

### **PRESSURE ULCER OCCURRENCE AMONG HOSPITALIZED OLDER ADULTS: DOES RN JOB SATISFACTION MATTER?**

J. Choi, S. Bergquist-Beringer, *University of Kansas School of Nursing, Kansas City, Kansas*

Purpose: Little is known about the effect of RN workgroup satisfaction on pressure ulcer occurrence in acute care hospitals. The study purpose was to examine the relationship between RN workgroup job satisfaction and the rate of hospital-acquired pressure ulcers among older adults on six types of acute care units. Methods: Linked 2009 data on pressure ulcers in adult patients (age 65 and over) and RN survey from the National Database of Nursing Quality Indicators® (NDNQI®) were used. Random-intercept negative binomial regression analyses were performed at the unit level. The sample consisted of 3,329 units in 561 NDNQI hospitals (126,032 patients; 77,826 RNs). The included unit types were critical care, step-down, medical, surgical, combined medical-surgical, and rehabilitation units. Results: Controlling for unit (nurse staffing, education, experience) and hospital (Magnet status, teaching status, bed size) characteristics, RN workgroup job satisfaction was negatively associated with pressure ulcer occurrence. The relationship varied by unit type. Higher RN satisfaction was associated with fewer pressure ulcers on critical care, medical, and rehabilitation units. No relationship, however, was found in step-down, surgical, medical-surgical units. The pressure ulcer rates were lower in Magnet than non-Magnet hospitals. Conclusions: Findings from this study provide evidence that RN workgroup job satisfaction is related to better pressure ulcer outcomes. Nursing administrators and managers wishing to reduce pressure ulcer rates should consider developing strategies to improve RN workgroup satisfaction based on unit types.

## **SESSION 270 (POSTER)**

### **COGNITIVE AGING**

#### **CNS THE RELATIONSHIP BETWEEN COGNITION AND GAIT FUNCTION IN LATINO ADULTS**

H. Nguyen, *Wake Forest School of Medicine, Winston-Salem, North Carolina*

Dual-task methodology that assesses the connection between cognition and gait has expanded rapidly. Cognitive impairments in executive function, attention, and psychomotor speed tasks have been linked to gait disturbances including slow gait speed, which has been found to predict future falls, disability, and dementia. While our knowledge about the link between cognition and gait has grown markedly, what we know about cognition and gait and racial/ethnic groups has not kept pace. The goal of this study is to identify specific cognitive tasks (Speed, Inhibition, Attention/Memory) that are related to gait velocity and other gait parameters performed with and without secondary verbal interference tasks (Serial 7 and Walking While Talking). A sample of 40 Latino men 18 and older was recruited from North Carolina. The mean age for the sample was 33.1 (range 18 – 72). Participants underwent a gait assessment using the GAITRite system, a computerized walkway with embedded pressure sensors (GAITRite, CIR systems, Havertown, PA, USA). Older age was significantly related to increased double limb support with and without verbal interference. Multiple linear regressions were performed to examine the relationship between cognitive function and gait performance, adjusted for key confounders including age and education. Cognitive tasks were not associated with gait velocity without

verbal interference. However, the Attention/Memory task was significantly associated with gait velocity in the verbal interference conditions. Findings from this study are generally consistent with previous general population studies, and suggest associations of gait with age and distinct cognitive processes.

### **METAMEMORY ACCURACY IN HEALTHY AGING AND EARLY ALZHEIMER'S: THE EFFECT OF GENDER**

J. Szajer, C. Murphy, *San Diego State University, San Diego, California*

Metamemory, or the ability to monitor, judge, and control our memories, is an important aspect of cognition because it helps to determine cognitive and behavioral self-regulation involved in overall judgment and decision-making (Marquie & Huet, 2000). Much research has focused on how age might affect metamemory abilities but findings have been highly inconsistent. However, recent research suggests that more complex tasks, such as those measuring episodic memory performance and challenging recognition memory, rather than recall, are better at revealing age-related deficits in metamemory accuracy (Daniels, Toth, & Hertzog, 2009; Dahl, Allwood, & Hagberg, 2009). The main aim of the current study was to examine the effect of gender on variation in metamemory accuracy among both healthy aging individuals and those with AD using an episodic recognition memory task. Data from 158 patients diagnosed with possible or probable AD were compared with data from 138 non-demented elderly controls ( $n = 296$ ). Since prior research suggests that memory-based olfactory tests are equally, if not more sensitive than more semantic, visual tasks when examining cognitive decline in normally aging individuals and those with AD, in particular (Murphy et al., 1999), recognition memory was assessed using a signal-detection based olfactory recognition memory task which included self-reported ratings of confidence in each recognition response. A univariate analysis of variance revealed a significant main effect of gender on the accuracy of confidence ratings,  $p < .05$ , with females reporting significantly more accurate confidence assessments than males. Applications and implications are discussed. Supported by grant # AG04085-25 from NIA.

### **MILD COGNITIVE IMPAIRMENT: A CONCEPTUALIZATION**

J.M. Sjostedt, M. Bull, *Nursing, Marquette University, Milwaukee, Wisconsin*

**Background.** Mild cognitive impairment (MCI) is often viewed as a transitional state to dementia and other neurocognitive disorders. A conceptual framework for MCI might help to guide research; but one does not appear to exist. Most published studies use only diagnostic criteria and do not specify a framework as the basis for their research. The purpose of this analysis is to explore the concept of MCI in order to provide a framework for future research and broaden the understanding of older adults' potential experiences with MCI. **Method.** Google-scholar and PubMed databases were searched for years 2000-2010. The search was limited to publications in English. Search terms focused on the attributes, sociocultural, temporal, and discipline variations of MCI among older adults. **Results.** A total of 52 articles and 2 comprehensive books were reviewed. The antecedents and consequences of MCI from the older adults' perspectives were identified, leading to the definition of MCI as a state of unstable limbo weighted by heterogeneity between a person's normal and abnormal continuums. Antecedents included attributes that were modifiable (lifestyle factors, dietary deficiencies, medications, and stress), potentially modifiable (chronic conditions, neuropsychiatric disorders, and a lack of awareness of deficits), and non-modifiable (sociodemographic and neuropathologic factors). The consequences of MCI were identified as being complex and enveloped by ambiguity, confusion, variability and uncertainty. **Conclusions.** The analytic synthesis of the literature resulted in a conceptual model of

MCI. The model illustrates the complexity and nature of MCI and provides a framework to guide future interventions and research.

### **WHAT'S IN A NUMBER? AN ANALYSIS OF AGE, CO-MORBIDITY, COGNITION, AND SELF-CARE IN ASSISTED LIVING RESIDENTS**

E.K. Smith<sup>2</sup>, R.E. Herman<sup>1</sup>, K.N. Williams<sup>1</sup>, *1. University of Kansas Medical Center, Kansas City, Kansas, 2. University of Kansas, Lawrence, Kansas*

Older adults in Assisted Living (AL) facilities have range of cognitive abilities. Cognitive abilities have a large impact on an older adults' ability to provide self-care (Njegovan et al., 2001). Declines in the ability to provide self-care often result in further institutionalization to a skilled nursing facility (Banaszak-Holl et al., 2004). The impact of increasing age and increasing number of co-morbidities is commonly thought to be a factor in declining cognition and self-care (Salthouse, 2009; Deary et al., 2009). Medical, cognitive, and functional data were collected from AL Residents ( $n=83$ ). This analysis examines the difference between three models. The first model shows age and co-morbidities predicting cognition and cognition, age, and co-morbidities predicting self-care. A nested model shows age predicting cognition and age and cognition predicting self-care. An alternative nested model shows co-morbidities predicting cognition and co-morbidities and cognition predicting self-care. The analysis utilized structural equation modeling (SEM) to determine which model provided a better fit and explained more of the variance. The results suggest age has a stronger causal relationship with declining cognition and declining self-care. All three models suggest a causal relationship between declining cognition and declining self-care. These results suggest as age increases and cognition declines the need for self-care increases. The implications of these findings are consistent with previous findings: (1) Age impacts cognition and self-care, (2) Declining cognition impacts self-care.

### **AGE AS A MODERATOR OF FATIGUE SEVERITY ON A TASK OF COGNITIVE SWITCHING**

K.R. Thomas<sup>1</sup>, M. Marsiske<sup>1</sup>, D. Marra<sup>1</sup>, J. Jones<sup>1</sup>, D. Bowers<sup>1,2</sup>, *1. Clinical and Health Psychology, University of Florida, Gainesville, Florida, 2. McKnight Brain Institute, Gainesville, Florida*

This study investigated the effect of fatigue on the cognitive performance of older adults, with a particular focus on whether persons in advanced old age ("old-old") might be disproportionately disadvantaged by fatigue. We investigated the separate and interactive effects of cross-sectional age and self-reported fatigue severity on executive functioning. Thirty-six healthy older adults completed neurocognitive, mood, and self-reported functioning measures. Participants were non-demented (mean MMSE=29.42), 75% female, with a mean education of 16.50 years. Their ages ranged from 62 to 93 years (mean=80.58) and they were, on average, not depressed (Geriatric Depression Scale=2.78). Participants were classified as young-old (62-80,  $n=17$ ) or old-old (81-93,  $n=19$ ). Self-reported fatigue was measured using the Fatigue Severity Scale; levels did not differ significantly between age groups. A difference score for the Trail Making Test (TMT) was obtained by subtracting the time to perform TMT part A from time to perform part B. Higher scores represented poorer cognitive switching ability. This difference score was significantly related to age category ( $\beta=.336, p<.05$ ), fatigue ( $\beta=.549, p<.01$ ), and the age by fatigue interaction ( $\beta=.467, p<.05$ ),  $R^2=0.325$ . These results suggest that very-old adults and those with greater self-reported fatigue evince poorer performance on a measure of cognitive switching. Above and beyond the separate age and fatigue effects, old-old persons with higher fatigue demonstrated disproportionately lower executive control. Future work with larger samples must examine whether these fatigue effects generalize to other measures of executive functioning, and whether fatigue effects persist after controlling for education, mood and sleep variables.

## FEASIBILITY OF NEUROPSYCHOLOGICAL TESTING IN THE OLDEST OLD: IT CAN BE DONE!

S.L. Andersen, L. Feldman, T.M. Neary, J.D. Gass, T.T. Perls, *Medicine/Geriatrics, Boston University School of Medicine, Boston, Massachusetts*

**Objective:** In light of prevalent sensory deficits and frailty amongst the oldest old, we sought to evaluate the feasibility of in-home cognitive function testing in this group. **Methods:** Long Life Family Study (LLFS) probands, their siblings and a referent age-matched cohort participated in a 2.5-hour battery of neuropsychological tests of memory and executive function that for the most part have been used in other studies and have low demands on vision, hearing, and motor abilities (tasks involving writing and drawing). Vision, hearing, and motor capacities were each rated from 1 (excellent) to 5 (deafness, blindness, or inability to use hands). Presence of environmental and dispositional (fatigue and willingness) factors were also noted. **Results:** 86 participants, age range 80-103 years were tested. 1 participant refused to complete the test battery. 91% of 32 octogenarians completed the testing in one visit compared to 70% of 50 nonagenarians and 100% of 4 centenarians. Mean visual, hearing and motor capacity ratings ranged from 1.4 to 1.6 for octogenarians, 1.7 to 2.3 for nonagenarians, and were 1 for the centenarians. Environmental factors may have affected testing in 66%, 46% and 25% of the sessions for the respective age groups. Disposition of the participant may have been a factor in 22%, 34% and 25% of the sessions. **Conclusions:** Extensive neuropsychological testing is feasible in the oldest old. Tests with minimal demands on hearing, vision, and motor ability should be selected and organized to allow for multiple testing sessions. Test difficulty does not need to be minimized.

## ASSOCIATION OF DIABETES WITH INCREASED RISK OF MILD COGNITIVE IMPAIRMENT IN THE AGING, DEMOGRAPHICS, AND MEMORY STUDY

H. Salman<sup>1</sup>, C.E. Gould<sup>2</sup>, S.A. Beaudreau<sup>1,3</sup>, *1. VA Palo Alto & the Sierra Pacific Mental Illness, Research Education and Clinical Centers (MIRECC), Palo Alto, California, 2. Stanford University School of Medicine, Department of Psychiatry and Behavioral Sciences, Palo Alto, California, 3. VA Palo Alto & Geriatric Research Education and Clinical Center, Palo Alto, California*

Diabetes increases the risk of dementia, but it is not clear whether diabetes is associated with mild cognitive impairment (MCI) in older adults. We aimed to determine whether the presence of diabetes is associated with MCI or dementia and whether diabetes increases the risk of developing MCI or dementia over a 7-year follow-up period. To address these questions, we conducted secondary analyses in a sample of 856 participants (M = 77.7 years) from the Aging, Demographics, and Memory Study (ADAMS). Three logistic regression analyses were used to determine predictors of (1) normal versus cognitive impairment but not demented (CIND) at baseline, (2) CIND versus dementia at baseline, and (3) conversion from normal or CIND to dementia at follow-up. We adjusted for age, gender, years of education, race, and ethnicity. Diabetes was associated with 2.23 times increased risk of CIND versus normal cognition (CI = 1.03 to 4.83). Age, education, and ethnicity were also significant predictors in this model. In the second model, only age predicted increased risk of dementia versus CIND. In our third model, only age and education predicted conversion to dementia. In the present study we determined that diabetes is associated with CIND, but not associated with conversion to dementia in middle-old and old-old adults. Although regular maintenance of diabetes is essential for adults of all ages, such care may not be necessarily preventative against cognitive decline due to dementia in middle-old to old-old adults. Future studies should determine the age at which diabetes is predictive of dementia.

## MEMORY DECLINES IN OLD AGE: BENEFIT OF SPACING IMPROVES CHANCES OF RETENTION

J. Zigterman, P. Simone, M. Bell, *Santa Clara University, Santa Clara, California*

Studies have been trying to figure out how to level the playing field between older adults and younger adults when it comes to memory retention and forgetting. Older adults clearly have difficulty remembering items in simple memory tasks. When items to be recalled are spaced apart instead of learned in one massed learning episode, adults see a benefit from the spacing and have better retention rates. Reducing the total number of items to be recalled also levels the playing field for older adults, but in reality, this accommodation is not practical. The current study compared performance on a simple word-pair memory task between young children ages 7 to 11, college aged students ages 18 to 22, and older adults ages 60 and older. Massed learning, spaced learning, and a control group were assessed for each age group. Consistent with previous findings, older adults performed the worst in all conditions, but significant differences between young children and older adults were especially large in the massed and spaced conditions. The control condition performed worst in all age groups, reinforcing the concept that repetition increases retention. Massed performance was the worst of the experimental conditions in all age groups. In light of these findings, older adults should utilize repetition when trying to remember things. For more complicated learning tasks, such as continuing education classes, older adults should practice spacing out the learning and studying episodes instead of cramming the information into one sitting. Through spacing, older adults can improve their memory.

## SESSION 275 (POSTER)

### COGNITIVE FUNCTIONING AND IMPAIRMENT

#### GRANT SUBMISSION AND REVIEW: APPLICATION OF COGNITIVE AGING AND DISTRIBUTED COGNITION

J.W. Elias, *UC Davis School of Medicine, Sacramento, California*

Changes in the page limitations for NIH grants and accompanying and continuing changes in the reviewers' approach to review have placed significant weight on not only strong and innovative ideas, but easily understood applications. A study of grant application strengths and weaknesses via the roles of: study section participation, CSR Scientific Review Administrator, NIA Program Officer, Director of Grants Coordination (UC Davis SOM), and cognitive researcher finds much to be gained by applying a "distributed cognition" approach to the goal-directed behavior of competitive grant writing. Distributed cognition places an emphasis on the process by which personal knowledge is socially transmitted and coordinated to form an external representation. Much is made of the elements of style and active vs. passive communication, but advice on grant writing and the review/scoring process in its current iteration, significantly overlooks specific application of cognitive research and heuristics. The study of cognitive aging in particular has much to contribute to the tool box of the writer who must transmit knowledge concisely, socially, and competitively in the distinct sections of specific aims, significance, innovation, and approach. In this presentation participants will be directed toward: 1) the application of principles from such cognitive areas as: working memory, reading, numeracy, neuro-economics, decision fatigue, heuristics, visual presentation. Participants will, 2) receive examples of how cognitive aging research and a distributed-cognition approach can facilitate ease of reader understanding in grant submission.

## A 5-YEAR FOLLOW-UP OF MILD COGNITIVE IMPAIRMENT INITIALLY ASSESSED AT AGE 55

W.S. Kremen<sup>1,2</sup>, M.S. Panizzon<sup>1</sup>, K.M. Spoon<sup>1,3</sup>, C.E. Franz<sup>1</sup>, A. Jak<sup>4,1</sup>, W.K. Thompson<sup>1</sup>, K.C. Jacobson<sup>5</sup>, M.J. Lyons<sup>6</sup>, 1. *University of California, San Diego, La Jolla, California*, 2. *VA San Diego Center of Excellence for Stress and Mental Health, La Jolla, California*, 3. *San Diego State University/Claremont Graduate School, San Diego, California*, 4. *VA San Diego Healthcare System, La Jolla, California*, 5. *The University of Chicago, Chicago, Illinois*, 6. *Boston University, Boston, Massachusetts*

Early identification of Alzheimer's disease is a major public health concern, and early identification of mild cognitive impairment (MCI) is important for addressing that concern. Using extensive testing not subject to ceiling effects, we previously showed that neuropsychologically-defined MCI could be identified in midlife (ages 51-59) in the Vietnam Era Twin Study of Aging (VETSA). As with older adults, prevalence rates varied widely depending on MCI definitions. Here we analyzed longitudinal data for the first 663 participants (ages 56-64) in our ongoing wave 2 follow-up. Six cognitive domains were assessed, and 4 definitions of MCI were tested. Analyses were non-twin, mixed-model analyses (units of analysis are individuals, not pairs) adjusted for clustering of observations. We compared wave 2 cognitive performance in MCI versus non-MCI groups, adjusted for wave 1 performance. For each definition, the multiple-domain MCI group was worse at wave 2 than the non-MCI group in all domains (results were less consistent for language). The amnesic MCI group was worse than the non-MCI group on processing speed and visual-spatial function for all 4 definitions, executive function for 3 of 4, and memory for 2 of 4 definitions. The results provide validation of our early diagnoses; the MCI group at wave 1 appears to have manifested greater declines than the non-MCI group, given their lower wave 2 performance even after adjusting for their already poorer wave 1 performance. Continued follow-up will be important, but the results suggest that it is indeed possible to identify MCI earlier than in previous studies.

## RESPONSES TO A DIAGNOSIS OF MILD COGNITIVE IMPAIRMENT

T. Kruger<sup>1</sup>, L.X. Blonder<sup>2</sup>, G.D. Rowles<sup>2</sup>, F.A. Schmitt<sup>2</sup>, R. Guttman<sup>3</sup>, F. Zanjani<sup>2</sup>, 1. *Indiana State University, Terre Haute, Indiana*, 2. *University of Kentucky, Lexington, Kentucky*, 3. *University of Western Florida, Pensacola, Florida*

Individuals with mild cognitive impairment (MCI, which involves a cognitive complaint with evidence of impairment on objective testing or longitudinal evidence of decline on cognitive tasks; generally intact global cognition; no functional impairment; and not being demented) have an elevated risk of developing dementia. Research on how older people respond to being told that they possess these early signs of cognitive decline, which may be linked to neurodegenerative diseases, is limited. Taking a grounded theory approach, 15 adults (6 women, 9 men; age range 64 to 91; mean education 15.9 years) participated in in-depth qualitative interviews to explore: a) reactions to being diagnosed with MCI, b) contextual factors affecting reactions, and c) how receiving a diagnosis of MCI influences emotions and behaviors. Findings indicated that, after experiencing initial reactions to receiving an MCI diagnosis, individuals negotiate the meaning of their diagnosis and reestablish equilibrium in their lives. These processes are influenced by several dynamics, including one's motivation for being cognitively evaluated, interactions with other people (physicians and significant others), and knowledge of MCI and dementia. Perceptions of uncertainty (regarding the diagnosis and the future), the influence of others in one's life, and the temporal framing of the anticipated implications of a diagnosis of MCI affect the way people responded to their diagnosis. This study extends the evolving research on the meaning of a diagnosis of MCI by exploring contextual, personal, and social factors that influence people's responses to their diagnosis.

## COGNITIVE FUNCTIONING AND PROBABILISTIC CLASSIFICATION LEARNING ACROSS THE LIFESPAN

H. Davis, S.M. Miranda, K.M. Beitz, *Psychology, University of Colorado at Colorado Springs, Colorado Springs, Colorado*

The Weather Prediction Task (WPT), a popular measure of habit learning, may be learned normally in amnesic populations and has been taken as support for intact implicit learning in amnesic patients. WPT deficits appear in individuals over the age of 60, but it is unclear if this deficit is due to cognitive declines with age. In the present study, participants are presented with 1-3 cards of a four card set assigned probabilities on the occurrence of either rain or sunshine in two sessions of 200 trials. The current study examines performance on a modified weather prediction task across the lifespan. Specifically, an explicit single card presentation is assigned a probability of 100% sunshine and another single card presentation is assigned a probability of 100% percent rain. Children and adolescents who are not often assessed for probabilistic classification learning on WPT were included in order to assess development of probabilistic classifications as well as its dissolution in the elderly. Thus, the current study examines performance on a modified weather prediction task across the lifespan, from 5 to 89 years of age. A 3-way mixed ANOVA revealed performance increases in children and adolescents, and declines in older adults. WPT explicit performance and explicit memory tasks were found to be moderately related. However, performances on purported implicit components were not above chance levels. This study suggests that an explicit component during probabilistic classification is more important than originally believed in unimpaired populations.

## THE EFFECTS OF MEMORY PROBLEMS AND DEPRESSIVE SYMPTOMS ON PHYSICAL FUNCTIONING IN ADULTS

M. Wood, E. Wayde, S.R. Black, F. Scogin, *University of Alabama, Tuscaloosa, Alabama*

As we age, our physical and cognitive functioning decline. A number of factors might contribute to physical decline among diabetics. There is evidence that diabetes affects cognitive functioning. We attempted to examine the relation between depression, and cognitive functioning by conducting analyses through the National Health and Nutrition Examination Survey (NHANES). The NHANES is a database of surveys assessing the health and nutritional status of individuals across the United States. Initial analyses indicated that there was a link between depression, memory, and physical functioning for individuals in the data set. In fact, our secondary data analysis of the 2009-2010 NHANES data set shows that memory problems and depressive symptoms explain a significant amount of variance of physical functioning in adults aged 20. The variables account for 16.3% of the variance,  $F(2, 2401) = 233.24, p < .001$ . Interestingly, additional analyses indicated that individuals who were 40 – 60 yrs endorsed significantly more problems with physical functioning than all other aged groups including groups over 80yrs  $F(3, 2401) = 48.43, p < 0.001$ . These results have implications for the relation between age, depression, and physical functioning across the lifespan.

## PATTERNS OF PERFORMANCE WITHIN FIBROMYALGIA: IDENTIFYING SUBGROUPS

B. Follick, B. Cherry, L. Zettel-Watson, E. Grandfield, D.N. Rutledge, J. Jones, *California State University, Fullerton, Placentia, California*

Fibromyalgia (FM) is a multisystem disorder characterized by widespread musculoskeletal pain and a host of other symptoms. Although FM was originally conceptualized as a musculoskeletal disorder consisting primarily of physical symptoms, it is now understood that individuals with FM experience a host of concordant symptoms including a decline in cognitive functioning, and difficulty with psychological health (Bennett, Jones, Turk, Russell & Matallana, 2007). This study sought to investigate the possible existence of subgroups within an FM

sample based on behavioral data gathered through the administration of physical and cognitive performance measures, as well as self report psychological symptom measures (e.g., pain, stiffness, fatigue, depression). Participants (N=57) were recruited from the general community and were required to provide documentation of having met the criteria for diagnosis of FM. Analysis was completed using Ward's method of hierarchical cluster analysis (Ward, 1963). A four cluster solution was chosen for its level of interpretability. Cluster I participants exhibited high physical and cognitive performance and low psychological symptoms. Cluster II participants exhibited low physical and cognitive performance and high psychological symptoms. Cluster III participants exhibited moderate physical and cognitive performance and low psychological symptoms. Cluster IV participants exhibited moderate and cognitive performance and high psychological symptoms. The results of this experiment suggest that subgroups exist amongst fibromyalgia patients based on their psychological symptoms and levels of cognitive and physical performance. These results provide a better understanding of the variability of symptoms experienced by fibromyalgia patients.

## **SESSION 280 (POSTER)**

### **CRITICAL APPROACHES TO GERONTOLOGY**

#### **CLASS AND SOCIAL PARTICIPATION IN LATER LIFE**

I.R. Jones, *Social Sciences, Bangor University, Bangor, Gwynedd, United Kingdom*

Studies of later life have increasingly focused on examining different measures of socio-economic status in older groups incorporating indicators of class, status, income, wealth and deprivation and examining how these interact with other important structuring factors including retirement status, gender and ethnicity. At the same time research has shown that participation in social activities and social networks are viewed as key elements of successful ageing. Pathways to retirement and the material circumstances experienced prior to and in retirement are also considered important for social participation and well-being in later life. They also contribute to the maintenance of individual capacities to engage in social activities and participate in social networks. There has, however, been a relative neglect of wider debates about class and class culture and how these relate to the literature on social participation and later life. Studies of successful and active ageing need to take account of the importance of the role of class, material circumstances and retirement pathways in influencing the capacities of individuals to participate in social life. This paper considers ways of linking these two important areas of research and the theoretical and methodological issues that arise from this.

#### **YOUTUBE: A CASE STUDY OF GERIATRIC1927 USING SELECTIVE OPTIMIZATION WITH COMPENSATION**

P. Sauer, A. Bardo, *Miami University, Oxford, Ohio*

YouTube, the interactive online video sharing platform founded in 2005, has rapidly become an essential online medium. Gerontological research on YouTube has overwhelmingly focused on the digital divide. The purpose of this study is to broaden the gerontological perspective of social media as a medium which encourages intergenerational exchange and can compensate for aging related losses. We conducted a case study of Peter Oakley, an 84-year-old English widower, who started posting autobiographical videos entitled "Telling It All" on YouTube in August of 2006 under the pseudonym geriatric1927. His first video entitled "First Try" quickly went viral and turned him into a media sensation over a matter of days. By 2012, geriatric1927 had posted 334 videos with more than 9 million total views. Our case study is guided by the theoretical framework of selective optimization with compensation which suggests that older adults can overcome aging related challenges through technological and social resources. We find that Peter

utilizes YouTube to compensate for his social isolation that he relates to his position as an older widower in an ageist society. He optimizes his role as a YouTube sensation to engage in personal growth through reminiscence in his "Telling It All" series. Through the progression of his YouTube videos, he engages in intergenerational exchange that promotes and encourages a critical examination of existing age stereotypes throughout and beyond the YouTube community.

#### **RAPE, HIV, AND AGING: IS PUBLIC HEALTH PART OF THE PROBLEM?**

S. Roher, *New York Academy of Medicine, New York, New York*

In the 1970s, feminists recognized that a major obstacle to preventing rape was the ubiquitous stereotype of women as sexual objects and associated beliefs that women desired or deserved to be raped. Similarly, in the 1980s, pervasive views of homosexuality as inherently 'diseased' and/or 'sinful' stymied efforts to mount a vigorous public health response to AIDS. In both cases, the cultural construction of women and homosexuals strongly inhibited an adequate public health response to critical challenges; the situations did not change until feminist and gay activists used the "politics of authenticity" to legitimize the voices of women and gay men and challenge 'experts'. Today's social construction of aging remains rooted in largely negative stereotypes and stigma. History suggests that this may compromise the ability of public health to act responsibly towards the older population. This presentation, using historical comparisons, examines how the cultural construction of aging may be influencing the public health response to aging-related public health issues, critiques the concept of 'healthy aging' as promoted by aging experts, and suggests that the absence of an authentic aging movement creates a significant challenge to the development of an effective public health response to population aging.

#### **ETHNIC DIFFERENCES IN CONCERNS, KNOWLEDGE, AND BELIEFS ABOUT ALZHEIMER'S DISEASE: RESULTS FROM A NATIONAL SAMPLE**

L. Ayalon, *Bar Ilan University, Ramat Gan, Israel*

**OBJECTIVES:** To evaluate ethnic group differences in concerns, knowledge, and beliefs about Alzheimer's disease (AD) in three ethnic groups of older adults (White, Latino, and Black). **METHODS:** The Health and Retirement Study is a U.S. national representative study of older adults over the age of 50. The study is based on the 2010 wave. **RESULTS:** Analysis is based on data from 939 White respondents, 120 Latino, and 171 Black respondents who completed a special module about AD concerns, knowledge, and beliefs. There were significant ethnic differences on 7 of 13 items. However, after adjustment for education, gender, age, and having a family member with AD, only 4 items showed significant ethnic group differences; relative to White respondents, Black respondents were less likely to report that having a parent or a sibling with AD, increases the chance of developing AD and that genetics was an important risk for AD. In addition, relative to White respondents, both Black and Latino were more likely to perceive stress as a potential risk for AD and less likely to perceive mental activity as a protective factor. **CONCLUSIONS:** The study found only limited ethnic group differences, with most items showing a similar pattern across groups. Given their limited scope, it is unlikely that the ethnic differences identified in the present study are responsible for the ethnic gap in service use and AD diagnosis documented in past research.

#### **MENTAL CAPACITY IN THE (CIVIL) LAW: CAPACITY, AUTONOMY AND VULNERABILITY**

M. Hall, *1. Law, Thomspon Rivers University, Kamloops, British Columbia, Canada, 2. Interdisciplinary Studies Graduate Program, Vancouver, British Columbia, Canada*

This paper examines "mental capacity" as a medico-legal social construct and concludes that, while the construct works reasonably well in

the contexts of property-related transactions and health treatment decisions, it is deeply problematic and a source of dysfunction in the context of guardianship and guardianship-type interventions. There is nothing natural, compelling or necessary about mental capacity, and the author proposes an alternate construct more consistent with the purpose of guardianship and guardianship-type interventions: vulnerability. As the capacity construct is deeply enmeshed with a traditional liberal theory of autonomy (the capacity/autonomy equation or paradigm), so the vulnerability construct described here is more consistent with a theory of relational autonomy.

## SESSION 285 (POSTER)

### DIVERSE POPULATIONS

#### PAIN TREATMENT OUTCOMES AMONG AFRICAN-AMERICANS AND WHITES: EVIDENCE OF AGE-RACE DISPARITIES

S.H. Meghani, A. Hanlon, D. Bruner, *Biobehavioral and Health Sciences, University of Pennsylvania, Philadelphia, Pennsylvania*

Chronic pain afflicts 116 million Americans with a cost of up to 635 billion annually. Racial disparities in both prescription of analgesics for pain and their adherence by minority patients are widely documented. We investigated if the heuristics regarding patients' decisions to use analgesics for cancer pain and their actual adherence to prescribed around-the-clock (ATC) analgesics vary among older versus younger African-Americans and Whites. African-Americans (n=102) and Whites (n=139) diagnosed with solid tumors having at least one prescription for ATC analgesics were recruited from outpatient oncology clinics in the Mid-Atlantic region. Choice-based-Conjoint (CBC) Analysis was used to elicit analgesic treatment preferences. Analgesic adherence (i.e., total number of correct doses of prescribed ATC analgesics taken over 3-month period) was assessed using Medication-Event-Monitoring-System, (MEMS®). When compared to Older Whites, older African-Americans reported higher levels of cancer pain (p=.000) and lower pain relief (p=.000), more analgesic barriers (8 v. 5, p=.000), more pain-related functional interference (35 v. 30, p=.008). Regardless of age-group, the most important factor for Whites in deciding to use analgesics was "pain relief" (p=.000) whereas for African-Americans it was "side-effects" (p=.000). MEMS® adherence was significantly lower among older African-Americans versus older Whites (54% v. 75%, p=.000). Using GLM, race was a strong independent predictor of MEMS adherence (p<.000). An age\*race interaction was not significant (p=.993) in this analysis. Minority patients' past experiences with pain treatment may reflect in their subsequent adherence to analgesics. Findings indicate the need for provider education and more aggressive pain and symptom management among African-Americans. Acknowledgements: NIN/NINR grant [NIHRC1NR011591] PennMARCH [1P30AG031043-01]

#### ETHNICITY AS A MODERATOR OF THE RELATION BETWEEN DISABILITY AND PSYCHOLOGICAL DISTRESS AMONG ELDERLY ASIAN-AMERICANS AND NON-HISPANIC WHITES

C. Huang<sup>1,2</sup>, M.R. Crowther<sup>1</sup>, G. Kim<sup>3,1</sup>, J. DeCoster<sup>4</sup>, 1. *Department of Psychology, University of Alabama, Tuscaloosa, Alabama*, 2. *Center for Community-Based Partnerships, University of Alabama, Tuscaloosa, Alabama*, 3. *Center for Mental Health and Aging, University of Alabama, Tuscaloosa, Alabama*, 4. *Center for Advanced Study of Teaching and Learning, University of Virginia, Charlottesville, Virginia*

Objectives: The present study aims to examine whether ethnicity moderates the relation between disability and psychological distress (PD) in elderly Asian-Americans and non-Hispanic whites. Methods: Data were drawn from the 2009 California Health Interview Survey

(CHIS). Respondents included non-Hispanic whites and five Asian-American subgroups (Chinese, Japanese, Korean, Filipino, Vietnamese) who were aged 60 and older (N=18,127). A generalized linear model (GzLM) analysis was conducted to examine the overall relation of disability with PD, as well as how the relation was moderated by ethnicity. Results: Ethnicity was found to be a significant moderator of the relation between vision/hearing disability and PD among elderly Koreans, Filipinos and non-Hispanic whites (Wald Chi-Square= 79.14, p < .001). Ethnicity also moderated cognitive disability in all Asian subgroups and whites (Wald Chi-Square= 1071.38, p < .001). Having an ADL functional disability led to more distress among Chinese, Filipinos Vietnamese, and whites (Wald Chi-Square= 304.68, p < .001) than among those from other Asian subgroups. When the five Asian subgroups were treated as an aggregated group, the moderating effect of ethnicity was no longer significant for ADL functional disability and PD. Conclusions: This study sheds light on understanding ethnicity as a moderator of the relation between disability and PD. The findings revealed greater group differences between older Asian-Americans and non-Hispanic whites when subgroup differences were taken into account. It is recommended that health care professionals offer culturally-sensitive mental health services for disabled older adults to enhance their emotional wellbeing.

#### INFORMATION-SEEKING BEHAVIORS OF CAREGIVERS: FINDINGS FROM MULTINOMIAL LOGISTIC REGRESSION ANALYSES

K. Kim, B.L. Casado, *University of Maryland, Baltimore, Maryland*

Limited empirical evidence is known on how family caregivers seek health information to take care of older immigrants. Understanding of their information-seeking behaviors is important to build a better way of connecting immigrant families to relevant health services. To fill the existing gap, this study examines what factors relate to health information-seeking behaviors of caregivers. This study employs data collected from 146 caregivers who take care of frail older Korean immigrants. The sample was recruited by collaboration of a local government, Korean social service organizations, and faith-based organizations. A dependent variable is information-seeking behaviors indicating a main source(s) of health information used to care for the care recipient: (1) none, (2) formal, (3) informal, and (4) both formal and informal sources. Independent variables include caregiver's characteristics (gender, education, relationship to care-recipient, and acculturation); care-recipient's characteristics (functional dependency and cognitive impairment); social network and perceived usefulness of services. Multinomial logistic regression is conducted to take into account four different types of information-seeking behaviors. The overall model significantly fits the data. Most variables are significantly associated, and different mechanisms are also found. For instance, compared to using "none", the odds of using "formal source" significantly increase with additional social network (OR=1.13) or a higher level of functional dependency (OR= 2.84); other significant predictors are no college education (OR= .001), acculturation (OR= .02), cognitive impairment (OR= .04). The results suggest useful insights on different information-seeking behaviors. Health policy and practice should address them to facilitate access to health resources.

#### ACCULTURATION AND UNHEALTHY BEHAVIORS AMONG OLDER ASIANS: FINDINGS FROM THE CHIS STUDY

S. Wang, P. Xu, H. Lee, P. Huffman-Oh, E. Dugan, *Gerontology, University of Massachusetts Boston, Boston, Massachusetts*

Previous research has explored Asian immigrants' positive health behaviors; however, less well understood are predictors of negative health behaviors. This study aimed to explore the associations between acculturation and unhealthy behaviors in older Asians residing in California. The data source utilized in this study was the 2009 wave of the

California Health Interview Survey (CHIS). The analytic sample included 2597 Asian adults age 50 or older (1141 males, 1456 females). Descriptive, bivariate and multivariate statistics were conducted. Among the subjects, 17% were born in the U.S., 90.9% were citizens; 52.3% spoke English or both English and other languages at home, while 38.4% spoke with friends; 48.5% reported exposure to English-language TVs, radios, and newspapers. Three multiple regressions were conducted on: 1) unhealthy diet, 2) unhealthy behavior (smoking and binge drinking), and 3) physical activities. Results showed that those who were younger, males, employed, in college, born in the U.S., and used more English ate significantly more unhealthy diets ( $F = 13.02, p < .0001$ ); those who were younger, males, not citizens and had higher education were significantly more likely to smoke and binge drink ( $F = 17.81, p < .0001$ ); and those who had less education did significantly less physical activities ( $F = 4.71, p < .0001$ ). Asian males, especially those in their 50's, may be a group needing targeted health education outreach. Further research to understand why these unhealthy behaviors are prevalent in this group is needed.

#### **DEPRESSIVE SYMPTOMS AMONG AGING AFRICAN AMERICAN MEN: A MIXED METHODS STUDY OF SOCIAL AND CULTURAL CONTEXTS**

D.C. Watkins, B. Kawaii-Bogue, *University of Michigan, Ann Arbor, Michigan*

Age differences in health are often explained using the "healthy survivor effect," which suggests that cohorts of older African American men who do not have serious mental health problems are a unique subgroup of African American men who are mentally healthier and more likely to live longer. However, it is not clear whether this effect is the result of longevity or specific strategies that older African American men use to maintain lower levels of depression than their younger counterparts. The purpose of this study was to examine issues relevant to the interpretive context within which social and cultural factors of depression in older African American men takes place. A triangulation multilevel model approach was employed to examine the correlates of depressive symptoms, psychological distress, and major depressive disorder among African American men ages 55+ using qualitative data from the Depression care in African American Church Elders study and quantitative data from the National Survey of American Life. We found that several social ecological factors underscored the etiology and symptomatology of depression in our sample, such as intrapersonal (age, education, household income, employment status), interpersonal (marital status, seeing a regular doctor, social support networks), organizational (health insurance), and community- (church membership and fellowship) level influences. Implications for depression programs in aging African American men are discussed.

#### **ASSOCIATIONS BETWEEN HEALTH CONDITIONS AND OVERNIGHT HOSPITALIZATION IN OLDER ADULTS WITH DIABETES**

O.J. Clay<sup>1</sup>, F. Ovalle<sup>2</sup>, M. Crowe<sup>1</sup>, *1. University of Alabama at Birmingham - Department of Psychology, Birmingham, Alabama, 2. University of Alabama at Birmingham - Department of Medicine, Division of Endocrinology, Diabetes, & Metabolism, Birmingham, Alabama*

Background: Older adults with diabetes are often hospitalized for acute metabolic complications of uncontrolled diabetes, chronic complications of diabetes, and comorbid medical conditions. Andersen's Behavioral Model conceptualizes an individual's likelihood to use medical services in terms of predisposing characteristics, enabling factors, and need for care as assessed by illness level or health conditions. This investigation focuses on the relationships between health conditions and overnight hospitalization in older adults with diabetes. Method: Data from the baseline telephone interview of the University of Alabama at Birmingham Diabetes and Aging Study of Health (DASH) were uti-

lized. Logistic regression models adjusted for age, education, income, gender, and race were utilized to assess the individual associations between health conditions and overnight hospitalization. Results: The sample consisted of 234 older adults with diabetes (mean age = 73.46) with 46% being male, 50% Caucasian, 45% African American, and 5% from other racial backgrounds. Of the participants, 43 (18%) reported spending at least 1 night in a hospital. Results of the covariate-adjusted models revealed that neuropathy (OR = 2.166; 95%CI = 1.084-4.327), stroke (OR = 9.582; 95%CI = 2.725-33.315), and congestive heart failure (OR = 3.578; 95%CI = 1.523-8.406) were among the medical conditions associated with an increased risk of overnight hospitalization within the last 6 months. There were no racial differences observed for the odds of overnight hospitalization. Conclusion: Results of this investigation suggest that among older adults with diabetes, comorbidity is associated with an increased risk of negative health outcomes and potentially higher health care costs.

#### **HEALTH AND WELL-BEING OF AGING BABY-BOOMERS IN AN APPALACHIAN REGION**

M. Iwasaki<sup>1</sup>, E.E. Grinnan<sup>2</sup>, L.P. Meyer<sup>3</sup>, *1. West Virginia University, Morgantown, West Virginia, 2. West Virginia University, Morgantown, West Virginia, 3. West Virginia University, Morgantown, West Virginia*

Due to the immense size of the baby-boomer population, the culture of older Americans will become more diverse and complex. Appalachian culture represents the largest and poorest rural population which faces disparities in health and health care access (Keefe, 1998; Hartley, 2004; & Smith, 2001). There is a paucity of research on health and well-being of rural residents, especially the baby-boomer generation. The present study was designed to examine self-reported health and well-being among baby-boomers living in the State of West Virginia. We selected a total of 26 qualitative interviews conducted by graduate students in a human development course in 2010 and 2011. Two doctoral students and a psychology faculty member conducted data analysis based on a modified consensual qualitative research (CQR; Hill et al., 2005) approach. All 26 interviewees were White and 18 were female. The average age was 56 and 12 had high school degree or less. Some degree of migration was evident as only 12 were lifelong residents of West Virginia. Major study themes found included positive view of self and aging and having basic health care for their existing conditions. Regarding the issue of mental health, the majority denied current needs despite acknowledging past mental health conditions and treatment. The majority expressed health and loss of independence as major concerns related to aging. Present study findings added helpful information for assisting future seniors in the Appalachian region. Implications of the findings and recommendations for future health care field will be discussed.

#### **THE IMPACT OF MARITAL STATUS ON FOREIGN-BORN WOMEN'S ECONOMIC WELL-BEING IN THEIR LATER LIFE**

N. Xie, *UMASS at Boston, Billerica, Massachusetts*

A fair amount of research exists on the association between economic well-being and marital status among native-born women. Women's marital status is always viewed as a major factor affecting their economic well-being, and being married is financially beneficiary for women. However, research about the impact of marital status on foreign-born women's economic well-being is still scarce. Foreign-born women, a fast-growing subpopulation, may experience a double-negative effect of being women and immigrants. Due to possible discrimination against foreign-born women and other factors, the impact of marital status on economic well-being may be stronger for foreign-born women than for native-born women. This study addresses the questions of whether unmarried foreign-born women are more likely to be in

poverty than their native-born counterparts, and whether economic disparities between married and unmarried women are greater among the foreign-born. Using data from the 2004 Health and Retirement Study, the study estimates the effects of marital status on the household incomes of women who are 50 years old or older. The findings show that foreign-born unmarried women are more likely to be in poverty than their native-born counterparts. The findings also show that married foreign-born women generally achieve higher economic status than unmarried foreign-born women. Moreover, the impact of marital status is stronger on foreign-born women than on the native-born, so the economic difference between married and unmarried women is greater among foreign-born women. The results suggest that unmarried foreign-born women are at a high risk of poverty in their later life. Public policy needs to pay more attention to the economic vulnerability of this foreign-born subpopulation.

#### **CULTURAL IDENTITY AND FAMILY INTERGENERATIONAL RELATIONSHIPS AMONG LATINO AND ASIAN AMERICANS**

K. Hoshino<sup>1</sup>, W. Tseng<sup>1</sup>, N. Hikoyeda<sup>2</sup>, D. Gallagher-Thompson<sup>2</sup>, J. Ventura<sup>3</sup>, H. Inoue<sup>4</sup>, 1. *University of California, Berkeley, Berkeley, California*, 2. *Stanford Geriatric Education Center, Stanford, California*, 3. *East Bay Asian Youth Center, Oakland, California*, 4. *Synarc, Inc., Nowmark, California*

1. Purposes: This research addresses three issues. First, the research examines cultural identity among Latino and Asian Americans based on Cultural Identity theory (Banks, 2006). Second, it analyzes their family intergenerational relationships according to Family Intergenerational Solidarity theory (Silverstein, Gans, Bengtson et al., 2010). Third, the research clarifies the relationships between cultural identity and family intergenerational relationships. 2. Methods: The participants (N=60) were 20 Peruvian, 20 Chinese, and 20 Japanese American first generation adults. Their age range was between 40 and 59 years old. In-person interviews based on a semi-structured interview protocol were conducted. The consistency rate of a content analysis was 86%. 3. Results and Discussions: As a result of a content analysis, no participant was evaluated as Stage 1 (Cultural Psychological Captivity), Stage 5 (Multiculturalism and Reflective Nationalism), and Stage 6 (Globalism and Global Competency). Peruvian (75%), Chinese (90%), and Japanese (75%) were evaluated as Stage 3 (Cultural Identity Clarification) and Stage 4 (Biculturalism). Regarding relationships between children and adults, Peruvian (70%), Chinese (38.89%), and Japanese Americans (30%) were evaluated as a positive type (i.e., Amicable Type). As for relationships between adults and elderly parents, Peruvian (58.33%), Chinese (47%), and Japanese Americans (50%) were evaluated as an Amicable Type. With regard to relationships between children and adults, those who were evaluated as Stage 2 (55.55%) were regarded as an Amicable Type more than those who were evaluated as Stages 3 and 4 (37.84%). As for relationships between adults and elderly parents, those who were estimated as Stage 2 (55.56%) were regarded as an Amicable Type more than those who were evaluated as Stages 3 and 4 (50%). Health care professionals should appropriately assess cultural identity and family intergenerational relationships in order to provide more culturally-generational sensitive social and health services for under-represented populations.

#### **GENETICS, PARENT HEALTH, AND EDUCATION: A MISSING LINK BETWEEN EDUCATION AND HEALTH?**

F. Yong, K.E. Whitfield, *Duke University, Durham, North Carolina*

The impact of education on later health is well documented. Yet this link often does not include estimates of familial influences or parent health, which could influence educational attainment through genetic influences or family environment. We examined the estimates of education to health before and after adding genetic influences and parent health. We applied a multilevel model for behavior genetic analysis,

using data from Carolina African American Twin Study of Aging (n=428). Genetic influences were measured by estimating additive genetic effects. Parent health and education were a subjects' self-reported measure. Outcomes were a count of chronic illnesses, ADLs, and self-rated health. Covariates included income, social support, age, gender, and BMI. The link of education to all health outcomes was significant before considering genetic influences and parent health ( $p < 0.05$ ). Yet, the link became unrelated after adding these variables. The genetic effect was still high (47% - 50%) even in the full model that includes both genetic and non-genetic influences. Parent health had both main effect ( $p < 0.05$ ) and interaction effect with education ( $p < 0.05$ ). Our findings showed a possible link of genetics, parent health, education, and later health outcomes, implying that it is important to consider the contributing factors of educational attainment to better address health variations. Further studies aimed to identify specific genes and polymorphisms underlying the health outcomes would advance our understanding of the possible link.

#### **SESSION 290 (POSTER)**

#### **EDUCATIONAL INTERVENTIONS**

#### **NURSING HOME LEADERSHIP PERCEPTIONS OF STAFF QUALITY IMPROVEMENT TRAINING NEEDS**

K. Zakoscielna<sup>1</sup>, S. Lichtenstein<sup>1</sup>, P.A. Parmelee<sup>1,2</sup>, 1. *University of Alabama, Tuscaloosa, Alabama*, 2. *Center for Mental Health and Aging, Tuscaloosa, Alabama*

The Minimum Data Set (MDS) quality indicators (QI) are commonly used for quality improvement in skilled nursing facilities (SNF). However, little is known about staff's perception and understanding of this system. This qualitative and quantitative study surveyed 289 leadership staff in Department of Veterans Affairs SNF units inquiring why they thought staff do (or do not) understand the MDS QI's, what could be done to improve staff's understanding of them, and specific perceived training needs. Respondents rated staff understanding of QI computations and meaning, and their general QI skills, as fair to good. Content analysis of open-ended responses regarding influences on staff understanding of the QIs yielded the following categories: Involvement, Staffing/staff roles, Education/Training, Mechanics, Big Picture, Lack of Interest/Motivation, Lack of Time, and Problems with the MDS itself (listed in order of frequency). For how to improve understanding, respondents recommended Education/Training, Involvement, Reinforcement, Meaningful Application, and Simplification (listed in order of frequency). Of specific training strategies/needs, the most frequently identified were "using the MDS as a clinical assessment tool," "basic quality improvement principles," and "individualizing care plans based on the RAPs." Frequencies of response categories differed as a function of position at the facility ( $p=.051$ ) and size of the unit ( $p<.05$ ). These results highlight the range of causes identified by managers for line staff's understanding of (or lack of) the QIs, and their clear preference for ways to improve staff understanding of what the MDS means.

#### **STATEWIDE TRAINING FOR ASSISTED LIVING AND ADULT DAY CENTERS: SIX YEAR IMPACT**

T. Gendron, J. Pryor, E. Welleford, *Virginia Commonwealth University, Richmond, Virginia*

The Department of Gerontology at Virginia Commonwealth University is responsible for training direct care staff from Assisted Living Facilities (ALF's) and Adult Day Centers (ADC's) throughout the state of Virginia. Direct care staff directly and critically impacts the health outcomes of the older adults they serve. In a continued effort to address the shortage of trained staff, a 6 year impact analysis of training sessions was completed. From 2006-2011, over 10,000 direct care staff employed in ALF's and ADC's attended statewide training sessions focused on building core competencies for working with older adults.



This poster presents results on program efficacy and impact by training topic, site and trainer obtained from pre and post test analysis. Systematic observations were also completed to assess training quality, trainer consistency and participant engagement. Future directions for curriculum revision based on evaluative data will be presented.

### **BENEFITS OF AN ORAL HISTORY PROJECT: A WIN, WIN, WIN ENDEAVOR**

M.B. Ligon<sup>1</sup>, K. Ehlman<sup>2</sup>, G. Moriello<sup>3</sup>, E. Welleford<sup>4</sup>, 1. *York College of Pennsylvania, York, Pennsylvania*, 2. *University of Southern Indiana, Evansville, Indiana*, 3. *The Sage Colleges, Troy, New York*, 4. *Virginia Commonwealth University, Richmond, Virginia*

Oral history, a method of recording historical information through in-depth interview, can provide multi-faceted benefits when embedded in gerontology classrooms. Students who interview and record elders' narrative responses, older adults who describe their experiences, and societies interested in preserving historical information while supporting development across the lifespan, can all benefit from such projects making it a win, win, win endeavor. This session chronicles a seven-year, multi-pronged project outlining outcomes of original research carried out by these authors demonstrating benefits to students, elders, and society. Findings show that students' attitudes toward older adults and the aging process improve after students interview older adults as part of an oral history assignment. Furthermore, findings from another study reveal that attitudes improve if that oral history project is given in a traditional or an on-line gerontology course. Two additional studies show that older adults who serve as interviewees also benefit as there may be a change in their life satisfaction and perceived generativity. Finally, oral history is undertaken as a way of benefitting others by informing the interviewer and the broader society about past historical and cultural events and eras. Therefore, this session culminates by illustrating ways in which oral history projects contribute not only to society's need to preserve historical information but also to society's need to cultivate cultural demand for elders to be contributing, vital members of our communities. By charting these connections, a richer understanding of the potential impact of oral history can be attained.

### **SHARP GERONTOLOGY CERTIFICATE PROGRAM COMPETENCY BASED EVALUATION METHODS AND OUTCOMES**

J. Frank<sup>1</sup>, R. Price<sup>1</sup>, C. Manning<sup>2</sup>, A. Lupa<sup>1</sup>, P. Robinson<sup>3</sup>, 1. *University of California, Los Angeles, Los Angeles, California*, 2. *Goodman Research Group Inc, Cambridge, Massachusetts*, 3. *College of the Canyons, Santa Clarita, California*

Background: Evidence Based Health Promotion and Disease Management Programs (EBHP) are defined as a process of planning, implementing, and evaluating programs adapted from tested models or interventions to address health issues in individual and community settings. With federal funding, most states have developed new systems to deliver and sustain these programs. However, the content and opportunities provided by these programs are a well-kept secret in higher education. Further, the personnel working in community based service organizations tasked with delivering these programs are often not prepared for their new roles. With support from the U.S. Dept of Education, Funds for Improvement of Post Secondary Education (FIPSE), we developed a short training program to increase the capacity of the workforce (present and future) to plan and deliver these programs. Methods: The Skills for Healthy Aging Resources and Programs (SHARP) certificate program was developed for community colleges utilizing a competency-based educational approach. This poster will describe the curricula development, faculty training, competency-based tools and present Cohort 1 student evaluation data. Competencies were measured by self-report using a 5-point scale from 0 (not skilled at all) to 4 (expert skill), and compared using paired-sample t-tests (n=17). Results: Findings document statistically significant improvements pre-post program in all 44

gerontology competencies at either  $p < .05$  or  $p < .001$  levels. Implications: Preliminary results indicate that short focused curricula can be delivered effectively through community colleges to increase the workforce preparedness to deliver community-based EBHP for older adults.

### **WILL THEY TEACH WITH AN IPAD? TECHNOLOGICAL DISCONTINUITY AND GERONTOLOGY FACULTY**

J. Cotter, *Virginia Commonwealth University, Richmond, Virginia*

Gerontological educators face new frontiers in a changed learning environment. The growth of mobile learning devices and distance education requires new approaches to teaching, learning and student engagement. New cohorts of students demand educational systems adapted to current methods of information transfer. Mobile learning devices will continue to disassemble traditional educational methods. The ability to enhance interactivity, speed up feedback, encourage collaboration and use multiple learning platforms become essential skills for gerontological and aging studies educators. This technological discontinuity will require a greater reaching out to faculty to find new ways to enhance student learning. The purpose of this poster session is to highlight issues of new technological imperatives and to propose the Transtheoretical model as a viable framework for assessing faculty readiness to implement and to involve faculty in implementing technological innovations. Although information technology infrastructure and student experiences and needs are two key elements of successful on-campus and distance education programs in gerontology, faculty involvement and support may be the most critical factor. As faculty have varying levels of interest, proclivity, and experience regarding new educational technologies, an adaptation of the framework of the Transtheoretical Model of Behavior Change may be helpful in understanding how best to involve and support faculty (Prochaska & Velicer, 1997). This session suggests appropriate strategies for facilitating behavior change in faculty who are at any of the six stages of the model: pre-contemplation, contemplation, preparation, action, maintenance, and termination.

### **MAPPING GERIATRIC COMPETENCIES IN CONCEPT BASED UNDERGRADUATE NURSING CURRICULA**

C. Madden, *University of Utah, Salt Lake City, Utah*

Aging of the U.S. population is a major challenge for the 21st century. Population projections indicate that by 2030, the number of those age 65 and over will double and account for more than 20% of the U.S. population. Implications for nursing education are intensified by statistics indicating older adults will comprise the majority of a new nurses' patient population. Geriatric competencies established by the American Association of Colleges of Nursing and Hartford Institute have been established and aligned with baccalaureate nursing education essential competencies; however there is little information about how they are specifically incorporated in baccalaureate nursing curricula. A recent trend in baccalaureate nursing education toward a concept-based approach provides a useful and timely educational pedagogical framework for mapping geriatric competencies within a curriculum. Mapping geriatric competencies from concept to learning activity provides a method for detailed identification of curricular integration of geriatric competence at the levels of process and content. The resulting curricular map provides clear assessment of opportunities for strategies to enhance the integration of geriatric competencies. It is hoped that the process for mapping competencies will be a first step in the rigorous evaluation of concept based curricula, with the ultimate goal of ensuring that new nurses are being appropriately prepared to meet the demands of the current and future work environment.

## EMOTION WORK

## FACIAL EMG AS A MEASURE OF COGNITIVE REAPPRAISAL SUCCESS IN YOUNGER AND OLDER ADULTS

J. Harris<sup>1</sup>, C. Platzek<sup>2</sup>, D. Isaacowitz<sup>1</sup>, 1. *Northeastern University, Boston, Massachusetts*, 2. *Brigham and Women's Hospital, Boston, Massachusetts*

Cognitive reappraisal is an emotion regulation strategy in which individuals alter their thoughts about a situation in order to change their affective experience. While some studies have investigated aging and reappraisal, few have differentiated between positive and detached reappraisal, and most have used subjective (self-report) measures of regulation success. The present study used a within-subjects design in order to assess reappraisal success in younger ( $N=23$ ) and older adults ( $N=20$ ) as they viewed negative images while implementing instructions to view the images naturally, positively reappraise the images, or to use detached reappraisal with the images. Specifically, participants' facial muscle movements in the corrugator muscle (frown) were recorded and examined using facial Electromyography (EMG) as an objective indicator of regulation success. Both reappraisal instructions led to lessened frown activity compared to the natural viewing condition; there was no main effect of age or interaction between age group and instruction condition. This suggests that when presented with negative stimuli, both younger and older adults were able to regulate their emotions successfully by using either detached reappraisal or positive reappraisal, and that these strategies may have advantages compared to viewing the images naturally regardless of age.

## AGE DIFFERENCES IN SELECTIVE ATTENTION TO TASK-IRRELEVANT POSITIVE AND NEGATIVE FACES

R. Neumann, U. Kunzmann, *University Leipzig, Leipzig, Germany*

Proceeding from past evidence for a diminished processing of negative vs. positive stimuli in old age, we tested the predication that older adults' performance in a visual detection task will be less distracted from task-irrelevant negative faces than from task-irrelevant positive faces, whereas the opposite pattern should occur in young adults. In a computer task young and old adults were asked to detect short intervals of coherent motion of randomly moving dots while ignoring negative, neutral, and positive emotional background faces. By individually adjusting the level of motion coherence, the task was sufficiently difficult; allowing competition for visual processing resources between detection task and emotional distracters to occur. In both age groups detection rates decreased immediately after onset of emotional vs. neutral background faces, indicating that emotional faces automatically capture attention. Older adults' performance in the detection task improved earlier during the presentation of negative vs. positive faces, whereas younger adults were more persistently distracted by negative relative to positive faces. These results are consistent with the idea that positivity effects are due to strategic top-down processes.

## EXPRESSING ANGER INCREASES RISK FOR METABOLIC SYNDROME IN OLDER ADULTS

J.A. Boylan, C. Ryff, *University of Wisconsin, Madison, Madison, Wisconsin*

Building on prior work linking anger to cardiovascular and metabolic related diseases (Chida & Steptoe, 2009), this study addressed whether high levels of anger expression exacerbated age-related risk for metabolic syndrome (MetS) in a national sample of adults. MetS is a constellation of risk factors associated with increased risk for coronary heart disease, type II diabetes, and all-cause mortality (Cornier et al., 2008). Participants ( $N = 1,054$ ; 54.7% female; Mage(SD) = 58.0(11.6)) were from the Survey of Midlife in the U.S. (MIDUS). Self-reported

anger expression was obtained via survey assessments, and MetS components (waist circumference, systolic and diastolic blood pressure, triglycerides, HDL cholesterol, and fasting glucose) were measured during an overnight clinic visit. Unadjusted MetS prevalence (according to the International Diabetes Foundation definition) was 40.9%. Age was significantly related to greater waist circumference, higher systolic blood pressure, lower diastolic blood pressure, higher fasting glucose, and a greater likelihood of having MetS in bivariate analyses. Anger expression did not predict MetS in main effects models, but a significant interaction emerged between age and anger expression in predicting MetS. As hypothesized, anger significantly predicted greater risk of MetS in the middle (50-65 years) and oldest (66-86 years) age groups, and this relationship was strongest in the oldest adults (50-65 years:  $\beta = .17$ ,  $p < .001$ , 66-86 years:  $\beta = .38$ ,  $p < .001$ ). Results highlight that anger expression is most pernicious to metabolic health for older adults.

## THE INFLUENCE OF ATTACHMENT STYLE ON AFFECT WITH SOCIAL PARTNERS

P. Goodwin, R.C. Intrieri, *Western Illinois University, Macomb, Illinois*

One hundred six older adults (72 women and 34 men; average age of 67.68) participated in a study examining attachment style, context, and affective experience. Participants completed a modified version of the Day Reconstruction Method (DRM), a stepwise procedure which asks participants to recall the previous day through construction of a diary consisting of a sequence of episodes. For each episode, participants provided information regarding the objective situation (activity, location, companion). The Positive Affect Negative Affect Scale (PANAS) was embedded within each episode report to assess affect. Participants also completed a measure of adult attachment style (Collins & Read, 1990). The current analysis explores attachment style and affect within the context of intimate relationships by comparing affect when with a spouse/partner as opposed to when with a social companion other than a spouse/partner. ANOVA for positive affect was significant ( $F(7,1458) = 8.950$ ;  $p = .000$ ). Fearfully attached participants had the lowest positive affect when with other social companions (20.82) while the highest positive affect for other social companions was obtained by dismissing participants (24.89). ANOVA for negative affect was also significant ( $F(7,1458) = 3.606$ ;  $p = .001$ ). Fearfully attached participants were the only group for whom negative affect was higher when with a spouse/partner (16.50) than when with social companions other than a spouse/partner (15.52). Dismissing participants had the lowest level of negative affect when with a spouse/partner (16.23) while securely attached individuals had the highest level of negative affect when with a social companion other than a spouse/partner (16.97).

## REMEMBER THE GOOD TIMES: LINGUISTIC CHARACTERISTICS OF RELATIONSHIP-DEFINING MEMORIES FROM YOUNG ADULTHOOD TO OLD AGE

N. Alea, *University of the West Indies, St. Augustine, Trinidad and Tobago*

Relationship-defining memories (RDMs) are vivid, emotional recollections about specific events that occur during the course of an interpersonal relationship (Alea & Vick, 2010). The current study examined whether the linguistic characteristics of positive and negative defining memories of adults' marriages would follow a pattern predicted by socioemotional selectivity theory (Carstensen, Isaacowitz & Charles, 1999). Men and women ( $N = 242$ ) ranging in age from 20 to 81 years-old completed an online survey which asked them to write about a positive and negative RDM. The content of the memory narratives were analyzed for the frequency of positive emotion, negative emotion, cognitive processes, sensory imagery words, and self and unit-oriented pronouns. A 5 (age-group by decade, e.g., 20-29 years-old, 30-39 years-old, etc.) x 2 (RDM valence) MANOVA was conducted. There was a multivariate effect for RDM valence,  $F = 37.43$ ,  $p < .001$ , and an age group x valence interaction,  $F = 2.20$ ,  $p < .05$ . Positive

RDMs contained more positive emotion words and unit-focused pronouns compared to negative RDMs, which had more negative emotion and cognitive process words, and more self-focused pronouns. The interaction with age existed for positive emotion words only,  $F = 2.76$ ,  $p < .05$ . People over the age of 60 had more positive emotion words in their positive RDMs compared to people 40 to 49 years-old. There were no age group differences for negative RDMs. The robustness of the positivity bias in older adults' recollections for positive RDMs is discussed.

### THE INFLUENCE OF TIME PARAMETERS ON THREAT PRIMING

C. Kappes, C. Bermeitinger, *Department of Psychology, University of Hildesheim, Hildesheim, Germany*

Recent research results show that old and young adults do not differ in detecting threatening information. However, other findings demonstrate that old adults are better at inhibiting threatening information than young adults, which is interpreted in the framework of the positivity bias. In three experiments, we tested whether information processing of threatening information differs between age groups by employing an evaluative priming paradigm with threatening and secure words as primes and targets. Participants evaluated target words regarding their threat value (threatening vs. nonthreatening). In experiment 1 ( $N(19-30 \text{ years}) = 40$ ,  $N(59-80 \text{ years}) = 37$ ), no significant age difference in the priming difference following secure prime words were obtained. However, there was a significant age difference in the priming difference following threatening prime words, indicating a smaller influence of threatening primes on target responses in the older age group ( $M(\text{young}) = 39 \text{ ms}$ ,  $M(\text{old}) = 15 \text{ ms}$ ). Yet, older participants had slower mean response times. In experiment 2 ( $N(19-27 \text{ years}) = 37$ ,  $N(56-87 \text{ years}) = 27$ ), we limited the response window. Consequently, no significant age differences in the priming differences were obtained anymore (both  $ps < .35$ ). We delayed the response time in experiment 3 ( $N(18-32 \text{ years}) = 78$ ), which resulted in no significant priming differences in the young age group, mirroring the results of the older participants in experiment 1. Results are discussed in terms of the time course of priming processes and regulation mechanisms.

### RECONSTRUCTING YESTERDAY: EXAMINING AGE AND COGNITIVE INFLUENCES ON MEMORY FOR EMOTIONS

L.H. Ryan, T.L. Queen, J. Smith, *Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

It is critical to understand whether age differences in reports of emotion reflect true experiential differences or potential secondary explanations, such as memory deficits. The current study aims to investigate this questions using a newly collected sample of adults (aged 50–96;  $N=968$ ) who were first asked about a set of overall emotions yesterday and then rated the same emotions within specific activities yesterday. To investigate age-related versus memory-related differences in emotional reports, scores were created to identify whether individuals' reports of specific emotions overall yesterday matched reports within an activity yesterday. For example, if a participant reported no sadness overall yesterday, but report any experience of sadness in an activity yesterday, s/he would be coded as a mismatch on sad. A series of logistic regression models were run independently for each emotion predicting the likelihood of matching overall to within-activity yesterday. Age, recall, and an age by recall interaction were included as predictors of interest, along with covariates related to emotion. Results indicate differential patterns depending on the emotion adjective. Differing interpretations will be considered based on existing theory on aging and emotion.

### LONGITUDINAL RELATIONS OF POSITIVE AFFECT AND ACTIVITIES OF DAILY LIVING IN A FUNCTIONALLY HETEROGENEOUS SAMPLE OF VERY OLD ADULTS

P.M. Drapaniotis<sup>1</sup>, H. Wahl<sup>1</sup>, V. Heyl<sup>2</sup>, O.K. Schilling<sup>1</sup>, *1. Department of Psychological Aging Research, Heidelberg University, Institute of Psychology, Heidelberg, Baden-Württemberg, Germany; 2. University of Education, Heidelberg, Institute of Special Needs Education, Heidelberg, Baden-Württemberg, Germany*

Previous research suggests a positive relationship between functional competence (ADL) and positive affect (PA) in later life and a respective robust causal direction. However, recent findings point towards an inverse causality between ADL and PA, particularly over longer time intervals, i.e. higher PA may also contribute to the maintenance of functional competencies. Moreover, most studies in the past have focused on the young-old and thus functionally rather unimpaired samples. The present study examines the causal direction between PA and ADL in a functionally heterogeneous sample of 169 very old adults, which were followed across 4 years (mean age at T1: 85.73 years; only community dwelling participants without cognitive impairment at T1). In particular, our sample contained functionally unimpaired as well as visually and hearing impaired older adults. Using cross-lagged panel analysis, we found a clear confirmation of the previously reported relationship between ADL and PA, but no substantial hints for a reverse direction in both the overall sample and the functionally different subsamples. Our findings indicate that interventions targeting functional competencies may help improve late-life emotional adaptation in oldest-old persons.

### UNDERSTANDING THE EMOTIONS OF AFRICAN AMERICAN CAREGIVERS IN KENTUCKY

A. Carter, D. Danner, J.F. Watkins, C. Smith, *Univ of Kentucky, Lexington, Kentucky*

With over 5.1 million Americans suffering from some form of dementing illness, Alzheimer's disease (AD) caregivers are at a particularly high risk for both emotional and physical strain (Alzheimer's Association, 2010). Most primary caregivers deal with tremendous strain of balancing their own responsibilities (e.g. work and family) with the duties (e.g. financial, legal, social) to their family member suffering from AD. As an increase public health crisis or "Silent Killer" in the African American community, the caregiving experiences is complicated for many African American families due to various issues such as: lack financial resources, denial about the disease, caregiver health, late diagnosis, lack of social and community support as just a few issues which increase the burden for this segment of the population. This pilot-study examines the impact of positive and negative emotions on the caregiving process of both African American and Caucasian caregivers in Kentucky. Guided by the Facial Action Coding System, this study seeks to understand the emotional process of caring for dementia patients, observation of feelings before and during the caregiving process, and both positive and negative aspects of caring for loved ones with Alzheimer's disease and its impact on the caregiving process. Qualitative methods and descriptive statistics are used to generate thematic meanings of the experiences of these caregivers living in Kentucky.

### ARE YOU IN THE ZONE? EXPLORING PSYCHOLOGICAL COMFORT ACROSS ADULTHOOD

S.J. Kohn, M.M. Willis, T.B. Butenshon, C.W. Fendig, S.E. Spivey, *Psychology, Valdosta State University, Valdosta, Georgia*

Health care practitioners typically portray comfort in terms of pain (discomfort) relief. Yet, a firm definition of psychological comfort among social and behavioral scientists may have contributed to the scarcity of research on this topic – especially in terms of life-span development and the psychology of aging. An ancient description of comfort, however, pertains to the Japanese concept of *Ibasho*, which abstractly means "being in a place." The closest Western developmental paradigm for

this might be Erikson's (1959) notion of a niche regarding identity. In this study, 616 older (n=191; M-age=73), middle-age (n=164; M-age=49), and younger (n=261; M-age=21) adults were surveyed on their feelings and perceptions regarding the importance of having Ibasho (comfortable place); and the degree to which diverse life situations and environments impacted their feelings of comfort. Our measures were based on current Ibasho metrics (Herleman, et al., 2008; Kunikata, 2011), and focus group-based pilot data. Comfort was operationalized in terms of discrete variable clusters related to concrete physical locations; interpersonal relationships; abstract meta-physical (spiritual and time/space) issues; and lifestyle-related behaviors. A series MANOVAS revealed significant differences between the three age groups. Noteworthy among these findings, were significantly higher comfort levels for older adults compared to young and middle-agers regarding death and end of life issues; and thinking about the future. Compared to older adults, young and middle-agers reported greater comfort associated with moving or relocating; and thinking about the past. Younger participants compared to older and middle-age adults, however, were more comfortable looking at themselves in a mirror.

## SESSION 300 (POSTER)

### END-OF-LIFE HELPING

#### PALLIATIVE CARE COMPETENCY IN MENTAL HEALTH: NEEDS ASSESSMENT ACROSS DISCIPLINES AND LEVEL OF TRAINING

K.H. Sorocco<sup>1,2</sup>, J. Whalen<sup>1</sup>, 1. *University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*, 2. *Oklahoma City VAMC, Oklahoma City, Oklahoma*

There is a paucity of research on the competency level and specific training needs of providers across disciplines and levels of training surrounding mental health care at end of life. A recent review of the literature yielded no formal publications on the training needs of providers on mental health issues at end of life. A training needs assessment for mental health issues at the end of life was conducted at a Mid-Western Health Sciences Center (N = 154). Participants, who included medical students, psychology trainees, and interdisciplinary providers, completed an anonymous survey prior to classes, seminars, or conference presentations. Participants were asked if they had formal training in any of 10 areas specific to mental health and palliative care (e.g. Grief/Bereavement) and to rate their competency level for providing care in each of the 10 areas (1 = Not competent, 10 = Absolutely competent). Average competency level across the 10 areas was 5.7 out of 10 (providers), 4.0 (psychology trainees), and 2.3 (medical students). All three groups felt the most competent in grief and bereavement. Brief treatment was the lowest rated area of competence for both the providers and medical students. Lastly, preferred teaching modality to enhance competency of providing mental health care at end of life was determined to be conferences/seminars and websites. Findings suggest a significant need for more training in mental health care at end of life. A discussion outlines a training program to meet the training needs of trainees and professionals in the field.

#### STRATEGIES FOR SUCCESSFUL IMPLEMENTATION OF A HOSPICE RANDOMIZED CLINICAL TRIAL: THE ACTIVE INTERVENTION

D. Parker Oliver<sup>1</sup>, G. Demiris<sup>2</sup>, E. Wittenberg-Lyles<sup>3</sup>, K. Washington<sup>4</sup>, R.L. Kruse<sup>1</sup>, 1. *Family and Community Medicine, University of Missouri, Columbia, Missouri*, 2. *University of Washington, Seattle, Washington*, 3. *University of Kentucky, Lexington, Kentucky*, 4. *University of Louisville, Louisville, Kentucky*

Much has been written on the challenge of doing clinical trial research in the hospice setting. Concerns regarding ethical challenges, difficulties in randomization procedures, and funding obstacles have been doc-

umented as reasons for so few trials with this population. We will share the strategies used and lessons learned in an implementation of a federally funded ongoing multi-site, 4 year randomized controlled trial of a behavioral intervention in hospice. Licensing and certification agencies require hospices to convene an interdisciplinary team (IDT) at least every 14 days to bring together at least nurses, social workers, physicians, and chaplains to collaborate and develop a care plan. Despite the hospice philosophy of patients and family empowerment with decision making regarding their care, they are routinely absent from these meetings. This research team has designed an intervention using Internet based video technology to involve informal caregivers (and patients when they are able) in the hospice interdisciplinary team care plan meetings. The intervention is being tested with 544 randomized hospice caregivers. This poster will demonstrate that large randomized controlled trials are feasible in the hospice setting but require significant planning. A strategic recruitment plan, a standard script for enrollment, a daily presence of research staff in the hospice, hospice participation in planning, and strong pilot testing of interventions have been important steps to assure success of this trial.

#### DIAGNOSTIC AND PROGNOSTIC LABELS: DO THEY IMPACT FAMILY MEMBERS' WILLINGNESS TO HELP AN OLDER RELATIVE?

E.J. Bergman, *Gerontology Institute, Ithaca College, Ithaca, New York*

Objective: Family members are central to care of older adults. This study examined the effects of prognostic and diagnostic labels and gender on family members' perceptions and willingness to help an older relative. Methods: 324 young adults were randomly assigned to 1 of 3 vignettes describing an older mother experiencing physical symptoms and functional disability. One included prognostic label ("terminal"), another included prognostic and diagnostic labels ("terminal lung cancer"), and the third included no labels. Effects for diagnostic and prognostic labels and gender were examined. Results: Participants who read no label were more likely to believe the mother's problems were due to old age than other groups; attributed less blame than those told the mother's condition was due to terminal lung cancer; attributed more blame and control than those only given the prognostic label; and were more likely to feel the mother's problems could improve if she received better medical care than those told the mother had terminal lung cancer. Diagnostic and prognostic labels did not affect feelings of anger, sympathy, willingness to help, have the mother move in, discuss EOL care, serve as a health care proxy, or support aggressive treatment. Female participants were more likely than males to have their mother move in and support aggressive treatment. Conclusions: While gender was a factor in health care and caregiving decisions, diagnostic and prognostic labels did not play a major role in these domains. However, they may subtly shape perception of and communication with older family members.

#### THE PERSPECTIVES TOWARD "GOOD DEATH" AMONG LOW-INCOME OLDER ADULTS

E. Ko<sup>1</sup>, M. Esperanza<sup>2</sup>, T. Pham<sup>1</sup>, S. Hall<sup>2</sup>, J. Kwak<sup>3</sup>, M.U. Mazzyck<sup>2</sup>, M. Piwowarski<sup>2</sup>, 1. *San Diego State University, San Diego, California*, 2. *Senior Community Centers, San Diego, California*, 3. *University of Wisconsin-milwaukee, Milwaukee, Wisconsin*

This study explores the low-income older adults' perspectives toward a "good death". A qualitative study, in-depth of individual interviews was conducted with 21 residents at the Transitional Housing Program (THP) in a large city in Southern California. Individual interviews were audio-taped and transcribed. The participants' mean was 65 years old. More than half of the participants were socially isolated; 57.1% (n=12) reported having no one to provide a care if they were severely ill. The main themes regarding a good death revealed by analysis of the interviews includes: 1) painless death-dying in one's sleep; 2) dying with the Lord; 3) dying surrounded by loved ones; 4) death is death. Many

participants emphasized that dying with comforts without physical pain is a good death. God holds a high power in controlling one's destiny that being with God during the final days was seen important. Some participants were fear of dying alone. Facing the last moment surrounded by loved ones was seen blessing. While others defined a good death, some viewed death as final passage which cannot be determined whether good or bad.

### **SIMILARITY BETWEEN ROMANTIC PARTNERS' END-OF-LIFE TREATMENT PREFERENCES**

M. Inoue, S.M. Moorman, *Boston College, Chestnut Hill, Massachusetts*

When terminally-ill people are unable to communicate their wishes for medical treatment, surrogates often make such decisions. It is critical for researchers to identify whether couples know each other's end-of-life preferences because if a dying person is married, his or her spouse is the first priority in most states to be selected as a surrogate. However, previous research using hypothetical scenarios finds that the surrogate's decision does not match the dying person's preference much of the time. Past research and theory suggests that people assume that others hold preferences similar to their own, and that people project these inaccurate appraisals onto others. Projection, however, is an acceptable strategy as long as couples truly share similar values. The purpose of the study is to examine couple characteristics that are associated with their similarity in end-of-life care preferences. The study conducts dyadic analyses using a nationally representative sample of 1,075 heterosexual American couples aged 18 to 64. We find that couples with an age gap of more than three years ( $\beta=0.59$ ,  $p<0.01$ ) and couples with differences in perceived health status ( $\beta=0.66$ ,  $p<0.05$ ) have more dissimilar treatment preferences. In contrast, cohabiting couples' preferences are more similar than those of married couples ( $\beta=-0.83$ ,  $p<0.01$ ). These findings offer important implications for legal and medical policies regarding romantic partners' end-of-life decision making for their loved ones.

## **SESSION 305 (POSTER)**

### **FAMILY RELATIONS**

#### **THE IMPORTANCE OF PERCEIVED FAMILY COHESION AND CONTACT ON PSYCHOLOGICAL WELL-BEING OF ASSISTED LIVING RESIDENTS**

K. O'Malley<sup>1</sup>, S. Qualls<sup>1</sup>, M.A. Doffing<sup>1</sup>, M. Williams<sup>2</sup>, *1. University of Colorado Colorado Springs, Colorado Springs, Colorado, 2. Caring Family, LLC, Colorado Springs, Colorado*

Family involvement with assisted living residents is believed to be valuable in ways that are comparable to the positive impact of regular visits on the well-being of nursing home residents, but empirical data are sparse (Gaugler, Anderson, & Leach 2003; Port et al., 2005). This study examined the impact of familial contact initiated by either the family member or AL resident on the residents' psychological well-being (depression and loneliness). 112 AL residents in multiple facilities were assessed on measures of depression, loneliness, perceived family contact and cohesion. Perceived rates of family contact related to AL residents' perceptions of family cohesion and predicted resident loneliness and depression. Specifically, AL residents who initiated contact with their families experienced lower levels of depression,  $r = -.28$ ,  $p = .004$ , and lower levels of loneliness  $r = -.23$ ,  $p = .02$ . Family member initiated contact with the AL resident also impacted residents' loneliness ratings,  $r = -.22$ ,  $p = .02$ . Furthermore, higher ratings of family cohesion correlated negatively with loneliness,  $r = -.23$ ,  $p = .02$ . Family cohesion was positively correlated with AL resident initiated contact,  $r = .23$ ,  $p = .02$ . Family contact and cohesion accounted for 15% of the variance in loneliness,  $p < .001$ , and 12% of the variance in depression,  $p = .002$ . These findings show the importance of interventions

designed to foster stronger family-resident contact following a move into assisted living.

### **THE EFFECTS OF POSITIVE FEEDBACK ON 'GENERATIVITY' IN OLD AGE**

M. Tabuchi<sup>1</sup>, T. Nakagawa<sup>2</sup>, Y. Gondo<sup>2</sup>, *1. Kwansei Gakuin University, Nishinomiya, Japan, 2. Osaka University, Suita, Japan*

In Japan, the role of elderly people in guiding and supporting next generations has been emphasized. The supportive actions for next generations are motivated by 'generativity', suggested by E.H. Erikson. These actions have an important effect on psychological well-being for not only young people but also elderly people. However, the conflicts between younger and older generations within the activities become a problem in some cases. In this study, we hypothesized that 'generativity' in old age would not develop unless they are received to be valued and get respect by the next generations. 400 Japanese elderly people responder to measures of 'generativity', generative actions, perceived respect, and emotional psychological well-being. Structural equation modeling showed that perceived respect had a direct impact on 'generativity'. These results suggested that the importance of positive feedback from young generations for the 'generativity' development in old age.

### **DISCREPANCIES IN REPORTS OF MARITAL QUALITY BETWEEN HUSBANDS AND WIVES WHO ARE KOREAN BABY BOOMERS**

J. Lee<sup>1</sup>, K. Kim<sup>2</sup>, G. Han<sup>3</sup>, *1. Chonnam National University, Dept. of Family Environment & Welfare, Gwangju, Republic of Korea, 2. Pennsylvania State University, Dept. of HDFS, University Park, Pennsylvania, 3. Seoul National University, Dept. of Child & Family Studies, Seoul, Republic of Korea*

The majority of Korean Baby Boomers (born between 1955 and 1963) are currently married or have a partner (first marriage: 88%, remarriage: 2%, domestic partnership: 1%). Using dyadic reports of married couples, this study examined discrepancies in reports of various aspects of marital quality between husbands and wives (e.g., marital satisfaction, sexual satisfaction, positive relationships and negative relationships) and investigated predictors of discrepancies in reports of marital quality of Korean Baby Boomer couples. Data used in this study are from the first wave of "Korean Baby Boomers Panel Study". A total of 4,668 respondents were surveyed in face-to-face interviews using structured questionnaires in this panel study. The surveys were conducted from May 2010 till August 2010. In this study, data from 1,218 couples (individual N = 2,436) was analyzed. About 44% of Baby Boomer couples were satisfied with their marriage while 6% were not satisfied. In addition, Baby Boomers reported to have positive relationships with their spouses. However, not surprisingly, Baby Boomers' marital relationships also showed certain levels of conflict and discord. Regarding dyadic discrepancies in reports of marital quality, husbands showed higher levels of marital satisfactions than wives. Especially the level of discrepancy in sexual satisfaction between husbands and wives is higher than other indicators of marital quality. These results suggest that there are different levels of discrepancies in reports of various aspects of marital quality between husbands and wives. Discrepancies in marital quality were associated with couple interactions.

### **ACTOR AND PARTNER EFFECTS OF DAILY RESTEDNESS ON MARITAL SATISFACTION**

A. Bond, K. Gustafson, W. Godfrey, J. Yorgason, *Brigham Young University, Provo, Utah*

Sleep is a crucial component of life therefore our aim was to examine the effects of daily sleep on marital satisfaction. We hypothesized that this relationship would be mediated by cognitive functioning. Our sample consisted of 161 aging couples from the Life and Family Legacies study. Each participant completed daily diaries for 14 consecutive

days. The participants rated the quality of sleep that was received (0=not well at all to 4=extremely well) and how rested and energetic he or she felt during the day. Marital satisfaction was assessed through questions regarding satisfaction (0=very unsatisfied to 6=very satisfied) with daily chores, support, time spent together, conflict resolution, conversations, affection, and dependability. The results indicate that a female's feeling of rest positively affects her marital satisfaction ( $\beta=.02$ ,  $p=.001$ ). For males, results were similar in that a male's feeling of restedness positively impacted his marital satisfaction ( $\beta=.04$ ,  $p=.000$ ). We also found it interesting that male's cognition positively affects female marital satisfaction ( $\beta=.06$ ,  $p=.032$ ), despite the evidence that males cognition negatively impacts their own marital satisfaction ( $\beta=-.54$ ,  $p=.006$ ). These findings may suggest a difference between male's and female's ability to compartmentalize daily challenges from daily marital satisfaction. Our findings indicate the importance of restedness and cognition on both individual and spousal marital satisfaction.

#### **FAMILY INVOLVEMENT AND WELL-BEING IN AN ASSISTED LIVING POPULATION**

E. Plys, N.G. Bliwise, *Emory University, Atlanta, Georgia*

Family visitations provide residents of long term care facilities a link to the outside world, continuity of relationships, and social support (Tseng & Wang, 2001; Thomas, 2001). Previous research suggests that the quality of family relationships may have greater mental health impacts for older adults than the quantity of family interactions (Conner, Powers, & Bultena, 1979). This study investigated the relationship between the quantity of family interactions and the quality of family relationships, and their impact on long term care residents' life satisfaction and depression. Factors influencing the quality of relationships between residents and their primary family caregiver were also of interest. Forty-four assisted living residents were sampled. Participants completed four measures assessing emotional bondedness to family, perceived social support, life satisfaction and depression. In addition, open-ended interviews assessed residents' perceptions of family interactions. Regression analysis revealed that the quality of family relationships better predicted life satisfaction and depression than the quantity of family interactions. In addition, the amount of socio-emotional support activities families engaged in correlated to higher emotional bondedness. Families who reminisced also showed higher scores of emotional bondedness, suggesting reminiscing might be a tool for families to improve the quality of interactions with institutionalized elders. Predictors of life satisfaction and depression for assisted living residents included self-rated health, friendships within the facility, and family involvement. These results have implications for residents of long term care facilities and their family members, as well as, staff and social workers.

#### **ROLES IN THE FAMILY, FAMILY STRUCTURE AND TIME PERSPECTIVE OF OLDER ADULTS IN JAPAN**

A. Ohashi<sup>1</sup>, K. Abe<sup>2</sup>, C. Ohi<sup>1</sup>, K. Mizuno<sup>1</sup>, Y. Arai<sup>1</sup>, *1. Chubu Gakuin University, Seki, Japan, 2. Kansai University of International Studies, Miki, Japan*

**Objectives:** This study was conducted on older adults residing in a local community in Japan for the purpose of examining the roles in their families. An examination was also made as to whether the roles in the family and family structure have an influence on time perspective. **Methods:** Data obtained from 2256 older adults residing in Shirotori-cho, Gujo city, Gifu prefecture, Japan. The participants provided information regarding the types of roles they have in their family, family structure, marital status and their time perspectives of the past, present and future. **Results:** 82.5% of the participants replied that they fulfilled some form of role in their family. The roles of more than 40% of the participants consisted of field or garden work, cleaning, washing clothes, meal preparation and home maintenance. Results of regression analysis revealed that having a role in the family is a predictor of each of past,

present and future time perspectives. In addition, marital status was a predictor of past time perspective, while living with or near to children or grandchildren was a predictor of present and future time perspectives. **Discussion:** The results suggested that having a role in the family would have the potential to bring about a positive time perspective. In addition, the presence of a spouse, children or grandchildren each would have a positive effect on different time perspectives.

### **SESSION 310 (POSTER)**

#### **HEALTH RISK BEHAVIOR**

##### **TEMPORAL PATTERNING OF ALCOHOL CONSUMPTION AMONG OLDER ADULTS**

M. Horn Mallers, L. Zettel-Watson, C. Elmi, *Human Services, CSU Fullerton, Fullerton, California*

A strong predictor of alcohol consumption is day of week. Few current studies have examined temporal drinking patterns, especially as it relates to older adults, though such information is critical for a greater understanding of daily health and coping behaviors. The present study thus examined the temporal pattern of daily drinking among a nationally representative sample of adults aged 33-84 and its concordance with daily stressors, affect and health symptoms. Data were a nationally representative sample of nearly 1000 adults from the second wave of the National Study of Daily Experiences (NSDE), carried out under the Midlife in United States (MIDUS) study. Results indicate that older adults are more likely to drink on weekends as compared to weekdays and that weekend drinking is associated with both positive and negative levels of affect. Additionally, compared to younger adults, older adults show more consistency in drinking amount across the week. Implications for both maladaptive and proactive coping processes among older adults who drink will be discussed.

##### **HAZARDOUS ALCOHOL USE IN STOCKHOLM COUNTY BETWEEN 1998 AND 2010**

K. Ahacic<sup>1</sup>, S. Kelfve<sup>2</sup>, R. Kennison<sup>3</sup>, *1. Department of public health, Social medicine, Karolinska Institutet, Stockholm, Sweden, 2. Karolinska Institutet & Stockholm University, ARC, Stockholm, Sweden, 3. California State University, Department of Psychology, Los Angeles, California*

The baby boomers are reaching the oldest ages. In Sweden the prevalence of abstainers has gone down considerably with the coming of these cohorts. This study therefore examines overtime changes the other end of the spectrum, i.e., the proportion of the population with a hazardous use of alcohol. The data set is four waves of Stockholm County Public Health Surveys conducted in 1998 ( $n=3043$ ), 2002 ( $n=30973$ ), 2006 ( $n=34414$ ), and 2010 ( $n=30468$ ). The postal interviews representative of the county's adults (with response rates around 60 percent) used a grid which asked for the beverage specific consumption during a typical week. A hazardous alcohol use exceeds 9/14 standard glasses of alcohol. While the proportion decreased in younger ages, in the ages 65+ there was a pronounced increase between 1998 and 2010. In age group 65-74 the prevalence increased from 17 to 29 percent and in age group 75-84 from 9 to 18 percent. While women have a lower proportion of hazardous users, the overtime trend was similar for men and women. While the prevalence of hazardous alcohol use decreases with age among older people, this trend suggests that there is a need to focus on older people's alcohol habits. Moreover, much of the scientific basis for limits of hazardous use etc. has been based on younger people; these things may have to be examined specifically for older ages. With the coming of the baby boomers, it is also clear that institutions and elderly dwellings may need to adopt to changing behavior patterns.

## ALCOHOL USE AND PRESCRIPTION DRUG SAFETY IN OLDER ADULTS

A. Hoogland, F. Zanjani, *University of Kentucky, Lexington, Kentucky*

**Introduction:** Alcohol and prescription drug use is a dangerous combination at any age. Alcohol can directly impact the availability or toxicity of a drug, which is especially problematic for older adults as a result of the decreased ability to metabolize alcohol due to age-related changes. Further, older adults oftentimes consume prescription drugs to treat late-life health conditions, and combining these drugs with alcohol can produce disastrous effects. Given these concerns, it is imperative that older adults are cognizant of the consequences of consuming alcohol while taking prescription drugs. **Objectives:** To determine the degree to which older adults are aware of and practice safe drinking habits while taking prescription drugs. **Methods:** Older adults (mean age = 71 years) were approached at a public pharmacy in Lexington, KY, and given a survey addressing drinking habits and prescription drug safety (PDS) knowledge to complete and return. **Results:** Sixty-seven percent of participants indicated that they drank alcohol, and 29% of these participants drank heavily. Participants reported mixed knowledge of PDS, with over a third suggesting that heavy alcohol consumption was safe when taking prescription drugs. Interestingly, females tended to report greater awareness of the dangers of combining alcohol with prescription drugs. **Conclusions:** While some older adults are aware of and practice safe drinking habits, others engage in dangerous practices and are unaware of how alcohol can interact with prescription medications. As such, it is necessary that researchers develop effective ways to inform older adults of the hazards of combining alcohol with certain prescription drugs.

## IMPACT OF CANADIAN PROVINCIAL ALCOHOL POLICIES ON YOUNGER AND OLDER DRINKERS: A 14-YEAR POPULATION-BASED STUDY

N. Giesbrecht<sup>2</sup>, N. Huguet<sup>1</sup>, B. McFarland<sup>3</sup>, D.H. Feeny<sup>4</sup>, A. Wettlaufer<sup>2</sup>, R. Caetano<sup>5</sup>, N.A. Ross<sup>6</sup>, M.S. Kaplan<sup>1</sup>, 1. *Portland State University, Portland, Oregon*, 2. *Centre for Addiction and Mental Health, Toronto, Ontario, Canada*, 3. *Oregon Health and Science University, Portland, Oregon*, 4. *University of Alberta, Edmonton, Alberta, Canada*, 5. *University of Texas School of Public Health, Houston, Texas*, 6. *McGill University, Montreal, Quebec, Canada*

Extensive international literature indicates that population-level alcohol policies — price, type of retailing system, density of outlets, and hours and days of sale, influence overall consumption and high-risk drinking. This study, funded by the National Institute on Aging, used data from the longitudinal Canadian National Population Health Survey (1994/6 – 2008/09) to examine relationships between changes in provincial-level alcohol policies and weekly alcohol consumption among current drinkers aged 15-54 and 55 and older. Annual archival alcohol policy data for 1994/95 through 2008/09 were collected for British Columbia, Ontario, and Quebec. Seventeen variables were organized into five categories: pricing and sales; outlet density; type of retail system; availability; and on-premise sales restrictions. The dependent variable was number of drinks per week among current drinkers (provincial n's: 1,478 to 3,671). Individual level covariates included age, gender, and income. Multi-level model results showed that policies affect alcohol consumption among younger drinkers more than among older drinkers. In Quebec, changes in outlet hour regulations were associated with weekly drinking among younger but not older adults. In British Columbia, alcohol policies were not associated with weekly drinking. In Ontario, price of alcohol, minimum price regulation, and changes in restriction of outlet hours and Sunday and holiday shopping were associated with weekly drinking among younger drinkers. Relaxed restrictions on private store sale hours were associated with drinking among older residents of Ontario. The results suggest that alcohol-control policies are more likely to reduce population-level risks among younger than older drinkers.

## ORAL HYGIENE AND THE DYNAMICS OF DENTAL CARIES AMONG OLD ADULTS

J. Liang<sup>1</sup>, B. Wu<sup>2</sup>, B.L. Plassman<sup>2</sup>, J.M. Bennett<sup>1</sup>, J. Beck<sup>3</sup>, 1. *Health Management & Policy, University of Michigan, Ann Arbor, Michigan*, 2. *Duke University, Durham, North Carolina*, 3. *University of North Carolina, Chapel Hill, North Carolina*

There is little research on the dynamic linkages between oral hygiene (i.e., brushing, rinsing, and flossing) and dental caries experience (i.e., decayed teeth, missing teeth, and filled teeth). We examined variations in the trajectories of dental caries among older Americans, particularly with reference to oral hygiene. Data came from 810 older Americans who were dentate at the baseline in 1988 with up to 4 repeated observations through 1994. Hierarchical linear models with ordered logit were employed in evaluating the linkages between oral hygiene and trajectories of dental caries. In general, baseline oral hygiene was correlated with the levels of dental caries but not their rates of change. In addition, rinsing differs from brushing and flossing in its effects on the trajectories of dental caries. For instance, baseline brushing and its time varying measure were associated with less tooth decay, whereas flossing but not rinsing at the baseline was correlated with fewer decayed teeth. The effects of baseline brushing and flossing persisted even with socio-demographic and baseline health attributes controlled. Nonetheless, oral hygiene was not associated with the rate of change in tooth decay. In contrast, baseline brushing and flossing were associated with more filled teeth, but baseline rinsing was correlated with fewer filled teeth. In addition, baseline rinsing was associated with a greater rate of decline in tooth filling. Time-varying measures of brushing and rinsing were not associated with tooth filling. The effects of oral hygiene remained significant even when socio-demographic and health attributes were adjusted. Supported by NIH/NIDCR (1R01DE019110)

## SESSION 315 (POSTER)

### INTERGENERATIONAL RELATIONS

#### HOW JAPANESE DAUGHTERS-IN-LAW CONSTRUCT THE MEANING OF PARENTAL CAREGIVING: A QUALITATIVE ANALYSIS

H. Kodama, *Tokyo Metropolitan Institute of Gerontology, Itabashi-ku, Tokyo, Japan*

My aim in this study is to explore how Japanese daughters-in-law (re)construct the meaning of their caregiving to their parents-in-law. Because daughters-in-law have been expected to care for their parents-in-law under the traditional familial institution in Japan, their caregiving tends to be seen merely as a burden; as a result, little is known about daughters-in-law's personal meaning of their care experiences. Using a qualitative approach, I examined (a) how Japanese daughters-in-law reflect on their care experiences after their care recipients (i.e., parents-in-law) deceased, and (b) how, through such reflection, they (re)construct the meaning of their care experiences for their lives. In doing so, I focused on daughters-in-law in rural Japan, where the traditional familial institution persists. Semistructured interviews were conducted with 13 daughters-in-law in a rural area who had cared for their parents-in-law until their death. I analyzed interview transcripts guided by a grounded theory approach. A dominant theme among participants' narratives is recurrent interpretation of their care experiences; participants reported that they reconstructed the meaning of their caregiving for their lives multiple times in response to changes in their circumstances. Further, how they reinterpreted their care experiences after their parents-in-law's death was linked to their current self-view and life satisfaction. Findings suggest the need for a long-term perspective from which to examine daughters-in-law's personal meaning of their care experiences. It also is necessary to support daughters-in-law who see their care experiences negatively after their parents-in-law deceased; such a negative interpretation can adversely affect their view of self and life.

## MEASURING MEANINGFUL TIME EXPERIENCES IN INTERGENERATIONAL RELATIONSHIPS: A PILOT TEST

H. Tabatabaei-Moghaddam<sup>1</sup>, C. Bolkan<sup>1</sup>, C. Peters<sup>2</sup>, 1. *Washington State University Vancouver, Vancouver, Washington*, 2. *Michigan State University, Lansing, Michigan*

We live in an increasingly fast-paced society with multiple demands and obligations; this limits the amount of time available to spend in meaningful interaction with family. This challenge becomes progressively more prominent as families age. A better understanding of how aging families perceive quality of time spent together and how it influences individual well-being and family relationships in later life would be useful to researchers and practitioners. In this study, we pilot tested the first quantitative measure developed to capture how older adults value shared time experiences with family (Peters & Bolkan, 2009). Participants included 23 older parents (16 mothers; 7 fathers) who reported on experiences with 44 adult children. We recruited participants (M = 82 years) from local Independent and Assisted Living sites to complete face-to-face surveys. In addition to the pilot measure, we collected information on sociodemographics, health, mood, and intergenerational ambivalence. The measure demonstrated good content validity and was created with an intergenerational ambivalence theoretical framework. Four related components of family time were assessed: closeness, genuineness, spontaneity, and emotion. Preliminary descriptive analyses of the ten-item measure indicated wide variability in meaningful time experiences reported by participants and no items were significantly skewed. Items were significantly inter-correlated and associated with related questions regarding intergenerational ambivalence. The internal consistency of the measure appears acceptable (Cronbach's alpha = .798), however, we will re-analyze after the second wave of data collection (estimated N = 40 participants, 85 relationships). This study provides initial promising evidence for a valid measure of meaningful time experiences in intergenerational relationships.

## KOREAN BABY BOOMERS - A TRANSITIONAL COHORT OF INTERGENERATIONAL RELATIONSHIPS?

G. Han<sup>1</sup>, J. Kim<sup>2</sup>, J. Min<sup>3</sup>, 1. *College of Human Ecology, Seoul National University, Seoul, Republic of Korea*, 2. *Institute on Aging, Seoul National University, Seoul, Republic of Korea*, 3. *University of Southern California, Los Angeles, California*

Contrary to western society, providing supports to elderly parents in Korea has been based on strong patriarchal normative expectation. However, it is argued that the nature of kin relationships has been changed to a direction towards bilateralization with recent social changes. While Korean Baby Boomers have been believed to be a transitional cohort of intergenerational relationships, there is little empirical research. This study examined how Baby Boomers provided supports to their elderly parents with special attention to the flow of support structured by family lineage across different types of support: financial support and instrumental support. Data used in this study has drawn from the 1st wave (2010) of Korean Baby Boomers Panel Study. The sample consisted of 1,468 Boomers being married and having at least one living parent on both sides. Results showed that bilateralization of providing support was clearly observed in financial support than in instrumental support. Also, women were in higher probability of bilateralization than men regardless of support types. Survivorships of each side-parents showed a significantly different relationship with degree of bilateralization between financial support and instrumental support. We discussed the role of survivorship of parents, child's gender, and types of support as key factors in the process of bilateralization.

## GRANDPARENTS OF GRANDCHILDREN WITH AUTISM SPECTRUM DISORDER (ASD): STRENGTHENING RELATIONSHIPS THROUGH TECHNOLOGY ACTIVITIES

S.D. Wright, V. D' Astous, C. Wright, M. Diener, *Gerontology Program, University of Utah, Salt Lake City, Utah*

This study of grandparent-grandchild relationships was embedded in the context of technology workshops offered for young children on

the autism spectrum. We examined the relationship dynamics of six grandparents with their grandchildren in the context of shared technological activities (using Google SketchUp software) in structured workshops at a university setting. Content analysis of transcribed focus group sessions with the grandparents indicated two emergent key themes: expectations were reframed and communication bridges were built through shared interests. The grandchildren learned technological skills, increased their social interactions with peers, family members (parents, siblings), and grandparents. The positive experience the grandparents perceived their grandchildren to have in the program gave them hope for future educational and employment opportunities for their grandchildren. The grandparents also indicated that the shared interests in the computer program augmented communication opportunities between themselves and their grandchildren, with other grandparents of grandchildren with ASD, and with their sons and daughters.

## THE EFFECT OF INTERGENERATIONAL PROGRAMS FOR PRIMARY SCHOOL STUDENTS THROUGH AN INTERGENERATIONAL PROGRAM WITH READING PICTURE BOOKS

Y. Murayama<sup>1,2</sup>, M. Yasunaga<sup>1</sup>, R. Takeuchi<sup>1</sup>, K. Nonaka<sup>1</sup>, H. Ohba<sup>1</sup>, M. Kuraoka<sup>1</sup>, S. Shinkai<sup>1</sup>, Y. Fujiwara<sup>1</sup>, 1. *Tokyo Metropolitan Institute of Gerontology, Itabashi Tolyo, Japan*, 2. *Keio university, Tokyo, Japan*

This article focuses on an intervention research project, the REPRINTS Program (Fujiwara et al., 2006), which educates and engages senior volunteers in picture book reading to school-aged children in educational settings. The focus is on the intergenerational effects on the children's prosocial development. This program was held in an elementary school in Kawasaki city during "Koryu Jugyo" for the purpose of the Picture Book Reading for first grade students. In all 28 students were assigned to the intervention group and 56 students were assigned to the waiting list (control group). Both groups answered questions before and after the "Koryu Jugyo" was conducted. The questionnaire consists of 2 scales, 35 items (Sense of voluntary participation, Empathy Scale, Intimacy with senior volunteer, Commitment to the intergenerational program, Social desirability scale.) A two-way (Groups × test session) repeated measures ANOVA showed interaction ( $F(1,77) = 7.20, p < .01$ ). Analyses of simple main effects showed that the intergenerational program "Koryu Jugyo" significantly improved the sense of volunteer work in the intervention group, but showed no change in the control group. Finally, structural equation modeling after the intergenerational program showed that the model is a good fit of the data  $X^2 = 6.544(5), p = .257, CFI = .974, RMSEA = .061$ . In summary, the result showed that an intergenerational program has a positive effect on the sense of volunteer participation. Concretely, not only empathy but intimacy with senior volunteer mediated the effects of volunteer participation. Furthermore, commitment to the intergenerational programs and sex determined intimacy with senior volunteer.

## CORESIDENCE WITH CHILDREN AND DEPRESSIVE SYMPTOMS IN MEXICAN AMERICAN ELDERS: THE MODERATING EFFECTS OF CULTURE AND NEEDS

Z. Cong, S. Park, D. Feng, J. Scott, *Human Development and Family Studies, Texas Tech Univ, Lubbock, Texas*

Purpose: Coresidence with adult children may promote children's support to parents and suggest substantial psychological consequences because of cultural expectations of intergenerational support among Mexican American elders. This investigation examined the conditions when coresidence with children reduces elder parents' depression, and addressed the debate about whether coresidence is a cultural preference or more out of elder parents' needs. Data/Methods: The sample included 89 Mexican American elders aged 60 and above recruited in a city in Southwest Texas in 2010. OLS was used to examine the effect of coresidence with children on elder parents' depressive symptoms, and whether



this effect is conditional to elder parents' needs and their acculturation. Results: We found that the effects of coresidence depended on elder parents' acculturation level. Elder parents who were less acculturated benefited more, i.e., experienced reduced depression to a greater degree, from coresidence with children. In addition, elder parents who had lower level of education also benefited more from coresidence. But the effects of coresidence did not depend on elder parents' income, health, or familism. Conclusion: We found that the cultural orientation, which is operationalized as acculturation, was an important factor to consider when examining the effects of coresidence on Mexican American elders' psychological well-being; whereas needs were not directly relevant. This to some degree offers support to the argument that cultural orientation is more important than needs that motivate coresidence with children among Mexican American elders.

### **INTERGENERATIONAL WII® PHYSICAL ACTIVITY PROGRAM: MIXED METHODS FINDINGS OF SOCIALIZATION BENEFITS**

M.S. Heinz<sup>1</sup>, J.A. Margrett<sup>1</sup>, S.L. Francis<sup>2</sup>, K. Strand<sup>2</sup>, M.J. Peterson<sup>2</sup>, W.D. Franke<sup>2</sup>, 1. *Human Development and Family Studies, Iowa State University, Ames, Iowa*, 2. *Iowa State University, Ames, Iowa*

The LIFE (Living [well through] Intergenerational Fitness and Exercise) study was designed to promote whole-person wellness among older adults participating in an eight-week intergenerational program. The program focused on physical activity using the Wii® as well as interactive games incorporating physical, social, and cognitive stimulation. Pre- and post-tests were collected from 46 participants that completed the program; 87% of participants were female and 80% lived independently. Participants ranged in age from 60-92 years (mean = 75.30). Mixed methods were employed to evaluate older adults' mental health pre- and post-intervention. Analysis of variance tests indicated that choosing to participate in the program for social reasons (n = 18) demonstrated significantly greater positive affect (p < .05) and less negative affect (p < .05) at follow-up (25 weeks). Qualitative comments from older adult participants and younger adult trainers supported the quantitative findings. Participants noted enjoyment socializing with one another as well with as the college-aged trainers. Trainers commented on participants' enthusiasm to participate and that a primary strength of the program was the ability to "get to know people on a deeper level." Together these findings indicate that intergenerational physical activity programs can be particularly advantageous for older adults seeking increased socialization. The program not only benefitted older adults physically, but also mentally by providing increased opportunities for socialization that ultimately resulted in more positive affect post intervention.

## **SESSION 320 (POSTER)**

### **LIFE SATISFACTION**

#### **THE IMPACT OF GEOGRAPHIC PROXIMITY OF CHILDREN ON LIFE SATISFACTION AMONG AGING PARENTS**

N. Xie, E. Dugan, *UMASS at Boston, Billerica, Massachusetts*

Previous theoretic research has identified the impact of geographic proximity between adult children and their aging parents on intergenerational relations. However, research investigating the impact of geographic proximity on life satisfaction differences of foreign-born and native-born parents is still scarce. This study addresses the questions of whether proximity between adult children and aging parents has an impact on life satisfaction, and whether life satisfaction of foreign-born aging parents is more likely to be affected by such proximity. Using data from the 2008 Health and Retirement

Study, the study estimates the effects of geographic distance between adult children and their aging parents on life satisfaction of people who are 65 years old and older. Descriptive, bivariate and logistic regression analyses were conducted. The findings show that older adults who have children living nearby generally have higher life satisfaction (p=0.038) while the impact of distance is not clear. Also, life satisfaction (p=0.014) and distance (p=0.026) between children and parents are significantly different between foreign-born and native-born elderly. However, the impact of proximity on life satisfaction is not significantly different in nativity whereas significant differences of health status, household income and net worth have significant impact on life satisfaction of these two nativity groups. Given the declining intergenerational coresidence, studies on the economic and social vulnerability of foreign-born subpopulation have become more increasingly important. The findings of the paper highlight the need for researchers and policymakers to consider this foreign-born population.

#### **UNDERSTANDING RELATIONSHIPS BETWEEN PERSONALITY, FEELINGS ASSOCIATED WITH ACTIVE ENGAGEMENT, AND LIFE SATISFACTION IN THE ELDERLY**

B. Dadic, *Southern CT State University, New Haven, Connecticut*

This study examined the role of personality in understanding feelings associated with particular activities and overall sense of life satisfaction among the elderly. Participants (n=27), ages ranging from 63-102 years, completed measures of personality (Neo-Five Factor Inventory-3, NEO-FFI-3), life satisfaction (Life Satisfaction Index-Z) and an activity inventory, which evaluated common activities and associated feelings (e.g., card playing, movies, reading and dancing, and feelings such as excitement, happiness, nervousness and stress). Extroversion was related to time spent in active leisure, particularly physical, and the happiness and excitement experienced in these activities, particularly card playing and going to movies. Interestingly, feeling stressed when dancing and reading, and feeling nervous while going to the movies was also related to extroversion. Neuroticism was negatively correlated with life satisfaction. Relationships between personality factors, common activities chosen by elderly individuals, and feelings experienced with these activities suggest the need for individualized programs for activities for this age group. Activities may provide more enjoyment to those who are extroverted than introverted, and interestingly, some activities may be more stressful to extroverts than to introverts. Based on this work, we recommend consideration of personality factors when designing activity programs for this age group, and to avoid a one-size fits all approach.

#### **ADAPTATION IN THE OLDEST OLD: THE ROLE OF MASTERY BELIEFS AND SOCIAL RELATIONS FOR LIFE SATISFACTION**

M. Takayama<sup>1</sup>, R. Fukuda<sup>1</sup>, J. Ando<sup>1</sup>, Y. Gondo<sup>2</sup>, H. Akiyama<sup>3</sup>, 1. *Keio University, Tokyo, Japan*, 2. *Osaka University, Osaka, Japan*, 3. *The University of Tokyo, Tokyo, Japan*

Numerous studies report that life satisfaction peaks in old age but few include participants over age 85. The population of the oldest-old is growing faster than any younger segment of the older population in most countries all over the world. This is also the age when more people require care because of illness and frailty which may constrain their potential for well-being. Moreover this trend may lead to a change of patterns of resources of life satisfaction in very old age, compared to those of the young old who maintain relatively better physical and cognitive fitness. However, little research has focused on life satisfaction

of people over age 85. In this context, it is especially timely that we learn more about life satisfaction and factors associated with life satisfaction in current cohorts of the oldest old. Studies of the young old suggest that mastery beliefs are important buffers against health-related losses in subjective well-being. Moreover, they also suggest that providing support and social integrations enhance mastery beliefs. Is this the case in very old age? We examine these questions using data from locally representative in-depth studies of the oldest old conducted in Tokyo, Japan (N = 663 M age = 89; range 85-102). The results showed that the typical resources explained the variance of life satisfaction, but some resource effects were mediated through mastery beliefs. Our findings suggest that adaptive capacities may be preserved into advanced age and highlight the pivotal role of perceived control for successful aging.

#### **LIFE SATISFACTION AMONG THAI ELDERLY: IMPACTS OF PHYSICAL, EMOTIONAL HEALTH, SOCIAL SUPPORT, AND SOCIO-ECONOMIC STATUS (SES)**

R. Phatchana, 1. Mahidol University, Salaya, Nakhon Pathom, Thailand, 2. Miami University, Oxford, Ohio

Life satisfaction, one component of quality of life, is rarely studied in social sciences in Thailand. The diversity of characteristics of the elderly indicates multiple factors affecting life satisfaction. Predictors of life satisfaction are complicated for various reasons and age as a sole predictor is not representative, so other factors must be further examined. This study takes an analytical approach to investigate the impacts of life, looking at physical, emotional health, social support, and socio-economic status on satisfaction among Thai elderly, using data from National Research University project. Life satisfaction among Thai elderly is analyzed across three different age groups, including young old, old-old and oldest old groups; urban-rural differences; and gender differences. Other research shows that life satisfaction was likely to decrease when age increased. Between rural and urban elderly, life satisfaction is not significantly different. The oldest old persons were found to have lower life satisfaction affected by health, and social support. Life satisfaction among other two age groups is significantly affected by income. Life satisfaction between older males and females are not really different. Readers will gain insight into the significance of predictors of Thai older adults' life satisfaction along with an understanding of implications for the future.

#### **PAYING IT FORWARD: THE ROLE OF GENERATIVITY IN THE RELATIONS BETWEEN WORKING OR VOLUNTEERING FULL-TIME AND LIFE SATISFACTION**

M. Montpetit, M. Dinkle, E.M. Ledvort, S. Schmelter, Illinois Wesleyan University, Bloomington, Illinois

The benefits of working and/or volunteering full-time on life satisfaction have been well-established. The current study investigates generativity, the sense that one is meaningfully contributing to the well-being of others, as one mechanism underlying this relationship. Data from 90 aging adults (M Age = 67 years; SDAge = 5.1 years) were used to test the hypothesis that generativity mediates the relationship between working or volunteering full time and life satisfaction. Sobel's test, applied to the results of regression analyses, suggests that partial, rather than full, mediation is more tenable. That is, generativity explains a significant portion, but not all, of the variance shared by full time pursuits and life satisfaction. Thus, the benefits of full time occupation on life-satisfaction are conferred, in part, through a sense of meaningful social contribution. Interestingly, satisfaction with one's own life may be maintained or enhanced by engaging in activities that enrich the lives of others.

## **SESSION 325 (POSTER)**

### **MENTAL HEALTH ASSESSMENT**

#### **FARSI VERSION OF THE GERIATRIC ANXIETY SCALE: TRANSLATION AND PSYCHOMETRIC PROPERTIES AMONG IRANIAN OLDER ADULTS**

D.L. Segal<sup>1</sup>, M. Bolghan-Abadi<sup>2</sup>, 1. University of Colorado at Colorado Springs, Colorado Springs, Colorado, 2. Ferdowsi University of Mashhad, Mashhad, Islamic Republic of Iran

The Geriatric Anxiety Scale (GAS) is a promising new self-report anxiety screening measure designed for older adults. Due to the need for validated, culturally-appropriate screening measures for anxiety among older adults in Iran, the purposes of this study were to translate the GAS into Farsi and to explore the preliminary psychometric properties of the Farsi version. The GAS was translated from English into Farsi through an initial translation and back translation process (double blind method). This draft version was then completed by 30 older Iranians. This pilot study revealed that each item of the Farsi GAS was understandable and culturally appropriate except for one item which was revised to fit with Iranian cultural expressions of anxiety. For the validation study, a large sample of Iranian older adults (N=295; M age = 67.0 years; range = 60 to 92 years) completed the GAS and the Iranian version of the Geriatric Depression Scale (GDS-15). Cronbach's alpha for the GAS total score and the GAS sub-scales were acceptable (Total score  $\alpha = .91$ ; Cognitive  $\alpha = .81$ ; Somatic  $\alpha = .81$ ; Affective  $\alpha = .80$ ). Test-retest reliability after two weeks was moderate ( $r = .51$ ,  $p < .001$ ). As expected, there were strong positive relationships (all  $p$ 's  $< .01$ ) between the GAS total score and each of the three GAS sub-scales (Cognitive  $r = .89$ ; Somatic  $r = .90$ ; Affective  $r = .88$ ). Additionally each sub-scale was significantly positively correlated (all  $p$ 's  $< .01$ ) with the other sub-scales, which shared common variance ranging from 42% to 56%. Next, the GAS total score and each of the sub-scales were significantly positively correlated with the GDS-15, with medium effect sizes (GAS total  $r = .55$ ; Cognitive  $r = .49$ ; Somatic  $r = .49$ ; Affective  $r = .48$ ). Finally, confirmatory factor analysis supported the three factor structure of the GAS. This study provides preliminary psychometric support for the Farsi version of the GAS.

#### **VALIDATION OF THE GENERALIZED ANXIETY DISORDER SCALE (GAD-7) IN THE ELDERLY POPULATION**

B. Wild<sup>1</sup>, A. Eckl<sup>1</sup>, W. Herzog<sup>1</sup>, S. Lechner<sup>1</sup>, D. Niehoff<sup>1</sup>, H. Müller<sup>2</sup>, H. Brenner<sup>2</sup>, B. Löwe<sup>3</sup>, 1. Department of General Internal Medicine and Psychosomatics, University Hospital Heidelberg, Heidelberg, Germany, 2. Division of Clinical Epidemiology and Ageing Research, German Cancer Research Center, Heidelberg, Germany, 3. Department of Psychosomatics and Psychotherapy, University Hospital Hamburg, Hamburg, Germany

Background: Generalized anxiety disorder (GAD) is one of the most prevalent mental disorders in the elderly population. Unfortunately, GAD in elderly people often goes undetected. The aim of the present study was to examine the operating characteristics of the seven-item Generalized Anxiety Disorder Scale (GAD-7) in participants ages 60 to 85. Methods: A subsample of 438 persons of the ESTHER study - a large German epidemiological cohort study - was included. Participants completed the GAD-7 questionnaire as part of a home visit. Subsequently, the Structured Clinical Interview (SCID) was conducted via telephone to diagnose anxiety and depressive disorders. The SCID diagnosis of GAD constituted the criterion standard to determine sensitivity and specificity of the GAD-7 scale. Results: 27 participants met the DSM-IV criteria for current GAD according to the SCID interview (6.2%; 95%-CI: 3.9%-8.2%). Patients with GAD had a markedly higher mean GAD-7 score than persons without anxiety disorder. A cut point of 5 or greater appeared to be optimal for detecting GAD - at this cut

point the sensitivity of the GAD-7 was 0.63 and the specificity was 0.9. At a cut point of 6 or greater, sensitivity decreased to 0.52 (specificity=0.94). The Area under the Curve (AUC) of the GAD-7 was 0.88 (95% CI: 0.83-0.93). Discussion: Results of this study show that the recommended cut point of the GAD-7 for detecting GAD should be lowered for elderly people (from 10 to 5). The AUC indicates that the questionnaire could discriminate well between elderly people with and without GAD.

### **OLDER ADULTS' SLEEP DIARIES OVER TWO WEEKS: A HAWTHORNE EFFECT?**

R. Zamora<sup>1</sup>, K.L. Lichstein<sup>1</sup>, D.J. Taylor<sup>2</sup>, B.W. Riedel<sup>3</sup>, A.J. Bush<sup>4</sup>, 1. University of Alabama, Tuscaloosa, Alabama, 2. University of North Texas, Denton, Texas, 3. University of Memphis, Memphis, Tennessee, 4. University of Tennessee, Memphis, Memphis, Tennessee

Sleep diaries are a self-reported behavioral log that asks individuals to record their sleeping behavior over consecutive days. The process of completing the sleep diaries may unintentionally make the individuals aware of their previous behavior and result in an alteration in future behavior. The present study attempts to examine week differences in 2 weeks of sleep diaries in older adults with and without chronic insomnia to determine if a Hawthorne effect occurs in sleep efficiency (SE). 246 older adults, collected in a normative epidemiological study, were enrolled using random-digit dialing. Participant's SE was collected for 14 days via 2 weeks of sleep diaries. A mixed ANOVA was performed to analyze mean SE week differences between individuals with insomnia and normal sleepers. The SE for week 2 was significantly higher than week 1. The SE of those with insomnia was significantly lower than those without insomnia. A significant interaction between week difference and insomnia condition found that individuals with insomnia had an increase in SE from week 1 to week 2, whereas those who did not have insomnia had a decrease from week 1 to week 2. A subsequent analysis tested for the regression to the mean, replacing consecutive days with odd and even days, and was not found to be significant. Therefore, the presence of sleep difference between the 2 weeks suggests that the process of completing sleep diaries can alter SE in older adults, especially those with insomnia; however the effect is small and may not be clinically relevant.

### **THE UCSD SORT (U-SORT): ASSESSMENT OF ORGANIZATIONAL SKILLS IN PATIENTS WITH SCHIZOPHRENIA**

D. Tiznado<sup>1</sup>, S. Abel<sup>2</sup>, T. Davine<sup>3</sup>, B. Mausbach<sup>2</sup>, V. Cardenas<sup>2</sup>, T.L. Patterson<sup>2</sup>, D. Jeste<sup>2</sup>, 1. Psychology, University of Missouri-Kansas City, Kansas City, Missouri, 2. University of California- San Diego, San Diego, California, 3. San Diego State University, San Diego, California

Patients with schizophrenia have cognitive and functional deficits that affect their quality of life. The present study evaluated the validity of a new cognitive test intended to assess organizational skills. Participants were 183 middle-aged and older adults (Mean age = 52.36, SD=8.05) with a DSM-IV chart diagnosis of schizophrenia or schizoaffective disorder. The Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) assessed cognitive functioning. The UCSD Performance-based Skills Assessment (UPSA) measured functional capacity. The UCSD SORT (U-SORT) test measured organizational skills. For the U-SORT, participants were given items that might be found in a drawer in their home. They were instructed to sort items into two different piles, Keep: items that might be useful to keep (e.g. coins, paper clips), and Trash: items that should be thrown away (e.g. bent paper clips, empty ketchup packet). A significant correlation was found between U-SORT scores and UPSA total scores,  $r(115) = .331$ ,  $p < .001$ . Significant correlations were also found between the U-SORT and UPSA subscales, with the exception of household chores. No sig-

nificant correlations were found between the U-SORT and symptoms. There was also a significant correlation between the U-SORT scores and the RBANS total score,  $r(117) = .254$ ,  $p = .005$ . As expected, no correlation was found between U-SORT scores and income. Preliminary results suggest that the U-SORT test is correlated with measures of functional capacity. However, more research is needed to examine the relationship between the U-SORT scores, indices of real-world functioning, and other cognitive domains.

### **RELATIONSHIP BETWEEN PRE-SLEEP AROUSAL AND SLEEP OUTCOMES IN YOUNGER AND OLDER ADULTS: VARIABILITY AS A PREDICTOR OF SLEEP**

K. Douglas<sup>1</sup>, C.S. McCrae<sup>2</sup>, N.D. Dautovich<sup>1</sup>, 1. University of Alabama, Tuscaloosa, Alabama, 2. University of Florida, Gainesville, Florida

Introduction: This study examined whether variability in pre-sleep arousal predicts sleep outcomes above and beyond overall pre-sleep arousal. To our knowledge, no study has examined whether overall arousal or variability in arousal better predict sleep outcomes. Examining fluctuations in nightly arousal predicting sleep outcomes across ages has implications for understanding the sleep-arousal relationship. Methods: 50 younger (M=19.88, SD=2.76) and 50 older (M=67.81, SD=6.73) adults completed 14-consecutive-day sleep and arousal diaries. Hierarchical multiple regressions were computed for sleep variables, entering the following: 1) age and gender 2) mean cognitive and somatic arousal, and 3) intraindividual standard deviations for cognitive and somatic arousal. Results: Variability accounted for negligible additional variance in sleep outcomes. Mean cognitive arousal predicted SOL ( $\beta=.48$ ,  $p<.01$ ), WASO ( $\beta=.37$ ,  $p<.01$ ), TST ( $\beta=-.29$ ,  $p<.05$ ), SE ( $\beta=-.43$ ,  $p<.01$ ), and SQR ( $\beta=-.51$ ,  $p<.01$ ). Mean somatic arousal predicted WASO ( $\beta=-.28$ ,  $p<.01$ ). Variability in arousal predicted SQR above and beyond mean levels, with variability in somatic arousal predicting SQR ( $\beta=-.31$ ,  $p<.01$ ). Conclusions: Overall arousal better predicts sleep outcomes than arousal variability with the exception of sleep quality ratings, suggesting variability, at least in pre-sleep arousal, is not negatively associated with sleep processes. Only global sleep quality ratings were influenced by variability. Variability in arousal may be impacting components of sleep that contribute to overall perception of sleep (i.e., the amount of time spent in deep sleep or the number of alpha intrusions) that are not assessed with sleep diaries. Implications for assessment and treatment of sleep disorders in younger and older adults are presented.

### **ASSOCIATIONS BETWEEN PERSONALITY DISORDER FEATURES, BELONGINGNESS, AND BURDENSOMENESS IN OLDER ADULTS**

M. Marty<sup>1,2</sup>, D.L. Segal<sup>1</sup>, 1. Psychology, University of Colorado at Colorado Springs, Colorado Springs, Colorado, 2. VA Palo Alto Health Care System, Palo Alto, California

Recent research has suggested that personality disorder (PD) features are strongly positively correlated with suicidal ideation and explain a significant proportion of the variance in suicidal ideation (Segal et al., 2011). Likewise, perceived burdensomeness (PB) and thwarted belongingness (TB) have been shown to be important indicators of suicide ideation (Van Orden et al., 2010). This study explored the relationships between PD features, TB, and PB among a community sample of older adults. Participants (N = 284, M age = 73.3 years, SD = 7.1, age range: 64 – 96 years) anonymously completed the Interpersonal Needs Questionnaire (Joiner et al., 2009), a self-report measure of TB and PB, and the Short Coolidge Axis II Inventory (Coolidge et al., 2010), a self-report inventory designed to assess the 10 standard personality disorders listed in the DSM-IV-TR. Results showed TB had significant positive and moderate correlations with Borderline ( $r = .30$ ), Schizoid ( $r = .32$ ), Paranoid ( $r = .35$ ), and Avoidant ( $r = .36$ ) PD features. Similarly, PB had significant positive and moderate correlations with Antisocial ( $r = .35$ ), Paranoid ( $r = .41$ ), Borderline ( $r = .45$ ), Schizoid ( $r =$

.49), and Avoidant ( $r = .50$ ) PD features. TB and PB were somewhat less related to Histrionic and Narcissistic PD features ( $r = .06 - .12$ ). Findings suggest that specific PD types are associated with increased TB and PB, perhaps due to the social disruption associated with PD pathology. Although the direction of this relationship is unknown, PD features should be considered during a thorough assessment of late-life suicidal risk.

#### INVESTIGATING SHORT TERM TEMPORAL ASPECTS OF LONELINESS IN OLDER PEOPLE: A PILOT STUDY

M. Sullivan, C. Victor, M.L. Gilhooly, *Brunel University, Uxbridge, Middlesex, United Kingdom*

The dynamic nature of loneliness in later life has been largely overlooked by the numerous cross-sectional studies which have sought to establish the prevalence of, and risk factors for, loneliness within the United Kingdom and other developed countries. A limited number of longitudinal studies have characterized three loneliness trajectories: (1) regenerative; (2) degenerative; and (3) enduring. However, less is understood about how feelings of loneliness may vary in the short term between different times of day or days of the week or how loneliness may vary across the course of a year. This poster presents the findings of an exploratory mixed methods study that sought to explore the links between the temporal variations in loneliness and an individual's intrapersonal and interpersonal characteristics and social environment. We undertook a quantitative survey of reported levels of loneliness using a self report and the de Jong Gierveld scale, at 3 month intervals across a 12 month period, and a series of in-depth interviews. We present a framework of five elements that contributed to participants' vulnerability (and capacity to combat) loneliness namely intrapersonal and interpersonal characteristics, the micro and macro social environment, and life events. We also introduce the complex relationship between temporal variations in loneliness and an individual's psychosocial context. We conclude by outlining some of the methodological challenges for longitudinal investigations of loneliness, and the possible implications of the findings for loneliness intervention strategies for a diverse group of older people.

#### WHAT ACCOUNTS FOR POSITIVE PERCEPTIONS OF SELF-RATED HEALTH AMONG OLDEST-OLD ADULTS? FINDINGS FROM THE GEORGIA CENTENARIAN STUDY

J. Cho<sup>1,2</sup>, P. Martin<sup>3</sup>, M. Cress<sup>4</sup>, M.G. Ory<sup>2</sup>, L. Poon<sup>4</sup>, 1. *Scott & White Healthcare, Temple, Texas*, 2. *School of Rural Public Health, Texas A&M Health Science Center, College Station, Texas*, 3. *Iowa State University, Ames, Iowa*, 4. *University of Georgia, Athens, Georgia*

**Background.** Older adults commonly experience a decline in physical activities and an increase in the number of medical comorbidities. Nevertheless, many old adults, especially oldest-old adults, have positive perceptions of their overall health. This study investigated which determinants (physical health impairment vs. physical performance) make oldest-old adults rate their health positively. **Methods.** 324 participants from the Georgia Centenarian Study were included. Multiple regression analyses were conducted to identify correlates of self-rated health items with three indicators of physical health impairment (number of health problems, number of diseases, number of usages of devices), five indicators of physical performance (physical performance scale, average grip strength, average leg strength, physical activity of daily living, instrumental activity of daily living) after controlling for age, sex, residence and ethnicity. **Results.** Data showed that number of health problems ( $\beta = -.15, p < .05$ ), number of devices usage ( $\beta = -.19, p < .05$ ), instrumental activity of daily living ( $\beta = -.15, p < .05$ ), and the physical performance scale ( $\beta = -.24, p < .05$ ) were significant factors for perceptions of overall health among oldest-old adults. Those who had less health problems, used less devices, and needed less help to do instrumental activities rated their health better. Additionally, after controlling for demographics, health problems and activities of daily living,

oldest-old adults who showed poor performance on the GCS scale rated their health better, pointing to a suppressor effect. **Conclusion.** The findings suggest disabilities or health problems were not obstacles for the very old age group to perceive their health as long as they experience less difficulty in everyday life.

### SESSION 330 (POSTER)

#### NURSING HOME CARE

##### NURSING HOME EMPLOYEE PERCEPTION OF ORGANIZATIONAL CULTURE AND ITS RELATION TO JOB SATISFACTION

B. Getz, I. Kostiwa, S. Shah, B. Ludwin, S. Meeks, *Department of Psychological and Brain Sciences, University of Louisville, Louisville, Kentucky*

Organizational culture in nursing homes has been found to be related to job satisfaction (Kostiwa & Meeks, 2009). However, the nature of the relationship between specific behavioral expectations and job satisfaction has not been fully explored. We hypothesized that (1) employees would be more satisfied with their jobs if they perceived a culture that discouraged avoidance, opposition, and competitiveness; and (2) Certified Nursing Assistants (CNAs) would perceive their work culture differently than other staff: as encouraging less avoidance, opposition, and competitiveness. One-hundred and sixteen nursing home employees were asked about job satisfaction and organizational culture, including sixty CNAs and 56 nursing home employees from management and other areas of the organization. Job satisfaction was measured by the Benjamin Rose Nurse Assistant Job Satisfaction Survey (Ejaz, Noelker, Menne, & Bagakas, 2008). Nursing home employees' perceptions of behavioral expectations in the workplace were measured by the Organizational Culture Inventory (OCI; Cooke & Rousseau, 1988). We found that employees were more satisfied with their jobs if they perceived a culture that encouraged less avoidance and more competitiveness. No effect was found for opposition. CNAs perceived the culture as more discouraging of avoidance and opposition as compared to other nursing home employees. No effect was found for competitiveness. The results support the idea that CNAs have a unique perspective of the nursing home environment; understanding employee perceptions of the environment may be key to reducing job dissatisfaction and changing nursing home culture.

##### LONGITUDINAL CHANGES IN EXPECTATIONS FOR NURSING HOME USE IN THE HEALTH AND RETIREMENT STUDY

P.P. Haley<sup>1,2</sup>, R.S. Allen<sup>2</sup>, 1. *South Texas Veterans Health Care System, San Antonio, Texas*, 2. *Department of Psychology/Center for Mental Health and Aging, The University of Alabama, Tuscaloosa, Alabama*

The Behavioral Model of Health Services Use (Andersen, 1968; Andersen & Newman, 1973) is a framework frequently used to examine factors that bear upon the decision to utilize health services (Andersen & Newman, 1973; Mui, Choi, & Monk, 1998). According to this model, an individual's predisposing characteristics, enabling resources, and degree of need determine whether they will pursue health services, including nursing home care. As expectations for nursing home use appear to approximate actual risks of utilizing nursing home services (Lindrooth, Hoerger, and Norton, 2000), the current study investigated relations between variables predicted by the Behavioral Model of Health Services Use to influence longitudinal expectations for nursing home use among Health and Retirement Study (HRS) respondents ( $N = 1,487$ ) 50 years of age and older. Variables of interest were drawn from the 2002-2008 waves of the HRS and included demographics, previous health services use, insurance possession, social support, cognitive status, emotional health, and functional status. Latent growth curve mod-

els were developed to test whether these variables predicted expectations for future nursing home placement. Results indicate that models that included respondents' age [X<sup>2</sup>(8)=12.891, p=.116, CFI=.991, TLI=.995, RMSEA=.020], previous health services use [X<sup>2</sup>(25)=26.796, p=.366, CFI=.999, TLI=.999, RMSEA=.007], insurance coverage [X<sup>2</sup>(8)=6.598, p=.581, CFI=1.002, TLI=1.000, RMSEA=.000], enjoyment of life and feeling full of energy [X<sup>2</sup>(24)=25.754, p=.366, CFI=.998, TLI=1.000, RMSEA=.007], and difficulty shopping [X<sup>2</sup>(28)=30.909, p=.321, CFI=.996, TLI=.999, RMSEA=.008] significantly predicted longitudinal expectations for future nursing home placement.

#### **DECREASING THE USE OF PHYSICAL RESTRAINTS IN NURSING HOME CARE**

A. Pot<sup>1,2</sup>, B.M. Willems<sup>1</sup>, D. Smit<sup>1</sup>, J.D. Lange<sup>1</sup>, 1. *Netherlands Institute of Mental Health and Addiction, Utrecht, Netherlands*, 2. *VU University, Amsterdam, Netherlands*

In the last years, there is increasing attention for the use of physical restraints in living arrangements for people with dementia. The Health Care Inspectorate and several field parties agreed to ban the belts in nursing home care in the Netherlands. From 2011, belts may only be applied under strict conditions. In this presentation, the changes in the use of belts and other types of physical restraints from 2009 to 2011 will be presented. Data will be used from the Living Arrangements for people with Dementia (LAD-) study. This study is an ongoing nation-wide study including around 140 living arrangements for people with dementia in the Netherlands. Every two years a measurement is carried out on the quality of care, care staff's well-being and residents' quality of life. Results of 2009 show that the mean number of physical restraints per resident was .52, ranging from 0 to 1.26. In the presentation, attention will be paid to the definition of restraints, different types of restraints, changes over time, the link with policy and ways to reduce the use of physical restraints.

#### **A COMPARATIVE ANALYSIS OF SNF DEFICIENCY PATTERNS: ARIZONA MASSACHUSETTS AND WASHINGTON**

K.A. Bailey, M. Velez, J. Tan, *Social Work, Bridgewater State University, Bridgewater, Massachusetts*

According to the most recent National Nursing Home Survey, there are 1.6 million individuals nationwide who reside in skilled nursing facilities (SNFs). It is critical to understand what factors impact the provision of quality care in these settings. Using the nursing home compare public use data set, this study examines the patterns of deficiencies in three states, Arizona, Washington and Massachusetts. Federal regulations dictate educational requirements for qualified social service directors. However, state regulations can add additional requirements. Massachusetts is a state that has additional educational requirements. Overall it was found that Massachusetts had the lowest average number of deficiencies while Washington had the highest average number of deficiencies. Predicting factors included facility ownership, multi-facility chain affiliation, and facility size. Analysis was conducted to test whether the relationship between these factors and deficiency level vary by state. It was found that these three factors are significant predictors for level of deficiency among the combined data sets. Specific results indicated ownership type as a statically significant predictor of deficiency level only in Washington, multi-facility chain affiliation as a statically significant predictor of deficiency level for Massachusetts and Washington and facility size to be a statically significant predictor of deficiency level only in Massachusetts. Results from this exploratory study demonstrate clear differences in deficiency patterns and indicate

a need for examination of deficiency scope and severity and deficiency categories to better interpret potential differences.

#### **THOSE WHO MATTER SPEAK OUT ABOUT OPTIMAL CARE ON A RESIDENTIAL DEMENTIA CARE UNIT**

R.H. Robnett<sup>1</sup>, B. Moore<sup>2</sup>, J. Sawyer<sup>2</sup>, 1. *Occupational Therapy, University of New England, Portland, Maine*, 2. *Genesis Health Care, Falmouth, Maine*

This qualitative research project explores optimal dementia care from the perspective of the involved stakeholders on a dementia-based residential care unit. We ran several focus groups comprised of staff and formal caregivers (n=24), family and friends of residents (n=8), and the residents themselves (n=16). This poster gives an overview of the distinct process employed to carry through each of the types of focus groups and shares the general results from the three different perspectives. Comprehensive theme analysis of the transcribed group meetings was conducted. The results offer not only crucial input regarding what is deemed best care for the residents, but also demonstrate that each type of focus group had varying and distinct views on optimal care. The majority of staff reported that the favorite aspect of their jobs was working directly with the residents, while the lack of time was the most challenging aspect. All participant groups agreed that more activities and more attention to the residents would be optimal. However, while the families and the staff focused more on environmental and physical issues, the residents rarely mentioned anything related to physical care. Rather, most residents focused on the positive aspect of social activities, such as music and singing, and food. While the results can be generalized only extremely cautiously beyond the facility in which they took place, the method of using focus groups and interviews to explore the opinions of those who matter in realm of dementia care easily could be replicated.

#### **TEST-RETEST RELIABILITY OF PERSONAL PREFERENCES IN COMMUNITY AND VETERAN NURSING HOME RESIDENTS**

K. VanHaitma<sup>1,3</sup>, K. Curyto<sup>2</sup>, K. Eshraghi<sup>1</sup>, M.H. Kleban<sup>1</sup>, C. Duntzee<sup>1</sup>, 1. *Polisher Research Institute, North Wales, Pennsylvania*, 2. *Western NY VAMC, Batavia, New York*, 3. *University of Pennsylvania, Philadelphia, Pennsylvania*

Use of personal preferences in planning individualized care requires reliable information. This study sought to assess the test-retest reliability of residents' self reported preferences for everyday living in two nursing home (NH) samples. Forty-six VA residents aged 55 to 94 (M=74.98, SD=11.13) and 37 non-VA NH residents aged 55 to 101 (X=81.62, SD=11.83) participated. The Preferences for Everyday Living Inventory (PELI), an 81 item questionnaire, was administered at 2 time points, 5-7 days apart. The PELI assesses a range of preference dominions including social contact, growth activities, leisure activities, self-dominion, and caregivers and care. Measures of agreement were derived for each subject. Perfect agreement was defined as exact scores across the T1 & T2 PELI measures. Acceptable agreement based on +/- 1 deviation across T1 & T2 for each subject was also calculated. Non-VA subjects demonstrated perfect agreements on average 66 percent of the time (AD = 9, range = 48 - 88) while VA subjects averaged 56 percent agreement (SD = 9.91, range = 32 - 76). For percent agreements based on +/- 1 deviations, non-VA subjects had a mean percentage = 95 (SD = 3, range = 88 - 100) and the VA subjects had a mean percentage = 88 (SD = 8.48, range = 70 - 99). Multiple regression analyses were conducted to examine significant predictors of reliability in both samples using demographics, cognitive, functional variables, and interviewer ratings. Results will be presented and implications for future research and clinical practice will be highlighted.

## BEHAVIOR PROBLEMS IN OLDER NURSING HOME RESIDENTS

K.A. Kitchen<sup>1</sup>, C.L. McKibbin<sup>1,2</sup>, D. Fleming<sup>1,2</sup>, T.L. Wykes<sup>1</sup>, A.A. Lee<sup>1</sup>, C.P. Carrico<sup>1,2</sup>, 1. *Psychology, University of Wyoming, Laramie, Wyoming*, 2. *Wyoming Geriatric Education Center, Laramie, Wyoming*

Certified nursing assistants (CNAs) have the most direct contact with residents among nursing home staff, yet receive little training in behavior management, particularly in rural communities. Thus, it is vital to understand rural CNAs' confidence in managing behavior problems. CNAs employed in Wyoming nursing homes (n=100) completed a survey assessing the type and frequency of observed behavior problems, their confidence in responding to behavior problems, and the extent to which they identify patient risk factors. Respondents ranged in age 16 to 67 (M=36.0, SD=14.1). The majority had at least a high school education (94%). CNAs (52%) reported that their patients display behaviors that interfere with care on at least a daily basis. They felt significantly more confident in their ability to effectively respond to the most frequently observed behaviors (M=3.09, SD=.81) than the least frequently observed behaviors (M=2.90, SD=.95;  $t(97) = 5.30, p < .001$ ), the nonaggressive behaviors (M=3.05, SD=.83) as opposed to the aggressive behaviors (M=2.98, SD=.94;  $t(97) = -2.01, p < .05$ ), and the verbal behaviors (M=3.06, SD=.86) as opposed to physical behaviors (M=3.00, SD=.87;  $t(98) = -2.35, p < .05$ ). The physically aggressive behaviors were often the most difficult to manage. "Physical and psychological disease" was identified as the most common risk factor for displaying behavior problems. Less than half of CNAs seek information about patient risk factors from a nurse or chart (40%), and few seek information when they begin working with a resident (27%). This information will be used to design future CNA trainings.

## SESSION 335 (POSTER)

### RELIGION AND SPIRITUALITY

#### COMPARING MEDIATORS OF THE FORGIVENESS - PHYSICAL HEALTH ASSOCIATION IN A PRISON SAMPLE WITH OLDER NON-VIOLENT AND VIOLENT OFFENDERS

G. Randall<sup>1</sup>, A.J. Bishop<sup>2</sup>, 1. *Family & Consumer Sciences, Bradley University, Peoria, Illinois*, 2. *Oklahoma State University, Stillwater, Oklahoma*

Using a sample of 262 older incarcerated males, we tested a path model linking forgiveness of self, situation, and others, both to an objective assessment of physical health (an index of health conditions) and to an assessment of perceived health, through religiosity, depressive symptoms, perceived stress, and social support. We conducted a two-group analysis comparing the hypothesized model between non-violent (n= 90) and violent offenders (n= 171). We employed Mplus 6.11 and indirect effects (IE) were calculated using the bias-corrected bootstrap resampling method to produce point estimates and 95% Confidence Intervals. The best fitting model allowed all paths free to estimate for both groups (i.e., the model fit differently for each group): Satorra-Bentler  $\chi^2(df=12)=17.43; p=.14; CFI=.99; RMSEA=.06; SRMR=.02$ . For the non-violent group, one specific IE was found for Forgiveness of Self through Social Support on Perceived Health, 95% CI [.02, .34]. For the violent group, one specific IE of Forgiveness of Situation through Depression on Health Conditions was found, 95% CI [-.26, -.03] and one specific IE of Forgiveness of Situation through Depression on Perceived health was found, 95% CI [.07, .29]. Implications for therapeutic interventions, particularly the relationship between type of crime and type of forgiveness, are discussed.

## DIFFERENCES IN DIMENSIONS OF FORGIVENESS BY TYPE OF CRIME COMMITTED BY OLDER INCARCERATED MALES

A.J. Bishop<sup>1</sup>, G. Randall<sup>2</sup>, 1. *Human Development and Family Science, Oklahoma State University, Stillwater, Oklahoma*, 2. *Bradley University, Peoria, Illinois*

The purpose of this study was to examine differences in self-reported forgiveness among older male prison inmates incarcerated for violent and non-violent criminal offenses. Participants included a sample of N = 261 incarcerated men, aged 45 and older, residing in state managed prisons in Oklahoma. IBM/SPSS 19.0 was used to examine mean differences across forgiveness of self, situation, and others by type of criminal offense (violent, n = 171; non-violent, n = 90). Controlling for age, race, religiosity, depression, social support, and perceived health, no significant differences by crime type emerged relative to forgiveness of situation,  $F(1,199) = .26, p = .61$ , or forgiveness of others,  $F(1, 197) = .15, p = .70$ . However, a significant difference by crime type was found for forgiveness of self,  $F(1, 197) = 4.17, p = .04$ , partial  $\eta^2 = .02$ . Planned contrasts revealed that older inmates who had committed a non-violent crime had higher levels of forgiveness of self than older prisoners who committed a violent offense,  $p = .04$ , 95% CI [-.372, -.065]. Implications relative to use of forgiveness as a therapeutic intervention with older male prison inmates are discussed.

## SECULAR REVERENCE AND SHORTER HOSPITAL LENGTH OF STAY AMONG CARDIAC SURGERY PATIENTS

A.L. Ai<sup>1</sup>, L. Noel<sup>1</sup>, F.P. Hopp<sup>2</sup>, P.M. Wink<sup>3</sup>, 1. *Florida State University, Tallahassee, Florida*, 2. *Social Work, Wayne State University, Detroit, Michigan*, 3. *Wellesley College, Wellesley, Massachusetts*

**BACKGROUND:** Despite the surging interest in the faith-health connection in aging, understanding this link is complicated by the growing diversification of the American religious landscape coinciding with the coming of age of the Baby Boomers. The Pew Forum (2008) reports an increasing number of Americans (approximately 16%) who express no religious affiliation. This study explored the role of traditional religiousness and of experiencing reverence in religious and secular (e.g., naturalistic, moralistic) contexts predicting postoperative hospital length of stay among patients undergoing open-heart surgery. Reverence was broadly defined as "feeling or attitude of deep respect, love, and awe, as for something sacred." **METHODS:** Information on demographics, faith factors, sense of reverence, mental health, and medical comorbidities was collected from 400+ patients (age 62+-12) around two weeks before surgery via personal interview. Standardized medical indices were retrieved from the Society of Thoracic Surgeons' national database. **RESULTS:** Hierarchical multiple regression showed that reverence in secular contexts predicted shorter hospitalization, after controlling for demographics, medical indices, depression, and psychosocial protectors. Other hospital length of stay predictors included female gender, age, medical comorbidities, low left ventricular ejection fraction, perfusion time, and coronary bypass graft surgery. **CONCLUSIONS:** Secular reverence exerts a protective impact on an objective measure of cardiac health. If these findings can be replicated, health providers may integrate a naturalistic perspective of spirituality in cardiac aging care.

## GOD GRANT ME THE STRENGTH: EXPLORING THE SPIRITUAL CAPITAL OF MOTHERS OF BREAST CANCER SURVIVORS

L. Manning<sup>1</sup>, M. Radina<sup>2</sup>, 1. *Center for Aging/Dept of Sociology, Duke University, Durham, North Carolina*, 2. *Miami University, Oxford, Ohio*

The National Cancer Institute estimated that 230,480 women will be diagnosed with and 39,520 women will die of breast cancer in 2012. Because breast cancer is an event that impacts the entire family, not

just the patient/survivor (Baider, Cooper, & Kaplan De-Nour, 2000; White & Klein, 2002), an equal or greater number of families may be affected by breast cancer as well. A growing number of women under 50 are being diagnosed with breast cancer (American Cancer Society, 2011). The mothers of these young breast cancer patients, who are likely impacted in a variety of ways by their daughters' diagnoses, deserve empirical research attention. To date, no research exists addressing the perspectives of this population. This study explores the perspectives of mothers of breast cancer survivors. We investigate the role spirituality plays for these mothers in the management of the stress and struggles of having a loved one with a diagnosis of cancer. This study uses secondary analysis of data generated during an earlier study on the families of the women with breast cancer. In a sample of 31 women, ranging in age from 40 to 81, we find that these mothers of daughters with breast cancer have well-developed spiritual capital, and as a result intentionally rely on their spirituality for managing the stress associated with having a loved one with breast cancer. In addition, we find that a cancer diagnosis is a source of spiritual strengthening for these mothers. Implications for health and well-being are considered.

### **RELIGIOUS/SPIRITUAL STRUGGLE: PREVALENCE AND CORRELATES AMONG OLDER ADULTS WITH DEPRESSION IN THE BRIGHTEN PROGRAM**

P. Murphy, G. Fitchett, J. Brunner, E.E. Emery, *Rush University Medical Center, Chicago, Illinois*

A growing body of evidence points to the harmful spiritual, emotional, and physical effects of religious/spiritual (R/S) struggles (e.g., feeling abandoned by God or punished by God). The aim of this study was to advance our understanding of R/S struggle among older adults with depression. The sample included 200 adults, aged 60+, with depression who were participants in the BRIGHTEN program. Half (51%) screened positive for R/S struggle. Hispanics were less likely than non-Hispanic Whites to screen positive for R/S struggle (OR .40, 95% CI .16, .99). Age was inversely associated R/S struggle (OR .95, 95% CI .92, .99). Gender, marital status, education, African-American race, and number of chronic illnesses were not associated with R/S struggle. R/S struggle was associated with higher levels of depressive symptoms ( $t = -2.841$ ,  $df = 195$ ,  $p = 0.005$ ), a difference that remained significant after adjustment for demographic and medical factors. Positive screening for R/S struggle in this sample of older adults with depression was consistent with that of individuals with cancer, congestive heart failure, or diabetes. The finding of higher levels of depressive symptoms among those screening positive for R/S struggle is consistent with other research. The high prevalence of positive screens for R/S struggle in this sample suggests that professionals who work with older adults, both mental health professionals and clergy and chaplains, should be alert to the potential co-occurrence of R/S struggle and depression and consider collaborative treatment or a referral to address conditions beyond one's expertise.

### **A CALLING TO COMPASSIONATE CARE: THE NEED FOR GERONTOLOGY EDUCATION IN THE SEMINARY**

D. Walsh, *Gerontology, CSU, Sacramento, Shingle Springs, California*

An understanding of all aspects of aging is crucial for those who work with elders. Parish priests minister to elder parishioners on a regular basis. The intent of this research is to determine to what extent Catholic seminaries offer adequate gerontology instruction and training for those who are preparing for the priesthood. It looks at whether seminarians and recently ordained priests believe they are adequately trained and prepared to serve elder parishioners. It examines what experiences they have in ministering to elders. It also looks at what seminarians and priests express they want and need to have taught in the seminary on age-related topics. Most information is gathered through a survey created by the researcher. The survey is made up of 13 open-

ended questions. Secondary research methods are observations, shadowing, and the examination of seminary curricula and library content. The data from these secondary methods are used to supplement the information gathered through the survey. The research of the seminary curricula studied shows gerontology courses are not being offered and participants report not having courses related to aging. The majority report not feeling fully prepared to work with elders. The survey responses indicate participants have a wide range experience with elders, yet when experiences prove challenging, many are not confident and comfortable. Many participants request a wide range of age-related topics to be taught. Responses clearly demonstrate a consensus from both seminarians and priests for gerontology instruction to better prepared them for ministering to elders.

### **RELIGIOSITY, SPIRITUALITY, AND SUBJECTIVE WELL-BEING: THE ROLES OF HOPE AND CONTROL**

M. Montpetit, S. Schmelter, E.M. Ledvort, M. Dinkle, K.M. Roessler, J.M. Abbasi, *Illinois Wesleyan University, Bloomington, Illinois*

The current project explores the process by which religiosity and spirituality impact subjective well-being. In particular, existing literature suggests that these constructs have practical (e.g., self-efficacy) and existential (e.g., hope) benefits for elderly individuals, but many of these relationships are not well understood. Data from 90 aging adults (MAge= 67 years; SDAge= 5.1 years) were used to investigate whether control or hope mediated the relationships of interest. Results of regression analyses indicate the both hope and control mediate the relationship between spirituality and well-being. The relationship between religiosity and well-being did not meet the criterion for significance ( $p = .06$ ). Interestingly, although a mediating model could not be tested, there was a strong positive relationship between religiosity and hope, but not control. Overall, results suggest that spirituality is more strongly to subjective well-being than religiosity, and that the benefits of spirituality are conferred through the sense of control and hope fostered thereby.

### **THE INTERACTION EFFECTS OF RELIGIOUS SUPPORT AND SOCIAL SUPPORT ON DEPRESSION AMONG KOREAN-AMERICAN OLDER ADULTS (KAOAS)**

S. Park<sup>1</sup>, S. Roh<sup>2</sup>, M.J. Lawler<sup>2</sup>, *1. New York University, New York, New York, 2. University of South Dakota, Vermillion, South Dakota*

Method: The study utilized a cross-sectional survey design. Through face-to-face interviews, two hundred participants, 115 male and 85 female, were recruited from Korean senior centers in New York City. In an attempt to measure a broad range of social support, Lubben Social Network Scale-Revised (LSNS-R) was used. Religious support subscale from the Brief Multidimensional Measures of Religiousness and Spirituality (BMMRS) were employed to measure a broad range of religious support. Depression was measured with the Geriatric Depression Scale-30 Korean version (GDS-K). Results: Multiple regression analysis indicated that social support ( $B = -.122$ ,  $p < .05$ ), religious support ( $B = -.511$ ,  $p < .05$ ), and physical health status ( $B = -1.451$ ,  $p < .01$ ) were significant factors for males, while religious support ( $B = -.846$ ,  $p < .05$ ), physical health status ( $B = -2.447$ ,  $p < .01$ ), and income ( $B = -1.19$ ,  $p < .01$ ) were significant predictors of depression for females. A significant 2-way interaction between religious support and social support for predicting depression was found ( $B = -0.074$ ,  $p < .05$ ), but the model including this interaction term was statistically significant only for females ( $F(7,77) = 4.174$ ,  $p < .05$ ,  $R^2 = .359$ ). The results indicate that social support moderates the relationship between religious support and depression among female Korean elderly. Conclusion: These findings emphasize that religious and social support could be contributive factors to decrease depressive symptoms. More attention should be paid to developing a variety of social services as a way of improving mental health among KAOAs. Future research is needed to replicate this study for diverse ethnic elderly groups. \* This study was supported by John A. Hartford Foundation.

## THE BLACK CHURCH AND “FULL-BODY” RELIGIOUS INVOLVEMENT: RACE AND RELIGION AMONG WORCESTER’S ELDERLY

M. Oviedo, *College of the Holy Cross, Worcester, Massachusetts*

Religiosity is a multidimensional construct that consists of cognitive, attitudinal, behavioral, experiential, and emotional aspects. Historically, the “Black Church” has shaped the expression of religiosity in ways thought to be different from that of the mainstream and evangelical “White Church”, such that several theorists see a more integrative influence of affiliation on religious expression. African Americans belonging to historically Black churches are thought to demonstrate a more “full bodied” religious experience with heightened involvement across all aspects of religiosity. We examined this “full body” hypothesis using data from interviews of 357 elders over the age of 60 in Worcester, MA. Multivariate analyses comparing African American and White older adults demonstrated heightened religious involvement on all aspects of religious involvement in keeping with the “full bodied” hypothesis. Of the 90 African Americans older adults in this sample, a sizable number were in mainline, historically integrated churches. Few differences in religiousness were noted between those African Americans in historically Black versus integrated White churches. This finding of full-bodied religiousness among those African American older adults affiliated with both Black and integrated churches is discussed in terms of developmental and stress/coping theories of religious expression in later life.

## SESSION 340 (POSTER)

### SOCIAL AND CIVIC ENGAGEMENT

#### SOCIOECONOMIC POSITION, MOBILITY, AND POLITICAL PARTICIPATION AMONG MEN AND WOMEN 77+ IN SWEDEN

I. Kåreholt, H. Long, *Aging Research Center, Stockholm, Sweden*

Introduction: Political participation, e.g. voting, is important as it allows people to influence national/regional politics. From an egalitarian perspective it is desirable that everyone, irrespective of age, sex, socioeconomic position, and health, has the possibility to vote. We study the relationship between voting and a combination of mobility and three measures of socioeconomic position (social class based on occupation, years of education, and income). Methods: Two nationally representative Swedish samples aged 53-75 were interviewed in 1968 and 1981 respectively. Survivors from 1968 were re-interviewed in 1992 (n=461), survivors from 1981 in 2002 (n=614). Both 1992 and 2002 were election years in Sweden. The question posed was: did you vote in the election? Logistic regressions were controlled for sex, age, and cognition. Mobility, measured as walking aids outdoors was coded: 1)no aids; 2)some aids (cane(s), quadraped(s), crutch(es), walker); 3)wheelchair/never go out. Results: Significant differences in voting were found for both sexes, for all measures of socioeconomic position – people with a high socioeconomic position being more likely to have voted. The association between voting and socioeconomic position varied over mobility, but not systematically: social class had the strongest association among men without walking aids; education among men using some aids; and income for men using a wheelchair/not going out. Social class and income had the strongest associations among women with some aids, education among women without aids. Conclusions: There are systematic socioeconomic differences in political participation measured by voting, but no systematic pattern in how the associations vary over mobility.

## THE LINK BETWEEN PRIVATE AND PUBLIC HELPING BEHAVIOR: CAREGIVING AND CITIZENSHIP ACTIVITIES AMONG AFRICAN AMERICAN URBAN ELDERS

L.J. Ficker<sup>1</sup>, P.A. Lichtenberg<sup>1</sup>, M. Herring<sup>2</sup>, M. Kruman<sup>2</sup>, C. Lysack<sup>1</sup>, J. Hannigan<sup>3</sup>, *1. Institute of Gerontology, Detroit, Michigan, 2. Center for the Study of Citizenship, Detroit, Michigan, 3. Merrill Palmer Skillman Institute, Wayne State University, Detroit, Michigan*

Older persons who provide care to others have been found to be more active in their communities in White, middle-class samples. The objective of this study was to determine if this is also true for African American elders living in an urban context. We interviewed 501 African American elders in order to assess caregiving activities, mobility status of elders, citizenship, and volunteering activities. The majority of the sample was female (86.0%) and retired (89.6%) with an average age of 70.7 years (SD = 8.6). Almost 80% of the sample had grandchildren (n = 391), one-third of whom (n = 131) were currently involved in caregiving for their grandchildren, and 85 were involved in caregiving for other adults, such as disabled family members or friends. Caregiving grandparents reported significantly higher citizenship activities compared to grandparents not involved in grandchild care. Caregivers of other adults reported higher volunteering compared to non-caregivers. Although caregivers were significantly younger than non-caregivers, mobility status was the same in both groups. Curvilinear relationships in citizenship and volunteering were found according to the amount of caregiving activities for both groups. Elders who provided the least and the most amount of care for others/grandchildren reported less citizenship and volunteering than those who provided a moderate amount. Implications are that elders who provide care for friends and family members may be more likely to volunteer and participate in citizenship activities, but that elders who provide the most intensive caregiving may have lower levels of involvement in community activities.

#### TRAJECTORIES OF QUALITATIVE SOCIAL SUPPORT: FINDINGS FROM THE VA NORMATIVE AGING STUDY

N. Toyokawa<sup>1</sup>, C.M. Aldwin<sup>1</sup>, A. Spiro<sup>2</sup>, *1. Human Development & Family Sciences, Oregon State University, Corvallis, Oregon, 2. Boston University & Veterans Affairs, Boston, Massachusetts*

Socioemotional selectivity theory (SST: Carstensen, 2006) predicts that old age is normatively associated with better quality of social relationships with emotionally meaningful social partners. In contrast, dynamic integration theory (DIT: Labouvie-Vief, 2003) predicts that the significant individual differences in qualitative social relationships are explained in part by varying cognitive resources. To compare these predictions, we examined longitudinal data on 1,066 men from the VA Normative Aging Study. Mean age at baseline was 60.83 (SD = 8.08, range: 40 - 88). Data on qualitative social support (reliance on family and friends) from three triennial surveys 1985-1991 were analyzed using conditional growth models with random intercept and slopes. In support of SST, the fixed effect of the qualitative social support indicated a slightly positive slope,  $B = .01$ , 95% CI =  $-.004 - .015$ , however, there was a slight but significant random effect in both the intercept,  $B = 1.32$ , 95% CI =  $1.19 - 1.45$ , and the slope,  $B = .01$ , 95% CI =  $.001 - .09$ , suggesting individual differences. Better self-reported health was positively associated with the slope,  $B = .258$ , 95% CI =  $.127 - .389$ , while having memory problems was associated with lower levels,  $B = -.233$ , 95% CI =  $-.42 - -.05$ . These findings suggest that physical and cognitive health may be protective factors for older adults' efforts to maintain their ability to rely on family & friends.

#### “CALL UP SOMEBODY AND TELL THEM YOU MISSED THEM”: SOCIAL NETWORKING AMONG ADULTS AGE 80 AND OVER

P. Sawyer<sup>1</sup>, B.R. Williams<sup>1</sup>, R.M. Allman<sup>2,1</sup>, *1. University of Alabama at Birmingham, Birmingham, Alabama, 2. Birmingham/Atlanta VA GRECC, Birmingham, Alabama*

PURPOSE: Among the oldest old adaptation of emerging communication modalities has been slow. This analysis explores older adults'



(age 80+) descriptions of the ways they stay up-to-date and connected to others. **METHODS:** We conducted a secondary analysis of semi-structured interviews conducted to examine mobility among community-dwelling older adults. Interviews included race, sex, age, residence, and life-space mobility (0-120; higher scores representing greater mobility). Content analysis of interview texts was used to explore social networking in this population. **RESULTS:** Participants (n=26) had a mean age of age 85.5 years (SD = 4.1) and were predominately white 69.2% (n=18), female 73.1% (N=19), and resided in single family dwellings 61.5% (n=16). Mean life-space scores were 40.6 (range 23-70). Emerging themes included the salience of staying connected to others, especially among adults with limited life-space mobility. Respondents showed an overwhelming preference for staying in touch with others by telephone, handwritten notes/letters, and face-to-face visits. Social gatherings and mealtimes provided opportunities for conversing with others and staying current. References to communicating by e-mail or using the internet did not appear in any interview text. **CONCLUSIONS:** These findings point to the importance of social connectedness in the lives of adults age 80 and older. However, non-internet modalities of social networking typified this sample. This suggests a cohort effect limiting the scope and range of communication patterns, potentially isolating the oldest adults from the mainstream of society, with important implications for communication between older and younger generations.

### **SOCIAL NETWORK COMPOSITION IN SENIOR HOUSING COMPARED TO A NORMATIVE SAMPLE**

J. Carroll, S. Qualls, *University of Colorado at Colorado Springs, Colorado Springs, Colorado*

A move into senior housing can both interrupt social networks and add new opportunities for social contact, yet shifts in the composition of social networks after move-in have not yet been documented in detail. Literature suggests that a move should not impact the inner circle, but the middle and outer circles could benefit from added friendship opportunities. In this study, Antonucci's concentric circle task assessed social network membership in a pilot sample of 22 residents two to three months after moving into an independent living senior residence. Compared to a national sample (Antonucci & Akiyama, 1987), the present analysis found network composition following move-in to be significantly larger in the inner circle (M = 9.68 versus 3.5 in national norms) and middle circle (M = 7.05 versus 3.2 nationally); whereas the outer circle was similar (M = 2.82 versus 2.0). Larger inner and middle circles in the present sample may indicate heightened family closeness during the transition into senior housing. However, the small size of the outer circle points to the rarity of including other senior housing residents as acquaintances a few months following move-in. A qualitative analysis of the identity of members of the circles points to ambivalence about integrating new acquaintances into the network. Further, more specific analysis quantifying the proportion of fellow senior housing residents compared to total network membership after move-in provides content to support this qualitative observation. **Keywords:** senior housing, social network composition, acquaintances

### **SOCIAL CAPITAL AND THE LIFE WORLD OF OLDER PEOPLE IN KOREAN RURAL COMMUNITIES**

S. Yoon<sup>1</sup>, G. Han<sup>2</sup>, *1. Samsung Life Retirement Research Center, Seoul, Republic of Korea, 2. Department of Child Development and Family Studies, Seoul National University, Seoul, Republic of Korea*

This study aims to explore how social capital is created and sustained in the life-world of older people in Korean rural communities and to understand the meaning of aging-in-place in rural communities within a framework of social capital. Two rural villages in Sunchang County in North Jeolla Province, South Korea were selected for this study and ethnographic fieldwork was conducted for about 2 months to gather the data. Research findings show the usefulness of the concept of social

capital in analyzing and understanding characteristics of social environments and the lives of older people in rural communities. Communities are places where they have not only established and sustained life-long social networks with friends and neighbors but also gained social status and roles. Older people made frequent contact and exchanged various resources with community members. In addition, they created and actively participated in organizations or associations they formed, and through this they gained a strong sense of ownership. Also, they collectively set and accomplished the goals for the community, and further developed their own unique culture. Despite the fact that rural communities face restructuring and economic decline, such experiences allowed them to have a sense of pride and a positive perspective about their community. This research shows older people in rural communities are producers of social capital and active agents of their life-world, dismantling stereotypical notions of older people as dependent and marginalized. Implications of the study are discussed in detail.

### **HUMOROUS SOCIAL INTERACTIONS AND MENTAL HEALTH IN ASSISTED LIVING RESIDENTS**

A.E. McQueen, *Portland Community College, Tualatin, Oregon*

Research has established that social interactions are related to older adults' mental and physical health. Social interactions involving humor may be particularly salient in the lives of older adults living in long-term care settings, who often face multiple age-related losses. Studies indicate that humor can enhance or promote social relationships and a sense of belonging, aid in the coping process, and help to buffer the effects of psychological stress. However, humor also has an ominous side. Negative forms of humor, which include both failed attempts at humor and humor with negative intent, may be characterized by aggression, criticism, manipulation of others, sarcasm, and ridicule that are interpreted as hurtful, offensive, demeaning, or overbearing. A new measure of humorous social interactions was developed and tested on a sample of 130 residents from assisted living communities in the Portland, Oregon metropolitan area. Confirmatory factor analysis showed the scale to have a two-factor structure, consisting of both positive and negative humorous interactions, and excellent internal consistency. Results from regression analyses indicated that positive humorous interactions were significantly related to depression (B=-.197, p=.018), negative affect (B=-.246, p=.001), and loneliness (B=-.231, p=.001). Negative humorous interactions were significantly related to depression (B=.189, p=.040), loneliness (B=.329, p=.001), and self-rated health (B=-.265, p=.022). Understanding the role of humorous interactions in relation to mental health is an important addition to the literature on social interactions and may also lead to practical interventions in long-term care facilities.

### **AWARENESS OF RISK FACTORS FOR LONELINESS AMONG THIRD AGERS**

E. Schoenmakers<sup>1</sup>, T.G. van Tilburg<sup>1</sup>, T. Fokkema<sup>2</sup>, *1. VU University, Amsterdam, Netherlands, 2. NIDI, The Hague, Netherlands*

Awareness of risk factors for loneliness is a prerequisite for preventive action. We focus on two risk factors: poor health and widowhood. Preventive action by developing a sufficient social network requires time and effort and thus seems most feasible for people unexposed to the risk factors, i.e. third agers and non-lonely people. Three questions are addressed. Are older adults aware of poor health and widowhood as risk factors for loneliness? Are there differences in awareness between third and fourth agers? Are there differences in awareness between lonely and non-lonely older adults? After being introduced to four vignette persons, 920 respondents aged 61-99 from the Longitudinal Aging Study Amsterdam were asked whether they expected these persons to be lonely. Older adults, especially third agers, expected peers in poor health, widowhood, or both to be lonely more often than peers in good health and marriage. This suggests that third agers are aware of the risk factors even

though they do not live under loneliness-evoking conditions. Compared to lonely older adults, non-lonely ones expected peers to be lonely less often, suggesting that non-lonely older adults are less aware of the risk factors than lonely ones. We conclude that third agers are aware of poor health and widowhood as risk factors for loneliness. This may contribute to initiating preventive action to avoid becoming lonely.

### **THE EFFECT OF THE BABY-BOOMER GENERATION'S INTIMACY FACTORS WITH AGED PARENTS ON FILIAL RESPONSIBILITY AFTER THE INTRODUCTION OF THE LONG-TERM CARE INSURANCE IN SOUTH KOREA**

Y. Sohn, *Humanities, Catholic University of Pusan, Busan, Republic of Korea*

The purpose of this paper is to examine Korean baby-boomers' locus of filial responsibility (over two year period between 2008 and 2010) after the introduction of the long-term care insurance, and determine whether intimacy factors with their aged parents are related to the locus of filial responsibility. The public long-term care insurance program initiated by the government, started in July 2008, its intention of alleviating the social and economic burden of the frail elderly, marked a watershed in formalizing 'socialized elder care'. From the life course perspective, the Korean baby-boomer generation is 'sandwiched' and feels double burdened for caring for both their aged parents and children. The concept of intimacy is indexed by the frequency of making a phone call, seeing each other, and the satisfaction toward their aged parents. It was hypothesized that those making frequent phone calls, seeing each other often, and having a higher parental satisfaction tended to say both individual and society should care for aged elders. Data are used from the Social Survey conducted by Statistics Korea in the years 2008(n=5,004) and 2010(n=3,698). Over the two period, those answered both individual and society responsibility is shifted from 48.3%(in the year of 2008) to 52%(in the year of 2010). The continuous shift toward both individual and society responsibility for the older population fortells that the generational stake will be increasingly higher as the baby-boomers started retiring in 2010. This result may be related to a series of 'socialized elder care' policies that are mainly spurred by the aftermath of both low fertility and mortality. The most consistently significant findings across three logit multivariate models were gender, education, and place of residence. Being men, having higher education, living in a city were more likely to prefer dual(individual and society) responsibility. Hypotheses were partially supported; that is, those feeling close to their aged parents tended to place filial responsibility on an individual/family one. Considering the fact that increases in both medical costs for the elderly and the national retirement pension will intensify the generational claims in the near future, well-balanced policies and programs for empathizing personal responsibilities along with government-initiated ones were suggested.

### **RELATIONSHIP BETWEEN SOCIAL NETWORK AND SOCIAL SUPPORT OVER TIME AMONG COMMUNITY DWELLING KOREAN-AMERICAN OLDER ADULTS**

H. Jeon, *Social Work, Boston College, Newton, Massachusetts*

This study extends existing research on social support and network integration among older adults in two ways. First, it focuses on marginalized older adults, especially in the population of Korean-American, who receive relatively little attention in gerontology. Second, it employed panel data, which permit stronger causal inferences than the most past cross-sectional studies. Based on the lagged dependent variable approach among 658 community dwelling older adults from 1994 and 1995, our findings indicate that one's social network integration had a positive impact on the amount of social support one receives in the ensuing year. Moreover, those older Korean-Americans who received positive social support also reported that, in the

previous year, they felt more respected. Being married also demonstrated a positive relationship with social support. However, education correlated negatively with relationship with one's level of perceived social support.

### **IT'S ALL ABOUT THE RELATIONSHIP: SENIORS MENTORING STUDENTS**

B. Heasley<sup>1</sup>, J. Feuerstein<sup>2</sup>, L. O'Neill<sup>1</sup>, J. Mohler<sup>1</sup>, *1. University of Arizona, Arizona Center on Aging, Tucson, Arizona, 2. University of Arizona, College of Medicine, Tucson, Arizona*

Background/Rationale: Senior Mentor Programs (SMP) provide health science students an opportunity to increase their comfort and appreciation of elders while better understanding geriatrics, psychosocial aspects, and communication skills. Senior mentors can facilitate their mentee's personal and professional growth through sharing their knowledge, insights and wisdom. Objectives: Our objective was to describe an ideal senior mentoring relationship, and to illustrate benefits to both mentee and mentor. Methods: The University of Arizona's SMP program objectives include interpersonal and communication skills; understanding of disciplinary roles and responsibilities; and Interprofessional (IP) team functioning. In guided sessions, students practiced patient-centered interviewing through life review, and assessment for function, resilience and quality of life. Later, case-based instruction and discussion seek to strengthen team consciousness and communication as IP members discussed profession-specific treatment strategies. A 1st year medical student and her senior mentor (a retired nursing home administrator) were assigned in 2010 and followed for two years. Conclusions: The mentor benefitted from sharing life reflections, experiencing a deeper sense of life's meaning and her contributions; she felt energized from exposure to new ideas. The student benefitted from dispelling stereotypes, and observing the resilience, deep social connections and active life her mentor embraced. Embrace of quality-of-life and function as important aging outcomes become increasingly relevant as our population ages, and providers increasingly care for elders. An engaging SMP experience contributes to these goals, as well as provides personal strength through the care of others and a sense of contribution to the mutual betterment of society.

### **SECRETS OF SUCCESSFUL AGING: PRODUCTIVE OCCUPATIONS IN RETIREMENT**

M.B. Cole<sup>1</sup>, K.C. Macdonald<sup>2</sup>, *1. Occupational Therapy, Quinnipiac University, Stratford, Connecticut, 2. Sacred Heart University, Fairfield, Connecticut*

People adapt to life after retirement in vastly different ways. Some find many ways to fill their days with enjoyable and productive activities, while others have little enthusiasm for doing anything at all. What accounts for the difference? How do differences impact function, well-being, and independence? And what can we learn from the former to help the latter? These two occupational therapist authors interviewed over thirty productive retirees ages 62-91, asking them to share their secrets for successful aging. They identified themselves as having at least three of six productive occupational roles: self manager, home manager, care giver, volunteer, part time paid worker, and lifelong learner. High on their list of secrets were staying fit and healthy, staying connected to friends and family, engaging in creative and meaningful activities, continuing positive routines and attitudes, choosing environments that support participation, and advocating for self and others. Findings are supported by interdisciplinary research, and resonate with current social and developmental theories such as Laslett's Third Age, Atchley's continuity theory, and newer theories of social identity and health.

**ASSESSMENT 1****TWO-STEP APPROACH USING COGNITION AND DAILY ACTIVITIES FOR SHORT-TERM PREDICTION OF CONTINUED OR DISCONTINUED COMMUNITY-LIVING IN OLDER ADULTS AT RISK**

M.R. Tomita, S.M. Nochajski, P. Suryakumar, T. Mashtare, B.J. Naughton, *University at Buffalo, Buffalo, New York*

**Background:** Predictors of discontinued living have been consistent: lower cognition and lower overall functional levels. However, all daily and instrumental daily living activities do not necessarily predict the end-of-life events. Also information regarding predictors lacks especially if a discontinued community-living status is at risk within a year. The purpose of the study was to identify daily activity predictors of continued community-living (CCL) or discontinued community-living (DCL) within a year timeframe in frail older adults. **Methods:** Data from 374 community-dwelling older adults who were discharged from health care services were divided into three levels based on the Mini Mental State Exam (MMSE), according to a ratio of DCL to CCL. Activities of daily living (ADL) and Instrumental ADL were analyzed using hierarchical logistic regression adjusting for other variables. **Results:** If the MMSE score was 13 or less (high risk group), all died. For the moderate risk group (MMSE 14-27), lower scores on the shopping for groceries/clothes, and taking medication items, and for the lower risk group (MMSE 28-30), lower levels of doing house work were predictors. Using cognition and daily activities, overall prediction accuracy ranged 81%-100%. **Conclusion:** Information about specific daily activities rather than an overall functional status within a certain MMSE range provides caregivers with useful information to prepare for older adults' imminent end-of-life event.

**PHYSICAL FUNCTIONAL CAPACITY AND ITS DETERMINANTS AMONG ELDERLY PEOPLE**

P. Pohjolainen, *Age Institute, Helsinki, Finland*

The Helsinki Birth Cohort Study started with aims to assess how growth and environmental factors acting during the fetal period and childhood are related to health in adult life. Since the beginning of the study during 1990s, the follow-up group of adult participants, born during 1934-1944 (n=1000), is now turning to the third age of life, with the current age ranging from 68 to 72 years. The number of participants was 250 (in March 2012) (44 % men, 56 % women). The coming presentation will use data available in November 2012 when the expected number of participants will be approximately 900. The purpose of this study is to describe the connections of birth weight with physical functional capacity in the third age. It was measured by muscle strength tests, a 6-minute walking test, a balance test and measurements of reaction time. In addition we studied how socio-economic status correlated with functional capacity. So far, the results showed that muscle strength and endurance were better among men than among women, while flexibility was better among women. There were no differences between genders in measurements of reaction time and balance. The birth weight was in connection with muscle strength, flexibility and endurance. Education correlated with measurements of muscle strength. In conclusion, the study advances our understanding of the connection of birth conditions and physical functional capacity in the third age.

**PREDICTORS OF TWO-YEAR SURVIVAL AMONG THOSE 85 AND OLDER USING THE MEDICARE HEALTH OUTCOMES SURVEY**

D. Ritenour<sup>1</sup>, M. Elliott<sup>2</sup>, S.C. Grace<sup>1</sup>, L. Giordano<sup>1</sup>, R. Malinoff<sup>1</sup>, *1. Surveys, Research and Analysis, Health Services Advisory Group, Phoenix, Arizona, 2. Rand Corporation, Santa Monica, California*

The oldest old are the fastest growing segment of the elderly, particularly vulnerable with substantial care needs. Little is known about

the extent to which predictors of mortality in younger populations apply, and the extent to which receiving care measured by standard quality measures may reduce mortality in this group. The Medicare Health Outcomes Survey is a national patient-based longitudinal outcomes measure assessing functional health and HRQOL of Medicare managed care beneficiaries. We examine these measures and other predictors of two-year survival among those  $\geq 85$ . This study uses 2008-2010 HOS data for beneficiaries aged  $\geq 85$  (n=50,449). Multivariate logistic regression predicted the probability of death before two-year follow up from demographic characteristics, BMI, health status, HRQOL, and HEDIS® measures. One-in-five beneficiaries  $\geq 85$  died prior to two-year follow up. Lower HRQOL, BMI < 30, male gender, White non-Hispanic, and worse self-perceived health were associated with higher odds of death within two years. Beneficiaries with difficulty eating, bathing, or using the toilet, and those with congestive heart failure, cancer, or respiratory diseases were more likely to die within two years. Receiving advice to increase or maintain physical activity was associated with significantly lower odds of mortality. Significant demographic and health associations with mortality among the  $> 85$  population largely mirrored previous findings in younger populations. Advice to increase/maintain physical activity was associated with a 10% lower odds of two-year mortality beyond health and demographics, both validating it as a quality measure and establishing its importance even for the oldest old.

**AN AUTOMATED MEASUREMENT OF THE "TIMED UP&GO" AS AN ASSESSMENT OF MOBILITY AND GAIT**

J. Kiselev, M. Gövercin, E. Steinhagen-Thiessen, S. Wegel, *Geriatric Research Group, Charité Berlin, Germany, Berlin, Berlin, Germany*

The prevalence of falls is an important issue in aging. About 30% of people aged 65+ falls once a year, 15% of the more often. 7% to 18% of all fallers suffer a hip fracture. 10% of all falls of those aging 70+ result in a traumatic brain injury (TBI), 5% result in the death of the faller. To initiate sufficient interventions to reduce the risk of falling, an early and comprehensive assessment of the individual risk factors is mandatory. However, existing instruments for the evaluation of fall risks are either very time consuming or not able to give detailed information. The "Timed Up&Go" (TUG) test is of the latter category. For this reason, the automated Timed Up&Go (aTUG) was developed. It consists of a chair with an implemented sensor array able to measure gait and weight distribution during sitting and standing up. Additional sensors detect the start and the end of the measurements. We recently started a validation study with 110 older people at risk of falling. Results from the aTUG are compared against a hand-stopped TUG and the results from the Berg Balance Scale and the GAITRite electronic walkway system. Preliminary results showing correlations of the aTUG with the conventional TUG and gait parameters from the GAITRite system are presented.

**THE EFFECT OF GENDER AND AGE ON SENSORY FUNCTIONS OF OLDER PERSONS: PILOT STUDY**

N. Deshpande, L. Delima, B. Brouwer, E. Culham, *Queen's University, Kingston, Ontario, Canada*

Normal aging causes gradual loss in sensory functions which directly impacts postural control. Although vibrotactile sensitivity is lower in men compared to women, the presence of sex-related differences in other sensory functions in an older cohort is unclear. This study examined differences in sensory functions between sexes in young-old (Y-O, aged 65 to 75) and old-old (O-O, age  $\geq 76$ ) groups. Thirty older adults were tested (18 Y-O, 10 females; 12 O-O, 6 females) and three sensory systems: vision (contrast sensitivity), somatosensory (ankle proprioception, vibrotactile sensitivity on the foot's plantar surface, and monofilament testing on the foot's plantar surface and medial malleolus), and vestibular (subjective visual vertical test and vestibular quotient obtained from the Clinical Test of Sensory Integration on Balance). Significant group differences were found in the somatosensory system in which the

Y-O adults had lower thresholds than O-O adults for ankle proprioception and vibration sensitivity ( $p < .05$ ) but not for other sensory functions. Overall, men had higher vibration thresholds and greater vestibular quotients in the anterior-posterior plane, ( $p < .05$ ). When height was included as a covariate, these differences disappeared. Further research with a larger sample size is needed to understand sex differences in these sensory functions. Despite using method of limits for both vibration sensitivity and ankle proprioception, tests that have common sensory pathways, it is important to understand why height affects only the thresholds of vibration sensitivity. O-O adults had greater thresholds for the somatosensory tests, which may have direct implications for balance and mobility tasks.

#### **INFLUENCE OF POSTURAL CONTROL AND LEG STRENGTH ON DOWNWARD REACHING PERFORMANCE IN OLDER ADULTS**

M. Hernandez<sup>1</sup>, J. Ashton-Miller<sup>1</sup>, N.B. Alexander<sup>1,2</sup>, 1. *University of Michigan, Ann Arbor, Michigan*, 2. *VA GRECC, Ann Arbor, Michigan*

Difficulty in reaching to the floor is associated with increased fall risk among community-dwelling older adults. Few studies have explored the relationship between postural control, strength and downward reaching performance. In addition to decrements in reaching distance, we hypothesized that older adults, compared to young adults, would require a greater base of support (BOS). We also hypothesized that leg strength would predict maximal reach performance. Healthy young ( $n=13$ , mean $\pm$ SD age 23 $\pm$ 3, BMI 23 $\pm$ 4) and older women ( $n=12$ , age 76 $\pm$ 6, BMI 25 $\pm$ 5) were recruited from the local community to perform a series of functional downward reaching tasks. Downward reaching performance was evaluated through the maximal forward reaching distance along the floor, as well as their minimal BOS when stooping down to touch their toes. Isometric ankle dorsi- and plantar-flexor strength and knee extensor strength were measured using an isokinetic dynamometer. Older women required a 50% larger BOS when stooping down to touch their toes and had a 25% decrease in their maximal forward reaching distance along the floor. Forefoot BOS was correlated to ankle strength (Pearson's  $r = 0.50-0.62$ ,  $P < 0.05$ ). Furthermore, the maximal forward reaching distance along the floor was strongly correlated to knee and ankle strength ( $r = 0.65-0.71$ ,  $P < 0.001$ ). In conclusion, these data provide the basis for how balance and strength requirements for reaching to the floor place older adults at risk for falls.

#### **TESTING BECK'S PAINCQ-33 SURVEY AND A CAUSAL MODEL OF DISCONFIRMATION IN MEASURING PERCEIVED QUALITY OF PAIN MANAGEMENT CARE IN NURSING HOMES**

T.D. O'Connor, Y. Scherer, *Nursing, SUNY @ Buffalo, Buffalo, New York*

**ABSTRACT** Background: Despite pain management guidelines from national organizations (e.g. American Pain Society) pain management practices in nursing homes continues to be problematic. Unmanaged persistent pain can lead to deterioration in function, and diminished quality of life. Purpose: To test the validity and reliability of the Pain Care Quality (PainCQ-33) in measuring a residents' perceived quality of pain management care in a nursing home setting. Sample: A non-probability, convenient sample of sub-acute and long-term residents with medical and/or surgical pain from a nursing home. Method: The PainCQ-33, the BPI-SF and the VAS - Pain will be administered within two hours after the end of the night shift (2300 – 0700 hours) (Time 1). A repeat measure by all three surveys will occur in three days and within two hours after the end of the night shift (2300 – 0700 hours) (Time 2). Results and Conclusions: Data sets (e.g. gender, age, sources of pain, comorbidities) will be summarized with descriptive statistics. Exploratory Factor Analysis will test the validity of the PainCQ-33. The reliability of the PainCQ-33 in measuring perceived quality of pain man-

agement care in a nursing home will be tested. From disconfirmation theory, the effect of the exogenous variables (resident expectations and caregiver performance) on the endogenous variables (disconfirmation and resident satisfaction) will be explored through regression analysis. Causal relationships among exogenous and endogenous variables will be explored using Structural equation modeling. Implications: The PainCQ-33 can help identify deficiencies in interdisciplinary pain management care that can be corrected through quality improvement processes.

### **SESSION 350 (POSTER)**

#### **ATTITUDES ABOUT AGING**

##### **THE GEOGRAPHY OF PERSONALITY**

K.E. King, *Center for the Study of Aging and Human Development, Duke University, Durham, North Carolina*

Both negative and positive affect have well-documented likely causal links with several downstream health outcomes. A large body of research also documents residential contextual associations with health. Links between a variety of measures of personality and numerous downstream health outcomes have been well-documented. Yet the contribution of residential sorting on the basis of personality has not been explored, despite the facts that (1) similar people choose to live in similar places and are sorted into similar places by socioeconomic processes, and that (2) aspects of residential context may have causal links with affect and other features of personality. Geographic clustering in health-relevant personality may confound estimates of neighborhood effects on health. Using the Health and Retirement Study and the Chicago Community Adult Health Survey, this project first establishes the extent and nature of geographic clustering of personality across personality domains. Negative emotions appear to be particularly geographically-dependent. Analysis then documents geographic variation in personality by region, and according to both built and social environments. Future work should investigate the nature of these associations (causal vs. selective) and the implications for research on neighborhoods and health.

##### **AFTER ALL, IT IS ABOUT KNOWLEDGE: NURSES' ATTITUDES TOWARD OLDER PATIENTS IN ACUTE CARE IN ISRAEL**

M. Topaz<sup>1</sup>, I. Doron<sup>2</sup>, 1. *Nursing, UPenn, Philadelphia, Pennsylvania*, 2. *University of Haifa, Haifa, Israel*

**Aim:** Negative biases and ageist attitudes toward older people among caregivers in acute care settings, especially nurses, are one of the main expressions of ageism in the healthcare system. The presented study was designed to (1) explore the level of knowledge of aging and the attitudes of nurses toward older people in acute care and (2) to examine the effect of selected socio-demographics and nursing work characteristics on attitudes toward older people. **Methods:** A descriptive correlational design was used. Participants were nurses working in med-surgical and surgical units of the largest public hospital located in the northern part of Israel. Out of 210 questionnaires, 170 were completed and returned (response rate of 81%). The research tools used Kogan's Attitudes towards Older People Scale and Palmore's Facts on Aging Quiz. Statistical analysis included univariate correlations and multivariate regression modeling. **Findings** The level of Israeli nurses' knowledge of facts on aging was relatively poor (12.8/25) and their average score on attitudes towards older persons placed them in an intermediate place (3.3/5), compared to finding from other countries. Knowledge of aging and ethnicity were the only significant predictors of the level of ageist attitudes toward older people. **Conclusions:** Placing more emphasis on gerontological education for nurses is an important avenue to reduce ageism, while more research is needed to fully understand the relationships between ethnic background and ageist attitudes.

## WHAT MAKES PEOPLE AGE ACTIVELY AT DIFFERENT AGES?

C. Paúl, L. Teixeira, O. Ribeiro, *UnIFai/ICBAS-UP, Porto, Portugal*

The Active Ageing Plan of Action (WHO, 2002) aims adequate health and social policies for old people, leading to a positive process of ageing. This study aims to verify which factors best predict the Active Ageing construct in two groups of community dwelling seniors (younger old <75 and aged 75+). A multi-group analysis of structural invariance was performed to test the invariance across age groups. Results suggest different structures for each age group ( $p < 0.001$ ). Six distinct factors were revealed in the 75+ old group explaining 55.5% of total variance: psychological factors (12.9%); health factors (12.0%); cognition (9.6%); bio-behavioral factors (7.4%); social relationship (6.9%); personality (6.6%). The confirmatory factor analyses structure describes adequately the 6 factors. The main difference between the structures in both groups is the relative importance of health. Contrarily to the young old group, in those aged 75+ psychological aspects discriminate the most ageing outcomes.

## STUDENTS ATTITUDES AND AGE BIAS TOWARD OLDER PEOPLE

Y. Lee, *San Diego State University, San Diego, California*

**BACKGROUND:** Widespread negative attitudes in society toward aging are prevalent and serve as obstacles for recruitment and training of care providers for the elderly. Young adults and men show greater ageism than others. Further characteristics of attitudes of students toward aging have rarely been studied. **PURPOSE:** To identify students' attitudes and bias toward aging by language use, living experience with older persons, frequency of and comfort with communication with older adults. **METHODS:** A cross sectional sample of 308 students in a nursing program completed measures of Attitudes toward Older People and Aging Quiz by online survey. Positive and negative attitudes and pro- and anti-aged biases were analyzed by using ANOVA and multiple regression. **FINDINGS:** Two variables, frequency of and comfort with communication with older adults were significantly differentiated in positive attitudes and pro-aged bias, while all variables significantly explained negative attitudes and anti-aged bias. Multiple regression analysis showed young, male, Asian students and those who had irregular contact with and uneasy feelings about talking with older adults had significantly more negative attitudes toward older people. **CONCLUSIONS:** The findings indicate that Asian students who speak languages other than English at home and had lived with older adults have more negative attitudes toward older people. Among Asian students, some communication barriers due to use of different languages between young and older generations seem to exist. Frequent communication is a key to understanding older people and reducing negative attitudes and anti-age bias.

## THE IMPACT OF A ONE-MONTH GERIATRIC CLERKSHIP ON MEDICAL STUDENT PERCEPTIONS OF THE AGED

B.A. Bensadon<sup>1</sup>, T. Teasdale<sup>1,2</sup>, G. Odenheimer<sup>2,1</sup>, *1. University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, 2. Veterans Affairs, Oklahoma City, Oklahoma*

Given the current dearth of geriatricians and increases in human longevity, a better understanding of medical student attitudes toward the aged, including both biological and psychosocial components, could not be timelier. **Methods:** Palmore's (1976) Facts on Aging Quiz was administered to fourth-year students during a required 4-week geriatric clerkship at a Midwestern college of medicine. 67 students anonymously completed the 25-item quiz on the first and last days of the clerkship. Unpaired, two-tailed t-tests were used to measure statistical differences in pre-post scores and by item domains. **Results:** Improvement in summed posttest scores was revealed ( $p < 0.001$ ), with better accuracy for medical compared to psychosocial questions. This was true when examining pre- and post-test items combined ( $p < 0.001$ ); and those at

posttest only ( $p < 0.001$ ). Though comparatively lower, scores on psychosocial items also showed improvement at posttest ( $p = 0.04$ ). **Conclusions:** Taken together, these findings suggest that without intervention, the accuracy of students' aging knowledge, particularly within the psychosocial realm, may be less than optimal during the pre-clinical years of medical school (i.e., years 1-3), and that geriatric-specific training may enhance the accuracy of these views. As the medical patient population continues to age across most specialties, these data underscore the importance of geriatric curricula, particularly those sensitizing trainees to the need for a biopsychosocial (i.e., interdisciplinary) model of care; and suggest such training should be a required component of medical education. Future research should focus on determining which curricular materials most effectively achieve this end.

## REMAPPING SUCCESSFUL AGING: THE EVOLVING THEORETICAL FRAMEWORK

M. Topaz<sup>1</sup>, M. Troutman<sup>2</sup>, M. MacKenzie<sup>1</sup>, *1. Nursing, UPenn, Philadelphia, Pennsylvania, 2. University of North Carolina, Charlotte, North Carolina*

**Introduction:** The United States life expectancy has increased by 28 years over the last century and the older adult population is rapidly growing, giving rise to intense interest in aging and old age. As we seek to chart new frontiers in aging research, we require new theoretical frameworks to guide us. **Objective:** Our objective is to first present a broad overview of the social theories of aging that have evolved and guided aging research in the last century and then to present an emerging theory: Flood's theory of successful aging. **Methods:** The history of the positivist construction and postmodern deconstruction of aging as a social phenomenon in the 20th century is presented first, illustrated by selected theories. We also demonstrate the impact of each view on nursing science. We then present Flood's Theory of Successful Aging as an emerging theoretical framework for aging, with discussion of the research implications. **Results and conclusion:** In the early to mid 20th century, positivism led to views of aging that were focused on the physical functioning of older adults, as illustrated by the Disengagement and Activity theories. The post-modernism of the late 20th century led to a different representation of aging focusing on personal self-definitions. A more holistic model, combining both the physical and the psychological, the objective and the subjective is now called for. Flood's theory of successful aging, encompassing the domains of spirituality, intrapsychic factors and functional performance mechanisms, provides a more comprehensive theoretical model for the aging scientist of today.

## SESSION 355 (POSTER)

### ATTITUDES AND ISSUES

#### SYSTEMATIC REVIEW OF FINANCIAL EXPLOITATION OF OLDER ADULTS: IMPLICATIONS FOR PRACTICE

L.K. DeSpain, J.S. Wilson, *University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

Financial Exploitation (FE) is a major public health problem for older adults that has been associated with poor health, dementia, behavioral problems, depression, dislocation from homes, and mortality. FE is a type of elder abuse and despite mandatory reporting laws it is under-recognized and under-reported by healthcare professionals. **Purpose:** to do a systematic review of the research about FE, including but not limited to, 1) FE definitions, incidence and prevalence 2) characteristics of FE victims and perpetrators 4) healthcare barriers to FE detection and reporting 5) FE screening tools. **Methods:** A literature search was performed of MEDLINE, CINAHL Plus, OVID, ERIC, Health Source Nursing, PsycARTICLES, Cochrane, and Health Technology Assessments within the disciplines of nursing, gerontology, psychiatry, and sociology. Findings from the search were analyzed for relevance to an interdisciplinary approach for FE prevention and intervention.

Findings: FE rates are highest among females, people over 70 with cognitive impairments, and African Americans over 60. This suggests that cognitive, gender, and racial differences warrant further attention. The most frequent perpetrators were corporations, adult children, females, substance abusers, and those prone to violence. New FE conceptual models and assessment tools have been developed, evaluated providing the groundwork for development of new interventions.

#### **ELDER ABUSE: INTERDISCIPLINARY APPROACH TO RECOGNITION AND REPORTING**

L. Vognar, M. Heflin, *Geriatrics, Duke University, DURHAM, North Carolina*

Elder abuse, first noted in medical literature in the 1970's as "granny battering", is becoming an increasingly recognized national problem. The Senate Special Committee on Aging estimates that as many as five million older Americans may be victims of abuse, neglect, and/or exploitation every year which is estimated to cost tens of billions of dollars annually in health care, social services, investigative and legal costs, as well as lost income and assets. The National Elder Abuse Incidence Study estimated for every one case of elder abuse, neglect, exploitation, or self neglect reported to authorities, about five more go unreported. Physicians and other healthcare providers often have first contact with victimized older adults and can provide early diagnosis and intervention. However, only 20% of referrals to Adult Protective Services come from physicians. Recognizing risk factors, understanding the definitions of, and knowing how to report elder abuse through the education of physicians, nurses, social workers, and home healthcare staff has become an accepted form of intervention and warrants the attention of healthcare professionals both nationally and locally. Objectives: 1) Assess knowledge on types, risk factors, and reporting of elder abuse 2) Determine the impact of an educational intervention with the overall goal of increasing knowledge, raising awareness, and preventing elder abuse Design/Methods -Develop and administer pre and post workshop survey to home healthcare workers, social workers, and geriatric fellows at the Veterans Administration Medical Center, Durham, NC -60 minute workshop featuring lecture by a panel of experts on elder abuse, forensic picture examples, and group discussion focused on risk factors, types, and reporting process of elder abuse -Post intervention survey 4 to 6 weeks after workshop completion evaluating obtained knowledge, identification of risk factors, and reporting of elder abuse Conclusions/Discussion: -Prevention of elder abuse is the responsibility of all healthcare providers and warrants an interdisciplinary approach. Education and further training of healthcare professionals regarding definitions, signs and symptoms, risk factors, and reporting of elder abuse has been given a central role in the recognition, identification and therefore prevention of elder abuse and neglect.

#### **ATTITUDES TOWARD ELDERLY BETWEEN NURSING STUDENTS AND NURSES IN KOREA**

G. Hong<sup>1</sup>, Y. Lee<sup>1</sup>, H. Kang<sup>1</sup>, S. Han<sup>2</sup>, 1. *Hanyang University, Seoul, Republic of Korea*, 2. *Asan Medical Center, Seoul, Republic of Korea*

It is generally known that attitudes toward elders tend to hold negative. It is necessary to investigate differences in attitudes toward elders according to general characteristics in order to improve the attitudes toward elders among nursing students and nurses. The purpose of this study was to examine attitudes toward general elders among nursing students and nurses. Descriptive study design was used through self-report response. Data collection was done from September, 2010 to September, 2011. One hundred seventy-three nursing students (n=76) and nurses (n=97) were recruited from Seoul, Korea. The instrument developed by Takeda and her colleagues (1991) was used to measure the attitudes toward elders. The instrument has three sub-domains such as vitality (18 items), generosity (14 items), and flexibility (5 items). Data were analyzed using t-test and ANOVA. The mean age of respondents was 26.8 (SD=5.56), and the majority of respondents was female

(97.1%), 79 (45.7%) respondents had an experience in living with elders together; 53 of them reported that they had familiarity with elders who they lived together. The vitality was statistically significant by familiarity with elders ( $t=2.51$ ,  $p<.05$ ) and the generosity was significant by working period as an RN ( $t=-3.09$ ,  $p<.001$ ), familiarity with elders ( $t=2.83$ ,  $p<.01$ ), and interest in elders ( $t=3.92$ ,  $p<.001$ ). In conclusion, further nursing intervention should be developed to improve the attitudes on elders in a positive way in both nursing students and nurses.

#### **THE EFFECTS OF ANTICIPATORY DEMENTIA ON SUBJECTIVE MEMORY COMPLAINTS AND OBJECTIVE MEMORY PERFORMANCE**

A.L. Norman<sup>1</sup>, J.L. Woodard<sup>1</sup>, J.E. Calamari<sup>2</sup>, N. Pontarelli<sup>2</sup>, J. Socha<sup>2</sup>, B. DeJong<sup>2</sup>, K.M. Armstrong<sup>2</sup>, 1. *Psychology, Wayne State University, Detroit, Michigan*, 2. *Rosalind Franklin University, North Chicago, Illinois*

Anxiety and worry, are associated with subjective and objective memory concerns and family history of Alzheimer's disease (AD). The specific fear of developing AD is common among older adults and is second only to the fear of developing cancer. Previous research has not investigated whether the fear of AD impacts subjective and objective memory performance, beyond the effects of general anxiety and worry. As part of a longitudinal study, 193 healthy older adults (aged 65-93) rated their concern with developing AD and completed the Penn State Worry Questionnaire, Trait Anxiety Inventory, Memory Functioning Questionnaire (subjective frequency of forgetting), and the Rey Auditory Verbal Learning Test (RAVLT; objective memory performance). Self-reported fear of AD was not associated with age, sex, ethnicity, education, or the RAVLT sum of Trials 1-5 or Delay ( $p>.05$ ). While not associated with objective memory performance, AD fear ( $r=.22$ ,  $p=.003$ ), Trait Anxiety ( $r=.28$ ,  $p<.001$ ), and Worry ( $r=.16$ ,  $p=.03$ ) were independently associated with frequency of forgetting. AD Fear significantly predicted frequency of forgetting when including Worry ( $p=.024$ ), but not when including Trait Anxiety ( $p=.232$ ). Greater frequency of forgetting was associated with older age, less education, greater Trait Anxiety ( $R^2=.267$ ,  $p<.001$ ), and greater Worry ( $R^2=.336$ ,  $p<.001$ ). Fear of developing AD was associated with subjective frequency of forgetting but not with objective memory functioning, suggesting AD concerns were not reflective of memory pathology. Further, AD fear predicted frequency of forgetting only when accounting for worry, suggesting that the fear of developing AD overlaps more with Trait Anxiety than with Worry.

#### **BEHAVIOR CHANGES IN OLDER ADULTS WITH ALZHEIMERS: INFORMAL CAREGIVERS ACCOUNTS AND IMPLICATIONS TO NURSING CARE**

A.M. Marins, J. Da Silva, *Universidade Federal do Rio de Janeiro, Rio de Janeiro, Rio de Janeiro, Brazil*

Multi methods study using descriptive statistics for exploratory quantitative data and Grounded Theory for qualitative data in-depth analysis. Data collection took place in 2011 after approval in two Institutional Review Boards. The key study aim was: to know what behavior changes in older adults with Alzheimers interfere the most in the caregivers daily life. Preliminary qualitative data analysis of resulted in 13 actions (behavior manifestations) of the older adult with Alzheimers. These actions may take place in public or private scenarios and each one of them can trigger repercussions or reactions in the caregiver: emotional (suffering); rational (recognition of behavioral manifestations of Alzheimers); and mixed (both emotional and rational). Furthermore, the data pointed out a gradient of possible reactions that may range from elementary intensity (bothers) or profound (interferes) in the caregivers life. Results indicate that a single action may cause significant changes in the caregivers life: (a) in the relational pattern and (b) in his daily life habits or routine. Over time, such changes may be incorporated as normal - or

not and these results become important resources in the health care management of both the older adult with Alzheimers and the caregiver.

## SESSION 360 (POSTER)

### CARDIOVASCULAR DISEASE

#### DEFECATION SYNCOPE: A HARBINGER OF DISEASE

A. Hsu, M.A. Drickamer, *Yale New Haven Hospital, New Haven, Connecticut*

**Introduction:** Defecation syncope is defined as syncope occurring during or immediately after defecation. Patients with this condition have been found to have high mortality rates secondary to underlying chronic diseases. **Case:** An 86 year old lady with atrial fibrillation, hypertension, diabetes and dementia presented with presyncope as she was having a bowel movement early in the morning. She revealed a long-standing history of constipation as well as significant anxiety regarding having daily bowel movements. Her family noted 6 months of worsening memory loss as well as the inability to take medications properly. EKG showed new lateral ST depressions and echocardiogram a newly decreased ejection fraction. Cardiac catheterization revealed a left anterior descending artery with diffuse disease. Throughout her hospital stay, she was continued on a bowel regimen and was able to have bowel movements without syncope. This case illustrates how defecation syncope can be a harbinger to serious underlying conditions. Defecation syncope is relatively rare, more common in the elderly, females, those with functional constipation and occurs more often after rising from bed. Causes vary from vasovagal reaction, orthostasis, and hypoxia to pulmonary embolus. It should not be considered a benign condition and further work up for underlying causes should be undergone in patients with an initial presentation.

#### ASSOCIATION BETWEEN ALCOHOL CONSUMPTION AND CORONARY ATHEROSCLEROTIC BURDEN

P. Chagas<sup>1</sup>, P. Caramori<sup>2</sup>, I. Filho<sup>3</sup>, C.H. Schwanke<sup>3</sup>, *1. Federal University of Santa Maria, Palmeira das Missoes, Brazil, 2. The Centre for Cardiovascular Research - Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, Brazil, 3. Institute of Geriatrics and Gerontology - Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, Brazil*

**OBJECTIVE:**To verify the association between alcohol consumption and coronary atherosclerotic burden.**DESIGN:**Cross-sectional Study.**METHODS:**Adult patients referred for coronary angiography were invited to participate of the study.The socio demographic data(age, education and occupation),cardiovascular risk factors(smoking, systemic arterial hypertension, dyslipidemia, diabetes, and family history of CAD) and the alcohol drinking habit were collected during the interview.The alcohol drinking consumption was divided in three categories: not drink; less than 15g ethanol/day(for women) or less than 30g ethanol/day(for man); and more than 15g ethanol/day(for women) or more than 30g ethanol/day(for man).The coronary atherosclerotic burden was assessed by a interventional cardiologists blinded to the alcohol drinking consumption, through the Friesinger Score(FS) in the coronary angiography. **RESULTS:**The study populatin was composed of 356 adult patients; 229 were male (63.1%). The average age was 60.5±11 years.Any level of alcohol consumption was reported by, 26 woman(19.4%) and 108 man(47.2%).There was lower alcohol consumption among patients with hypertension when compared to the ones without hypertension(p=0.031) and a more alcohol consumption among smoking patients when compared to the no smoking(p=0,003).There was no significant association between alcohol consumption and the remaining cardiovascular risk factors evaluated.Moderate alcohol consumption was inversely correlated to atherosclerotic burden as assessed by the FS in men(p=0.05) but not in women(P=NS).By multivariate analysis atherosclerotic burden was independently associated with sex, age, hypertension, and dys-

lipidemia,but not with alcohol consumption.**CONCLUSION:**An association between moderate alcohol consumption and lower coronary atherosclerotic burden was observed only in men by univariate analysis.This association was not significant after controlling for traditional risk factors.

#### THE IMPACT OF RESTING HEART RATE ON LONGEVITY IN THE VERY OLD

J. Stessman, J.M. Jacobs, *Geriatrics and Rehabilitation, The Jerusalem Institute of Aging Research, and Hadassah Hebrew-University Medical Center, Jerusalem, Israel*

**Purpose:** The relationship of resting pulse rate (RPR) to longevity among older people is unclear. We examined this relationship from age 70-90. **Methods:** The Jerusalem Longitudinal Study (1990-2010) prospectively follows a representative community-dwelling cohort, born 1920-21. Comprehensive assessment at age 70 (n=453), 78 (n=856) and 85 (n=1044) included resting pulse rate (RPR) (average of 3 measurements), and beta-blocker usage. Mortality data were collected from the Ministry of Interior. Cox proportional hazards ratios (HR's) were determined for RPR (continuous variable), adjusting for gender, education, diabetes, ischemic heart disease, hypertension, kidney disease, physical activity, body mass index, self-rated health, dementia, beta-blocker use, and an interaction term for RPR×beta-blocker use. **Results:** Mean RPR at age 70, 78 and 85 among females was 75±9.9, 74.5±10.9, 68.5±10.5, and males: 74.3±10.7, 73.1±11.2, 65.2±10.5. Among subjects not taking beta-blockers, followed-up from 70-78, 78-85 and 85-90, mean RPR was lower among survivors vs. non-survivors for females: 75.8±9.2 vs. 83.5±10.9 (p<0.001), 75.5±9.8 vs. 79.9±12.6 (p<0.01), and 71.5±9.9 vs. 74.6±10.7 (p<0.05), and males: 75.2±10.3 vs. 75.2±10.9 (p=0.98), 73.5±10.1 vs.77.2±12.1(p<0.005), 67.1±9.5 vs. 70.4±11.7 (p<0.05) respectively. The adjusted hazards ratios for mortality according to increasing RPR, during the period of follow up from age 70-78, 78-85, and 85-90, was 1.008 (95%CI 0.98-1.03), 1.03 (95%CI 1.01-1.05), and 1.016 (95%CI 1.001-1.03) respectively. The hazards ratios for beta-blocker usage and the RPR× beta-blocker interaction-term remained insignificant. **Conclusions:** Longevity among older people is associated with lower resting pulse rate. This effect is independent of beta-blocker usage.

#### HOURLY AMBULATORY BLOOD PRESSURE MONITORING IMPROVES BLOOD PRESSURE CONTROL IN OLDER ADULTS

M.M. Matthews<sup>1,2</sup>, R. Boland<sup>1</sup>, M.D. Neese<sup>1</sup>, V. Hirth<sup>1,2</sup>, *1. Palmetto Health, Columbia, South Carolina, 2. Univ of SC, Columbia, South Carolina*

**Purpose:** Elevated blood pressure (BP) and poor nocturnal BP dipping as measured by 24-hour ambulatory blood pressure monitoring (ABPM) are associated with increased cardiovascular risk in older adults. A pilot study was conducted to determine how availability of detailed BP information from ABPM influences clinical decision making and BP management in older adults. **Methods:** Subjects with no clinical hypertension (HTN) diagnosis, clinically controlled HTN, and uncontrolled HTN (BP>140/85) were recruited from a geriatric outpatient practice. Outcomes include: accuracy of clinical HTN diagnosis compared to ABPM; medication changes adopted after reviewing ABPM results and BP change at 6-month follow-up. Statistical analyses were performed using descriptive statistics and paired t-tests. **Results:** Fifty-two subjects (age 63-89) completed baseline and follow-up ABPM assessments. Agreement between clinical diagnosis and ABPM by group showed: uncontrolled HTN-70% (N=20), controlled HTN-81% (N=16), no HTN-81% (N=16). Medication changes adopted for each group showed: uncontrolled HTN-95%; controlled HTN-25%, no HTN-19%. Six month follow-up ABPM demonstrated significant improvement for those

with uncontrolled HTN (overall SPB decrease 9.6 mmHg,  $p < 0.01$ ; daytime SBP decrease 10.0 mmHg  $p = 0.0031$ ; nighttime SBP decrease 8.1 mmHg,  $p = 0.0056$ ). There were no significant improvements in BP at 6 months in controlled HTN or no HTN groups. Conclusion: ABPM may assist clinicians in improving blood pressure in uncontrolled older adults while it is less clear that it makes a difference for those clinically assumed to be controlled. Future study would involve comparing use of ABPM to a strict protocol of subjects utilizing home ambulatory BP readings.

### QUALITY OF LIFE IN OLDER INDIVIDUALS WITH HEART FAILURE AND SLEEP DISTURBANCES

C. Moon, B. Fahlberg, D.R. Lauver, *University of Wisconsin-Madison, Madison, Wisconsin*

**Background:** Sleep disturbances are common in older individuals with HF and may explain some of the negative impact of HF on their quality of life (QOL). Individuals with HF often report that their sleep is disrupted by nighttime awakenings. Disrupted sleep interferes with functional performance and mental health, negatively impacting QOL. Individualized quality of life (IQOL) incorporates personal perspectives of QOL by eliciting and measuring determinants of QOL that are most important to the individual. Although measures of IQOL could assist in assessment of factors that impact QOL, these measures have not been used in people who have HF and sleep disturbances. **Methods:** Using a cross-sectional design, a secondary analysis was conducted on data collected from 52 older adults with stable chronic HF. Sleep disturbances were assessed with an item from Minnesota Living with Heart Failure questionnaire. General and disease-related versions of the Schedule for the Evaluation of Individual Quality of Life scales were used to measure IQOL. Functional status was measured using the Specific Activities Scale. Data analysis was conducted in SPSS 19.0 using descriptive statistics and multivariate regression. **Results:** Comparing people with minimal and with moderate to severe sleep disturbances, there were no significant differences in demographic factors. Controlling for functional status and comorbidities, sleep disturbance negatively contributed to disease-related IQOL ( $\beta = -.345$ ,  $p = .015$ ). **Conclusions:** Sleep disturbances negatively contribute to IQOL in older individuals with stable chronic HF. These findings suggest the need for future studies to more closely examine sleep disturbances experienced by individuals with HF.

### RELATIONSHIPS BETWEEN ADIPONECTIN, POLYMORPHISM AND CORONARY HEART DISEASE IN NINGXIA HUI NATIONALITY

S. Jia, F. Chen, Z. Liu, R. Yang, *Chinese Medical Association, Yinchuan, China*

The aim of this paper is to study the relationship between Adiponectin (APN) plasma level, single nucleotide gene polymorphism (SNP45T/G and SNP276G/T) and coronary heart disease (CHD) in Ningxia Hui nationality of China. 193 Hui patients were divided into two groups according to the Coronary angiography: 95 cases of coronary heart disease (CHD) and 98 cases of control group. Enzyme Linked Immunosorbent Assay (ELISA) and Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP) were used to detect the plasma APN level and gene polymorphism of its two sites. The results show that the plasma APN level of Hui CHD group was reduced ( $P < 0.05$ ), and Distribution Frequency of SNP+45 TG+GG genotype an G allele of Hui CHD group was significantly higher than control group. Distribution Frequency of SNP+276 TG+TT genotype and T allele of CHD group was higher than control group. A conclusion could be drawn that SNP+45, SNP+276 in APN was associated with CHD in Ningxia Hui nationality.

### IMPAIRED VASCULAR FUNCTION FROM UPPER AND LOWER EXTREMITIES IN ELDERLY WITH PERIPHERAL ARTERIAL DISEASE

X. Li, J. Cao, *First Department of Geriatric Cardiology, Chinese PLA General Hospital, Beijing, China*

**Background** Dysfunction of vascular endothelium is an initial event of atherosclerosis. The aim of this study is to evaluate the brachial and superficial femoral endothelium-dependent dilation, i.e. flow-mediated dilation (FMD) and endothelium-independent dilation, i.e. nitroglycerin-mediated dilation (NMD), of elderly patients with peripheral arterial disease (PAD). **Methods** In this non-randomized concurrent controlled trial, thirty-three PAD patients (age > 70 years) and 40 healthy elderly with matched age and gender were recruited. Using non-invasive approach, high resolution color doppler ultrasound diagnosis system was applied to detect FMD of upper and lower extremity arteries in all participants. NMD from arteries in upper and lower extremities were also tested with intake of 0.6 mg nitroglycerin in all the participants. **Results** Both FMD and NMD of the brachial artery and the superficial femoral artery in PAD patients were significantly lower than those of healthy controls (brachial FMD%  $3.56 \pm 1.92$  vs  $10.55 \pm 4.7$ , brachial NMD%  $8.54 \pm 4.72$  vs  $13.40 \pm 3.75$ , superficial femoral FMD%  $2.16 \pm 1.22$  vs  $7.46 \pm 2.52$ , superficial femoral NMD%  $5.27 \pm 3.69$  vs  $8.48 \pm 3.51$ , all  $P < 0.05$ ). In old PAD patients, the superficial femoral FMD and NMD were significantly lower than brachial FMD ( $P < 0.01$ ); There was close relationship between the brachial and superficial femoral FMD ( $r = 0.9314$ ,  $P < 0.01$ ), so was the NMD ( $r = 0.9191$ ,  $P < 0.01$ ). **Conclusion** The superficial femoral FMD and NMD may reflect the vasoreactivity of PAD patients more directly and sensitively than those of brachial artery. There is close relationship between brachial and superficial femoral arteries.

### HEALTH CARE UTILIZATION AND HYPERTENSION MANAGEMENT IN ELDERLY KOREAN IMMIGRANTS

M. Sin, A.M. Hirsch, *College of Nursing, Seattle University, Seattle, Washington*

Despite the efforts of national, state and private organizations to improve the health status of minority immigrants, studies documenting the effectiveness of these efforts are lacking. The purpose of this study is to examine the utilization of health care services and hypertension management in elderly Korean immigrants to the United States. In this descriptive study, 70 elderly Korean immigrants were recruited from a Korean senior center and church. Health care utilization was assessed with a self-report questionnaire and hypertension management was ascertained through the objective measurement of blood pressure and a self-report questionnaire. Descriptive statistics were used to analyze the data. Results indicated that 96% of elderly Korean immigrants had health care insurance and 86% received regular health check-ups. Although their hypertension was not managed effectively, all participants with a diagnosis of hypertension were aware of it and were taking blood pressure medications. This study provides an overview of health care utilization and hypertension management in elderly Korean immigrants and provides recommendations for further studies.

### FEARFULLY VIGILANT: THE EXPERIENCE OF BEING CAREGIVER TO YOUR AGING SPOUSE WITH ADVANCED HEART FAILURE

H.C. Bursch, *Adult and Gerontological Nursing, College of Nursing, The University of Iowa, Iowa City, Iowa*

The purpose of this first phenomenological study of advanced heart failure (AHF) caregivers (CGs) in the US was to give insight into spouses' understanding and intention for caregiving and provide ethical underpinnings for recommendations guiding care preferences at the end of life with AHF. **Method:** Seven older spouse CGs of care recipients (CRs) with NYHA II-IV heart failure each participated in 3 reflective interviews over a period of 2 months, followed by a phone call at



the conclusion of the study 2-10 months later. Data were analyzed using a method based on Interpretive Theory by Paul Ricoeur and grounded in his Philosophy of Ethics. Findings: Caregivers identified 3 themes and 11 subthemes, and metaphorically described the essence of the experience as “being fearfully vigilant, at the mercy of the disease and its treatment, while worrying about that which remains unspoken”. They emphasized careful negotiation of dignity and respect due to care recipients’ fluctuating physical and cognitive capacities, named specific burdens and described the complexities of managing coexisting diseases. Implications: Healthcare providers need to address symptom interpretation and adherence within the dynamics of the CG-CR dyad. CG health and wellbeing should be routinely assessed during CR outpatient visits. CG burdens can be discussed in the context of a support group including managing multiple dietary restrictions, prioritizing symptom management within a holistic illness presentation, CG self care and relationship counseling. More research is needed to foster adaptive coping in AHF CGs.

### **EXPERIENCING “AGAPE” AND SPIRITUAL CONNECTIONS: A LONGITUDINAL FOLLOW-UP OF MIDDLE AGED AND OLDER SURVIVORS OF CARDIAC SURGERY**

L. Noel, A.L. Ai, *College of Social Work, Florida State University, Tallahassee, Florida*

**BACKGROUND:** Severe cardiovascular disease (CVD) is one of the greatest causes of mortality in the United States. Thus, cardiac surgery often is a life-saving operation for those with advanced heart conditions. However, most studies have focused on pathology related cardiac outcomes. The life and death high stakes of such conditions and associated operations have the potential to lead its victims to question, connect, or reconnect to their spirituality (Ai, Park, & Shearer, 2008). We argue for a need to add to this literature by exploring religious coping, spiritual connectedness, and experiences of divine love in this population. **METHODS:** two wave longitudinal study (N = 200) investigating the experience of divine love (Agape) as an indicator of spiritual growth in middle aged and older adult patients after surviving cardiac surgery for 30 months. **RESULTS:** Hierarchical linear regression indicated the direct effect of preoperative positive religious coping on experiences of divine love, controlling for other key variables. Postoperatively perceived spiritual support was entered at the final step as an explanatory factor, which appeared to mediate the coping effect. None of the other faith factors predicted divine love. **CONCLUSIONS:** Further research regarding divine love and spiritual support may eventually guide clinical attempts to support patients’ spiritual growth as an independently relevant outcome of cardiac surgery.

## **SESSION 365 (POSTER)**

### **CHRONIC DISEASE MANAGEMENT**

#### **UTILIZATION OF CHRONIC PAIN MANAGEMENT AMONG RACIALLY AND ETHNICALLY DIVERSE OLDER ADULTS: THEME-BASED QUALITATIVE DATA ANALYSIS**

J. Park, K. Manotas, C. Hirz, *School of Social Work, Florida Atlantic University, Boca Raton, Florida*

This study explored ethnic (African Americans, Afro-Caribbeans, European Americans, and Hispanics) group differences in perception and management of chronic pain in community-dwelling older adults, including barriers (challenges) and facilitators for utilizing nonpharmacological pain management. Forty participants (10 from each ethnic group), age 60+, were interviewed using a semi-structured protocol relating to their experiences with chronic pain and pain management. Interviews were audio tape-recorded, transcribed, and subjected to theme-based content analysis. For pain therapy, participants used (a) only nonpharmacological management (e.g., acupuncture, yoga, exer-

cise, praying, water aerobics, chiropractic, hot showers), (b) only pain medication (e.g., vicodin, ibuprofen), or (c) both types of therapies. Seven themes related to barriers to using nonpharmacological pain therapies were identified: (a) lack of Medicare coverage for treatment, (b) high cost of treatment, (c) lack of knowledge about the treatment, (d) failure of health care providers to recommend the treatment, (e) concerns regarding possible effects of treatments (f) lack of support for the treatment from friends and family, and (g) limited resources (e.g., transportation, financial instability). Five themes related to facilitators were identified: (a) education, (b) affordable health care plan covering treatments, (c) health care provider recommendations, (d) materials and resources such as brochures from health care providers, and (e) available transportation. More study results will be presented during the GSA poster session. The study results may guide health care providers in understanding pain management in diverse older adults and developing effective pain management to decrease health care utilization costs through reduction in admissions to nursing homes.

### **CONTRIBUTORS TO DEPRESSIVE SYMPTOMS AMONG OLDER KOREAN IMMIGRANTS WITH TYPE 2 DIABETES**

S. Choi<sup>1</sup>, P. Reed<sup>2</sup>, *1. UC Irvine, Program in Nursing Science, Irvine, California, 2. UC Irvine, Department of Psychology and Social Behavior, Irvine, California*

**OBJECTIVES:** To examine 1) prevalence of depressive symptoms among older Korean immigrants with type 2 diabetes; 2) factors associated with depressive symptoms; and 3) whether these relationships with depressive symptoms vary as a function of age or gender. **RESEARCH DESIGN AND METHODS:** A total of 115 Korean immigrant older adults (age 65 and over), recruited from the community, were assessed for three groups of potential factors that could influence depressive symptoms: demographic factors (age, gender, education, English proficiency), clinical factors (duration of diabetes, co-morbidities, insulin use), and psychosocial factors (general health, diabetes quality of life, family support). Depressive symptoms were measured by the Center for Epidemiological Studies – Depression scale [CES-D]. **RESULTS:** 57% of participants had CES-D scores of 16 or higher. Controlling for other factors, multiple regression showed higher levels of depressive symptoms to be associated with greater impact of diabetes on quality of life (b=5.15, p=.02) and less family support (b= -4.27, p=.05). The relationship between depression and diabetes impact on quality of life was stronger for men than women (b= -11.36, p<.01). **CONCLUSION:** The findings suggest that older Korean immigrants with type 2 diabetes have a high prevalence of depressive symptoms, and diabetes related quality of life and family support are important factors to consider in addressing depressive symptoms among this population. Particular attention needs to be paid to men within this population as the relationship between diabetes related quality of life and depressive symptoms is stronger than among women.

### **INVESTIGATION AND HEALTH COUNTER MEASURES ON 9583 PHYSICAL EXAMINATION PEOPLE IN WUHAN**

H. Gui, *Department of Geriatrics, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China*

Objective To Analyze the Physical Examination Data In Wuhan And Provide Information For Epidemic Disease Prevention And Health Intervention. Methods Datas of 9583 Physical Examination People In Our Hospital Were Collected, 15 Categories of Diseases And Symptoms Were Analyzed By Sequence Rule And Constituent ratio. Results The Relevance Ratio of the Top 10 Diseases And Symptoms Were Trachoma, Osteopenia, Hypertensive Disease, Hyperlipidemia, Prostatic Hyperplasia, Thyroid Nodule, Helicobacter Pylori Infection, Obesity, Hepatic Cyst and Osteoporosis (31.12%, 14.34%, 10.98%, 9.94%, 8.23%, 7.63%,

5.73%, 3.21%, 2.99%, 2.13%). Spearman Analysis Showed That Trachoma Was Negative Correlated With Age, While Osteopenia, Hypertensive Disease And Hyperlipidemia Were Positively Correlated With Age. The Average Category of Disease Was 2.79. The Rate of Males Was Obviously Higher Than That of Females In 13 Kinds of Diseases And Symptoms Excepted For Thyroid Nodule And Osteoporosis. Conclusions The Present Study Demonstrates That Cardiovascular Diseases And Metabolic Diseases Have A Higher Sickness Rate Level, And the Disease Situation Is Quite Serious. Therefore, Health Education Should Be Carried Out In Time To Physical Examination People In Order To Prevent And Reduce The Occurrence Of Commonly Encountered Disease And Correlated Diseases.

### **SELF-MANAGEMENT OF AGE-RELATED MACULAR DEGENERATION: A TELEMEDICINE APPROACH**

E.P. Griffiths, L.C. Field, S. Edland, H. Ferreyra, S. Brown, C. Depp, B.L. Brody, *UC San Diego, La Jolla, California*

**Background** Patients with age-related macular degeneration (AMD) have twice the rate of depression as community-dwelling older adults. In a randomized controlled trial, in person group self-management intervention has been shown to reduce psychological distress, improve self-efficacy, and improve use of visual assistive devices. To broaden the reach of this intervention, we conducted a pilot study of the feasibility of transporting this program to video-conferencing. **Methods** We conducted an open trial of a 6-week self-management program via video conferencing in a group format. A total of 8 participants participated from their homes through weekly 1.5-hour sessions led remotely by clinicians. The impact of the program was evaluated based on participants' change pre-post in depression diagnosis status (SCID) and depression severity (HAM-D). **Results** Participants were eight patients with AMD aged 82-94 (mean=89 years). Median visual acuity of participants was 20/32 in the better eye and 20/80 in the worse eye. At baseline, 62.5% met criteria for major, minor, or subsyndromal depression. Seven of 8 participants completed the program. Based on the SCID, the rate of major, minor, or subsyndromal depression at baseline was 62.5% and was 25% at post-assessment. The average score on the Hamilton Depression Scale was, at baseline, 4.5, and 3.5 post-treatment. The effect sizes were similar to the ones seen in the in-person self-management program. **Conclusion** This small pilot study indicated that teleconference may be a feasible method of broadening the reach of self-management education to people with AMD and reducing rates of depression in this vulnerable and growing population.

### **TRAINING IN ACCEPTANCE AND COMMITMENT THERAPY AND SELECTIVE, OPTIMIZATION AND COMPENSATION STRATEGIES IN NURSING HOME RESIDENTS WITH CHRONIC PAIN**

M.A. Alonso Fernández, A. López-López, A. Losada, J. Wetherell, J. González, *Psychology, Universidad Rey Juan Carlos, Alcorcón, Madrid, Spain*

In recent years there is growing interest in the study of the efficacy of Acceptance and Commitment Therapy (ACT) with people with chronic pain. In addition to ACT, Selective Optimization with Compensation (SOC) can help the elderly with chronic pain to accept and behave according to their main values and areas of interest. The aim of this study is to analyze the efficacy of an ACT combined with training in SOC strategies for elderly people with chronic pain living in nursing homes. Participants were 111 people (mean age = 82.7; SD = 9.74; 81.1% female), who were randomized to the intervention condition (ACT-SOC) or to a minimal support control group (MSC). Complete data are available of 53 participants (IC: n = 27; MSC: n = 26). Pre, post-intervention, and follow-up assessments were done. Time intervention changes has been found in activities of daily living pain interference ( $p < .06$ ), compensation strategies ( $p < .07$ ), acceptance of pain ( $p < .05$ ), and pain related anxiety ( $p < .05$ ) both at post-intervention and follow-up. No sig-

nificant changes were found for participants in the MSC. Simple effects changes was also found in qualitative dimensions of pain ( $p < .01$ ), in selection ( $p < .01$ ) and compensation strategies ( $p < .05$ ), and catastrophizing beliefs ( $p < .05$ ) both at post-intervention and follow-up. The results suggest that an ACT intervention combined with training in SOC strategies may improve the quality of life of nursing home residents with chronic pain. **Keywords:** aging, elderly, chronic pain, acceptance and commitment therapy, selective optimization with compensation.

### **SPANISH VALIDATION OF THE CHRONIC PAIN ACCEPTANCE QUESTIONNAIRE IN NURSING HOME RESIDENTS WITH CHRONIC PAIN**

M.A. Alonso Fernández<sup>1</sup>, A. Losada<sup>1</sup>, A. López-López<sup>1</sup>, J. González<sup>1</sup>, J. Wetherell<sup>2</sup>, *1. Universidad Rey Juan Carlos, Alcorcón, Madrid, Spain, 2. University of California, San Diego, California*

Chronic pain acceptance is a process that involves the willingness to experience pain and engaging in life activities. Acceptance of pain appears as an important factor in the explanation of functional capacity of older people with chronic pain. The Chronic Pain Acceptance Questionnaire (CPAQ) is the most often used measure of pain acceptance in chronic pain, and is composed of 20 items grouped in two factors (pain willingness and activities engagement). The aim of this study is to examine the psychometric properties of the Spanish validation of the CPAQ in nursing home residents with chronic pain. A total of 129 Spanish older people with chronic musculoskeletal pain (mean age = 82.7; SD = 9.26; 79.1% female) participated in the study. Confirmatory factor analysis (CFA) of both the initial two factors and one-factor solutions showed a poor fit to the data. Drawing upon the two factor structure, those items with factor loadings lower than .40 were deleted, resulting in an 11 item version of the CPAQ (RCPAQ; with 5 and 6 items for the pain willingness and activities engagement subscales, respectively). This model showed an acceptable fit to the data ( $\chi^2 = 76.92$ ;  $df = 42$ ;  $p < .001$ ; CFI = 0.91; TLI = 0.88; RMSEA = 0.08). Acceptable reliability indexes (Cronbach's alpha) were also found for the RCPAQ global scale (.76) and the factors pain willingness (.77) and activities engagement (.75). Significant associations were found between the RCPAQ and the CPAQ-20 ( $r = .94$ ), AAQ ( $r = -.33$ ), pain intensity ( $r = -.38$ ), catastrophism beliefs ( $r = -.54$ ), depression ( $r = -.48$ ) and anxiety ( $r = -.65$ ), all of them significant ( $p < .01$ ). The Spanish RCPAQ is an acceptable tool for measuring pain acceptance in older people with chronic pain living in nursing homes. **Keywords:** acceptance, chronic pain, assessment, depression, pain anxiety related.

### **POORER EXECUTIVE FUNCTION PREDICTS EARLY DROP-OUT FROM PULMONARY REHABILITATION IN OLDER ADULTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE**

S.S. Chang<sup>1</sup>, T.M. Gill<sup>1</sup>, V. Towle<sup>1</sup>, A.L. Ries<sup>2</sup>, *1. Medicine/Geriatrics, Yale School of Medicine, New Haven, Connecticut, 2. UCSD, San Diego, California*

**Background:** Impaired executive function increases in prevalence with advancing chronic obstructive pulmonary disease (COPD) and reduces treatment adherence, leading to ineffective COPD management. While pulmonary rehabilitation (PR) has demonstrated important clinical benefits for managing moderate-to-severe COPD, early drop-out is common. Whether poorer executive function predicts early PR drop-out remains unclear. **Methods:** Data were drawn from the National Emphysema Treatment Trial, a cohort of adults aged  $\geq 60$  with COPD who participated in comprehensive PR prior to randomization to lung-volume reduction surgery (N=1559). Early drop-out was defined by non-completion of PR. Executive function was assessed by Part B of the Trail Making Test (TMT) and the difference in completion time between Parts B and A (Delta TMT), with higher scores indicating poorer cognitive performance. Delta TMT reflects the level of cognitive flexibility after accounting for manual dexterity. TMT scores were log-trans-

formed because of their skewed distribution. Relative risks of the relationships between TMT scores and early PR drop-out were estimated using modified Poisson regression with robust error variance. Models were adjusted for socio-demographic characteristics, anxiety, and depressive symptoms. Results: The prevalence of early PR drop-out was 19.9% (N=310). Poorer performance on TMT-B by 4.1 seconds and on Delta TMT by 3.6 seconds increased the risk of early PR drop-out; adjusted RRs were 1.41 (95%CI=1.05-1.88, P=0.02) and 1.28 (1.05-1.55, P=0.01), respectively. Conclusions: In older PR participants with COPD, poorer executive function is strongly associated with drop-out from PR. Developing interventions to improve PR completion rates should include an early evaluation of executive function.

### **THE EXPERIENCE OF THE OLDER ADULT WITH PULMONARY ARTERIAL HYPERTENSION**

A. Monson<sup>1,2</sup>, S. Pennell<sup>3</sup>, 1. *New York Methodist Hospital, Brooklyn, New York*, 2. *Saint Xavier University, Chicago, Illinois*, 3. *University of Massachusetts, Amherst, Massachusetts*

Pulmonary arterial hypertension (PAH) is a chronic and devastating disease that has been under-diagnosed for many years. As research, awareness, and medical interventions in PAH have blossomed over the past 10 years, more PAH patients are being diagnosed in all age groups and living longer lives as a result. Patients diagnosed with PAH now live into their sixties, seventies, and eighties and more are being diagnosed in their later years. It is documented that PAH patients suffer from decreased quality of life and experience psychosocial problems such as depression, anxiety and increased family/interpersonal stress, however little work has been done with an older adult (age 65+) population. This poster will present findings from an exploratory grounded theory inquiry focused on the daily activity, illness experience, and quality of life of older adults with PAH.

### **ANTIPARKINSON DRUG ADHERENCE AND IMPACT ON MEDICARE PART D ENROLLEES WITH PARKINSON'S DISEASE**

Y. Wei, F. Palumbo, L. Simoni-Wastila, *University of Maryland School of Pharmacy, Baltimore, Maryland*

Antiparkinson drugs (APDs) are the mainstream treatment for Parkinson's disease (PD). Limited population-based data exist on the prevalence and factors of adherence to APDs, and the association of APD non-adherence with healthcare utilization and expenditures. A 5% random sample of Medicare beneficiaries from 2006–2007 Chronic Condition Warehouse data was used to select patients who had (1)  $\geq 1$  medical claim with an ICD-9 code 332.0 (paralysis agitans) in two consecutive years; (2) continuous enrollment in Parts A, B, and D from 6/1/2006 through 12/31/2007 or date of death; and (3)  $\geq 2$  APD prescription fills. APD adherence measures included duration of therapy (DOT) and Medication Possession Ratio (MPR) assessed over 19 months (579 days). Factors associated with APD adherence were analyzed using multinomial regressions. The association of adherence with all-cause utilization for five services (hospital, ER, skilled nursing facility, home health agency, and office-base physician care) and expenditures was estimated using negative binomial and gamma generalized linear models, respectively. One-fourth of APD users (n=7,583) had short DOT (<400 days) and low MPR (<0.80). Factors associated with low adherence included older age ( $\geq 65$ ), non-white ethnicity, cognitive impairment, having  $\geq 11$  comorbidities, and having changes in APD therapy. Longer DOT and higher MPR were associated with reduced rates of all-cause utilization and total, Part A, and Part B expenditures, but associated with increased Part D expenditures. Findings suggest improving duration of treatment and adherence to APDs may lead to significant reductions in all-cause healthcare utilization and expenditures in Medicare beneficiaries with PD.

### **EVALUATION OF A PILOT HIGH RISK CONGESTIVE HEART FAILURE DISEASE MANAGEMENT PROGRAM FOR MEDICARE BENEFICIARIES WITH MEDIGAP COVERAGE**

K. Hawkins<sup>1</sup>, R.J. Ozminkowski<sup>1,3</sup>, G.R. Bhattarai<sup>1</sup>, J.J. Li<sup>2</sup>, J. Huang<sup>1</sup>, T.S. Wells<sup>1</sup>, R.J. Migliori<sup>3</sup>, C.S. Yeh<sup>4</sup>, 1. *Analytics and Data Management, OptumInsight, Ann Arbor, Michigan*, 2. *OptumHealth, Golden Valley, Minnesota*, 3. *UnitedHealth Group Alliances, Minnetonka, Minnesota*, 4. *AARP Services, Inc., Washington, District of Columbia*

Research Objective: To evaluate quality of care received by Congestive Heart Failure (CHF) Disease Management program participants. Methods: Adults at least 65 years of age with CHF and an AARP® Medicare Supplement (i.e., Medigap) Insurance Plan provided by UnitedHealthcare Insurance Company were included in the analysis. Eligible members had a high health risk severity score and/or were referred to the program by their health care provider or another care management program. Participants were provided a scale that reported their weight, pulse, and blood pressure daily to nurses. Considering these, nurses provided telephone and mailed services to improve CHF-related care. 1,235 members actively participated in the program. 8,662 members were qualified but did not participate and were used for comparison. Logistic regression analyses estimated differences in quality of care between program participants and non-participants. Quality measures pertained to hospital readmissions and evidence based medicine (EBM) metrics that addressed the appropriate use of office visits and pharmaceuticals. Results: Compared to similar non-participants, participants were significantly (P<0.05) more likely to have an annual office visit with a doctor to manager their CHF and to have an office visit soon after hospital discharge. Participants were more likely to be compliant with recommended pharmacotherapy and less likely to be readmitted to the hospital within 30 days of hospital discharge, but these last two measures were not statistically significant. Conclusions: This may be the first CHF Disease Management program designed for Medigap insureds. All the analyses showed that program participants may have received higher quality of care.

### **PRELIMINARY RESULTS FROM AN RCT TO EVALUATE A SELF-CARE TRAINING PROGRAM FOR CHRONIC DISEASE MANAGEMENT AMONG LOW-INCOME COMMUNITY DWELLING OLDER ADULTS IN SINGAPORE**

A. Chan<sup>2,1</sup>, M. Fink<sup>1</sup>, A.J. Hu<sup>2</sup>, R. Singh<sup>2</sup>, C. Chei<sup>1</sup>, D.B. Matchar<sup>1</sup>, 1. *Health Services and Systems Research, Duke-NUS Graduate Medical School Singapore, Singapore, Singapore*, 2. *National University of Singapore, Singapore, Singapore*

Aim: This paper assesses knowledge, attitudes, and beliefs about chronic disease and health related quality of life. This topic has yet to be examined among low-income community dwelling older adults in Singapore. We hypothesize that baseline data will show a correlation between lower rates of knowledge about chronic disease and a higher prevalence of undiagnosed hypertension. Methods: The sample size for this cluster randomized control trial is 400 older persons (above 55 years) without severe illness or impairment. Using cluster randomization, six of the 12 randomly selected Senior Activity Centers were assigned as intervention sites. At baseline, all screened and consented participants completed a health exam and interviewer administered questionnaire. Results: Preliminary results show a high prevalence of hypertension (62%) and pre-hypertensive measurements (25%). Study participants showed above average levels of self efficacy (mean score 7.7) as scored using Stanford's Self-Efficacy for Managing Chronic Disease 6-item Scale. This is despite a substantial lack of knowledge regarding the symptoms of chronic diseases. Of the participants who have hypertension, 20% were unaware of their condition. Eighty-three percent of study participants did not know that one usually feels fine despite having high

blood pressure, and 63% did not know that decreasing blood pressure can reduce the risk of kidney problems. Conclusion: Baseline results suggest that the knowledge, behavior and attitudes of community dwelling lower income older adults requires substantial improvement to better their health.

### **CHRONIC DISEASE SELF-MANAGEMENT: DO PATIENT DEMOGRAPHICS AND LEADER CHARACTERISTICS AFFECT OUTCOMES?**

J. Woo, E. Hui, W. Chan, *Medicine&Therapeutics, The Chinese University of Hong Kong, Shatin, Hong Kong*

Objective To examine whether the Chronic Disease Self-Management Program (CDSMP) developed for adults with chronic diseases benefits frail older patients with low education levels, and to compare the efficacy of classes taught by older lay leaders compared with professionals. Methods 567 community-dwelling persons aged  $\geq 55$  years with at least one chronic disease were recruited from various community settings. Participants were assigned to either an intervention or a control group. The intervention group was further allocated to standardized CDSMP courses led by professional or older lay leaders. Outcome measures included self-management behaviors, self-efficacy, health status and health care utilization. Two-way ANCOVA was used to compare outcomes of participants from different subgroups of age, education and frailty levels. The Mann-Whitney U test was used to compare the outcomes of lay and professional-taught groups. Results The post-hoc subgroup analysis showed that in various domains, subjects who were older, less educated and frailer experienced better outcomes than other subgroups. Overall, the outcomes of lay-taught and professional-taught classes were not significantly different. Conclusions Frail older patients can benefit from CDSMP. Moreover, older persons can be trained to lead the program as effectively as professionals.

### **CHRONIC DISEASE REFERRALS FOR OLDER ADULTS: HOW CHRONIC PAIN COMPARES TO OTHER COMMON CONDITIONS**

C.R. Shillam, S.M. Fishman, F. Patmon, C. Li, H. Han, *University of California, Davis, Sacramento, California*

Chronic pain affects more Americans than diabetes, heart disease and cancer combined. Despite significant improvements in functional outcomes and pain management when referred to pain centers, a disparity exists in primary care providers referring to specialists for pain compared to other chronic diseases. This study explored referral patterns for older patients with different chronic diseases within a university healthcare system. A random sample of 1504 patients over 65 years old with chronic pain, cardiovascular disease, liver disease, pulmonary disease, and diabetes were identified by extracting data from the electronic health record (EHR) system. Patients with chronic pain were identified by diagnosis and  $>1$  year of opioid use. Patient referral records and emergency department (ED) visits for the previous 2 years were extracted. On average, patients were  $74.3 \pm 7.3$  (mean  $\pm$  SD) years old, (range 65 to 100 years), and 55.5% were female. Patients with chronic pain received significantly fewer referrals (mean  $\pm$  SD =  $0.49 \pm 0.99$ ;  $p < .01$ ) compared to those with cardiovascular ( $2.05 \pm 2.72$ ), liver ( $0.76 \pm 1.79$ ), and pulmonary ( $1.13 \pm 1.65$ ) disease. Significant differences were also noted in the number of ED visits. Exactly how these findings relate to adequacy of referral for patients with chronic pain to pain management centers by primary care providers remains to be clarified. Implications for future research include identifying predictors for referral to pain management centers and determining outcomes available through EHR data to evaluate the effectiveness of chronic pain treatment in the primary care setting.

### **THE PATIENT-DOCTOR RELATIONSHIP IN THE TREATMENT OF CARDIAC DISEASE AMONG OLDER LATINOS WITH SERIOUS MENTAL ILLNESS**

A.P. Gomes<sup>1,2</sup>, L.J. Cabassa<sup>2</sup>, *1. School of Social Work, Columbia University, New York, New York, 2. New York State Psychiatric Institute, New York, New York*

Older patients with serious mental illness (SMI) face substantial challenges in trying to manage comorbid medical conditions because of the nature of psychiatric illness. Minority status adds additional complexity when considering illness management. The quality of patient-provider interactions can impact medical treatment. Findings on older Hispanics with SMI and at risk for cardiovascular disease, and their understanding of the impact of the doctor-patient relationship on their care will be presented. Participants were recruited from a public mental health clinic in New York City. Five focus groups were conducted and analyzed using grounded theory. Positive interactions with providers included respectful communication. Negative interactions included feeling stigmatized due to psychiatric illness. Preferred interactions included patient-centered behaviors by providers, such as a personal warm style. What we learned from this analysis is that the quality of the relationships with their doctors has a clear impact on the healthcare experience of the patients studied.

## **SESSION 370 (POSTER)**

### **COGNITIVE FUNCTION AND THE THREE D'S**

#### **TRAJECTORIES OF COMBINED LABORATORY- AND EVERYDAY-BASED SPEED OF PROCESSING IN COMMUNITY-DWELLING OLDER ADULTS**

F. Lin<sup>1</sup>, D. Chen<sup>1</sup>, D. Vance<sup>2</sup>, M. Mapstone<sup>1</sup>, *1. University of Rochester Medical Center, Rochester, New York, 2. University of Alabama at Birmingham, Birmingham, Alabama*

Speed of processing (SOP) is among the first cognitive abilities to decline in normal aging. Purpose of this study was to: (1) characterize the trajectories of laboratory- and daily-based SOP over 5 years using latent class modeling; (2) explore the baseline individual-level profile that can predict the membership of trajectories; and (3) compare the changes of functional outcomes over time by the trajectories. A cohort study with secondary data analysis was conducted using data from the Advanced Cognitive Training for Independent and Vital Elderly randomized intervention trial. Participants included 2802 community-dwelling older adults without dementia at baseline. Participants' laboratory- and daily-based SOP and functional outcomes were assessed over 5 years, while variables in individual-level profile were collected at baseline. After controlling for covariates, the latent class model yielded 4 distinct trajectories: 4.6% of older adults had poor laboratory-based SOP and very poor daily-based SOP that both declined substantially over time; 17.9% had relatively poor laboratory- and daily-based SOP that declined moderately over time; 38.7% had relatively neutral laboratory- and daily-based SOP that maintained relatively stable over time; and 37.9% had relatively good laboratory- and daily-based SOP that declined slightly over time. Non-White, depression, subjective memory complaints, and several vascular factors predicted the membership in the trajectories. The trajectories significantly differed in the decline rate of activities of daily living, instrumental activities of daily living, and grip strength over time. Distinctly different longitudinal trajectories of laboratory- and daily-based SOP exist in old age, and are related to different trajectories of functional outcomes. Future interventions addressing SOP abilities should particularly target the vulnerable group with poor levels of SOP over time.

## PRE-DIABETES INCREASES THE RISK OF MILD COGNITIVE IMPAIRMENT (MCI): THE MAYO CLINIC STUDY OF AGING

R.O. Roberts, Y.E. Geda, D.S. Knopman, M.M. Mielke, R.H. Cha, V.S. Pankratz, W.A. Rocca, R.C. Petersen, *Mayo Clinic, Rochester, Minnesota*

**Objective:** To investigate the association of pre-diabetes with mild cognitive impairment (MCI), a putative predictor of dementia. **Background:** Type 2 diabetes (DM) has been associated with an increased risk of MCI. However, the association of pre-diabetes with MCI is uncertain. **Methods:** We evaluated a population-based cohort (n = 1,450, ages 70 years and older) using the Clinical Dementia Rating scale, a neurological evaluation, and neuropsychological testing at baseline and at 15-month follow-up visits. A panel of physicians, neuropsychologists, and nurses reviewed all the information to reach diagnoses of normal cognition, MCI, and dementia by consensus. At baseline, DM was assessed using the Rochester Epidemiology Project medical records-linkage system; fasting and random blood sugar (FBS, RBS), and hemoglobin A1c (HbA1c) levels were measured. In subjects without DM, pre-diabetes was defined as: 1) abnormal blood sugar (FBS  $\geq$  100 mg/dl or RBS  $\geq$  140 mg/dl) or HbA1c  $\geq$  5.7%, and 2) abnormal blood sugar and HbA1c  $\geq$  5.7%. **Results:** Over a median 4.0 years, 366 subjects developed MCI. Pre-diabetes (abnormal blood sugar and HbA1c  $\geq$  5.7%) was associated with MCI (hazard ratio [95%confidence interval]; 1.56 [1.05-2.31]) after adjustment for age, sex, education, apolipoprotein epsilon 4 allele, and stroke. After exclusion of subjects with a history of stroke the association persisted: 1.74 (1.02-2.97). By contrast, pre-diabetes defined as abnormal blood sugar or HbA1c  $\geq$  5.7% was not associated with incident MCI. **Conclusions/Relevance:** Pre-diabetes defined by both elevated blood sugar and HbA1c levels may be a risk factor for MCI in elderly persons.

## COGNITION RESULTS FROM THE RESVERATROL FOR IMPROVED PERFORMANCE IN ELDERLY (RIPE) TRIAL

T. Manini, M. Marsiske, W. Perlstein, C. Sozda, V. Dotson, S. Anton, *University of Florida, Gainesville, FL*

Resveratrol, a natural polyphenol found mainly in red wine and dark-skinned grape cultivars, has been shown to attenuate hippocampal cell death and protect against excitotoxic brain damage. We conducted a double-blind Phase IIa randomized, placebo controlled trial to determine the efficacy of resveratrol supplementation on cognition and brain activation in older adults (ClinicalTrials.gov identifier: NCT01126229). Cognitively intact older men and women (N=32; 73.0 $\pm$ 7.0 yrs) were randomized to three treatment groups (placebo, 300 mg/d or 1000 mg/d). Resveratrol was orally ingested resveratrol for 90 days (supplement extracted from *Polygonum Cuspidatum*). Cognition was tested using a comprehensive battery of assessments. A subset of individuals (N=11) underwent functional magnetic resonance imaging to examine hippocampal activation during memory encoding. Participants had 93% compliance rate throughout the trial. Treatment groups had similar effects in visual attention working memory, and short-term and semantic memory. Participants randomized to the 300 mg/d recalled 30% more words compared to other treatment groups (Eta<sup>2</sup>=0.05, p=0.20). Psychomotor speed was improved 10-25% in participants taking 1000 mg/d of resveratrol compared to other treatment groups (Eta<sup>2</sup>: 0.12, p=0.02). Hippocampal activation demonstrated a significant increase in participants taking 1000 mg/d compared to those taking placebo (Eta<sup>2</sup>=0.58, p=0.04), but no effect was seen in participants taking 300 mg/d. The data are supportive of a short-term course of resveratrol supplementation for memory, psychomotor speed and enhanced hippocampal activation. Future work with larger sample sizes and longer duration of supplementation are needed to confirm the findings.

## DISASTER PREPAREDNESS FOR VETERANS WITH DEMENTIA AND THEIR CAREGIVERS: EVOLUTION OF AN EDUCATIONAL INTERVENTION

N.L. Oliva, B. Wexler, G. Gullickson, M. Manco, A. Layton, S. McLean, S.R. Brunskill, *GRECC, Veterans Administration, Palo Alto, California*

**Background:** Sensory, cognitive and physiologic changes in older adults can result in barriers to awareness, communication and help-seeking and help-finding during a disaster. Individuals with dementia are at risk of isolation and injury due to cognitive impairment. This Pilot was designed to address these complex needs among community-dwelling Veterans. **Methods:** A multidisciplinary Disaster Kit Pilot planning committee from several VA Palo Alto Healthcare System (VAPAHCS) geriatrics programs was created, utilizing a Plan-Do-Check-Act (PDCA) Quality Improvement process model to identify and evaluate Pilot tasks. Tasks included design of a disaster kit model with supplies, tools and information customized for cognitively-impaired Veterans/their caregivers, and pre and post-intervention self-report surveys on disaster preparedness. One-hundred and sixty eight (168) Veterans with dementia and 132 caregivers were identified within VAPAHCS geriatric case-loads. **Results:** The pre-intervention survey was mailed to a total 278 caregivers/Veterans in mid-2011; 26% returned completed surveys (71/278). Two-thirds of respondents (68%, n=48) reported not having a disaster kit and 26% (n=17) Not at All Prepared for a disaster. The post-intervention survey (36% response, 44/123) revealed a substantial, positive shift in respondents' knowledge of key disaster preparation elements. Seventy-nine percent (79%, n=19) of respondents reported that they were prepared, with none reporting Not at All Prepared. **Conclusions:** Pre-intervention, few Veterans with dementia or caregivers reported that they were fully prepared for a disaster. Post-intervention, respondents reported much improved disaster preparation. Disaster preparedness in a vulnerable Veteran and caregiver population calls for anticipatory guidance and structured support such as that offered in this Pilot.

## POOR SELF-RATED PHYSICAL FITNESS IN MIDLIFE PREDICTS DEMENTIA IN OLD AGE

J. Kulmala<sup>1</sup>, A. Solomon<sup>2,3</sup>, T. Rantanen<sup>1</sup>, H. Soininen<sup>3,4</sup>, J. Tuomilehto<sup>5</sup>, M. Kivipelto<sup>2,3</sup>, *1. Department of Health Sciences, Gerontology Research Center, University of Jyväskylä, FI-40014 University of Jyväskylä, Finland, 2. Aging Research Center, Karolinska Institutet, Stockholm, Sweden, 3. Department of Neurology, University of Eastern Finland, Kuopio, Finland, 4. Department of Neurology, Kuopio University Hospital, Kuopio, Finland, 5. Department of Public Health, University of Helsinki, Helsinki, Finland*

Physical inactivity and chronic conditions, which are known risk factors for cognitive decline, correlate with poor self-rated fitness. This study aims to investigate, whether perceived physical fitness in midlife is associated with subsequent dementia. Participants of the Cardiovascular Risk Factors, Aging and Dementia (CAIDE) study were derived from random, population-based samples previously studied in a survey in 1972, 1977, 1982 or 1987. After an average follow-up of 21 years, 2000 survivors aged 65 to 79 were invited for a re-examination in 1998, and 1449 individuals (72 %) participated. Dementia was diagnosed in 61 participants, and 56 of the non-participants had a dementia diagnosis in their medical records. Age and gender adjusted logistic regression models were used to assess the association between midlife self-rated fitness and late-life dementia. Among participants, perceived poor physical fitness in midlife increased the risk of subsequent dementia more than four-fold when compared to persons with good perceived physical fitness (OR 4.1, 95% CI 1.8-9.7). Participants who rated their fitness as satisfactory did not have an increased risk for dementia (OR 1.9, 95% CI 0.9-4.0). The results were similar when also the non-participants were included. The preliminary results suggest that people who rate their physical fitness in midlife as poor may be at increased risk of

developing subsequent dementia. Therefore a self-report of poor physical functioning could be considered an early warning sign of cognitive decline in old age and preventive measures should be considered in this group.

#### DEMENTIA AND DELIRIUM AS PREDICTORS OF RECOVERY IN WALKING AFTER HIP FRACTURE

A.L. Gruber-Baldini<sup>1</sup>, E. Marcantonio<sup>2</sup>, E. Barr<sup>1</sup>, J.P. Brown<sup>1</sup>, D. Orwig<sup>1</sup>, M. Terrin<sup>1</sup>, J. Magaziner<sup>1</sup>, J.L. Carson<sup>3</sup>, 1. *University of Maryland School of Medicine, Baltimore, Maryland*, 2. *Beth Israel Deaconess Medical Center, Brookline, Massachusetts*, 3. *UMDNJ-Robert Wood Johnson Medical School, New Brunswick, New Jersey*

Delirium is common after hip fracture and associated with poorer functional outcomes. However, the independent associations of delirium, dementia, and persistence of delirium on recovery in walking ability have not been fully explored. The Transfusion Trigger Trial for Functional Outcomes in Cardiovascular Patients Undergoing Surgical Hip Fracture Repair (FOCUS) Cognitive Ancillary Study examined delirium and outcomes in 139 patients randomized to liberal versus restrictive blood transfusion. Delirium was assessed by direct interviews using the Confusion Assessment Method up to 4 times during hospitalization and at 45-day follow-up. Dementia was assessed using hospital medical records and IQCODE (>3.44) obtained during family informant interviews. Ability to walk independently (without human assistance) was obtained through telephone interviews with patient or a proxy at 30-day and 60-day follow-ups. Logistic regression models predicting walking ability included: delirium, dementia, delirium\*dementia interaction terms as well as treatment effect (not significant). Of 138 subjects with in-hospital delirium assessments, 61 (44.2%) had neither dementia nor delirium during hospitalization; 33 (23.9%) had delirium only; 16 (11.6%) had dementia only; and 28 (20.3%) had both. At 45-day follow-up n=15 (13.5% of 111 w/data) had delirium. Significant predictors of inability to walk were: 1) At 30-day: Dementia (OR=2.2, 95%CI:1.0-4.9) and in-hospital delirium (OR=2.5, 95%CI:1.2-5.3); 2) At 60-day: Delirium presence at 45-day follow-up (OR=5.9, 95%CI:1.3-16.0) and Dementia (OR=3.8, 96%CI:1.4-10.7), but not in-hospital delirium (OR=1.1, 95%CI:0.4-3.2). Accounting for pre-fracture dementia, delirium in hospital and at 45-Day follow-up were associated with failure to recover walking ability. Monitoring for delirium after hospital discharge may be beneficial.

#### HYDROCEPHALUS AS A CAUSE OF DELIRIUM AND COGNITIVE DECLINE IN AN ELDERLY MALE AFTER AORTIC VALVE REPLACEMENT: CASE REPORT

J. Diniz<sup>1</sup>, A. Frisoli<sup>1,2</sup>, A. Diniz<sup>1</sup>, M. Erlichman<sup>1</sup>, M. Maneschy<sup>1</sup>, D. Rangel<sup>1</sup>, S. Ingham<sup>1</sup>, A. Carvalho<sup>1</sup>, 1. *Cardiology Division, Federal University of Sao Paulo., São Paulo, Brazil*, 2. *Center of Aging and Health-Johns Hopkins University, Baltimore, Maryland*

The incidence of cognitive disorders and delirium in the elderly after exposure to extra corporeal circulation is high. Thromboembolism has been identified as a frequent cause, but in the majority of cases, the etiology has not been identified. We report the case of an elderly man who presented with delirium caused by hydrocephalus after an aortic valve replacement. Case report: PF, 85 years old, male, was admitted with episodes of syncope. He had hypertension, a coronary artery bypass grafting (CABG) 20 years ago and an aortic stenosis for 6 years. Five years ago, he was diagnosed with mild cognitive impairment and cranial computer tomography (CT) at the time showed brain volume reduction without signs of hydrocephalus. A week before admission, he developed dizziness, near syncope and sleepiness. In the ER, echocardiography showed critical aortic stenosis, with a valve orifice area of 0.6 cm<sup>2</sup>, mean gradient of 42 mmHg and the coronary angiography revealed an 85% obstruction of the bypass. The EuroSCORE was 29%. He underwent valve replacement and a new CABG. Before, during and after surgery, transcranial doppler sonography (TCD) was per-

formed, demonstrating an increase of about 50% of the flow of right and left middle cerebral artery after the procedure. In the immediate postoperative period, the patient developed delirium. Three weeks later, he was hospitalized due to infection and gait worsening. He developed progressive aphasia. CT showed enlargement of the ventricles without acute ischemia. Cerebrospinal fluid TAP test was performed showing clinical improvement. The radionuclide cisternography was positive for liquor reflux and he was submitted to a ventricular peritoneal shunt. In three days, the delirium had disappeared. In three months, his cognitive performance was better than in the preoperative period. Discussion: In the literature we identified two case reports of hydrocephalus after aortic valve replacement. One of them associated to posterior fossa ischemia, and the another case of hydrocephalus described was in a fetus after aortic valve replacement in a pregnant woman and this was attributed to changes in the blood-brain barrier caused by low flow. The importance of our case lies in two factors: 1- normal pressure hydrocephalus may be more frequent and an underestimated etiology of delirium and cognitive decline in elderly patients after aortic valve replacement; 2- the etiology of these syndromes can be associated not only to ischemic phenomena but also the neurometabolic effects consequent to the increase in cerebral blood flow, as evidenced in this case by TCD and probably present in other cases.

#### ELDERLY PEOPLE ARE ABLE TO IMPROVE THEIR COGNITIVE TEST PERFORMANCE IMMEDIATELY

N. Trushkova<sup>1</sup>, G. Zelano<sup>2</sup>, N. Ermolina<sup>3</sup>, 1. *Center of Motor Education, Aprilia, Italy*, 2. *Catholic University, Rome, Italy*, 3. *Astrakhan State University, Astrakhan, Russian Federation*

BACKGROUND: Several studies suggest that individuals have ability to rebound from mistakes and experience. The aim of our research is to examine how people of different ages change their performance during the second possibility (retest, executed immediately) of execution of motor and cognitive tests. METHODS: We have selected a total of 120 healthy people and created three groups. Group A (n = 40, mean aged 72 years) Group B (n = 40, mean age 40 years), Group C (n = 40, mean age 11 years). All participants have proposed to perform twice the following tests: TMT parts A and B, Digit Span Forward and backward Tests, Rey Auditory Verbal Learning Test, The Time-Get Up and Go Test, Dual Task Tests, Motor control test. RESULTS: Here we show percentage of the number of participants who improved the test. The tests greater improvement are : TMT-A: Group A-80%, Group B-88%, Group C-91% TMT-B: Group A-71%, Group B-68%, Group C-94%, TUG: Group A-60% Group B-80% Group C-54%; Rey Auditory Verbal Learning Test: Group A-80%,% Group B-82, Group C-80%; worst: Digit Span Forward: Group A-17%, Group B-20%, Group C-11%; Digit span Backward: Group A-40%, Group B-14%, Group C-17%; Dual Task Group A-17%, Group B-26%, Group C-31%; CONCLUSION: 80% of elderly people have the ability to improve performance of TMT test part A, 71%-TMT test part B,60%- The Time-Get Up and Go Test immediately.

#### VALIDATION OF THE MOCA-J TO EVALUATE THE TIME COURSE CHANGES OF COGNITIVE FUNCTION IN EARLY-STAGE AD

H. Suzuki, M. Yasunaga, T. Naganuma, S. Shinkai, Y. Fujiwara, *Research Teams for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Itabashi-ku, Tokyo, Japan*

Objective: We carried out a longitudinal study to examine the validity of the Japanese version of the Montreal Cognitive Assessment (MoCA-J) to evaluate the time course changes of cognitive function in older people with early-stage Alzheimer's disease (AD). Methods: Participants were recruited from the outpatient Memory Clinic of Tokyo Metropolitan Geriatric Hospital. The MoCA-J, the Mini-Mental State Examination (MMSE), and the revised version of Hasegawa's Dementia Scale (HDS-R), were applied to twenty three patients with early-

stage AD (NINCDS-ADRDA criteria, CDR 0.5 or 1, Male = 8, Female = 15, mean age = 76.0 ± 17.3, mean education = ). These neuropsychological tests were executed four times every year for three years. Serial changes of the scores were computed using a one-way repeated measures analysis of covariance. Results: In the first year, there were no changes in the scores for the three neuropsychological tests. In the MoCA-J, the scores significantly decreased every year from the second year onward (p<.01). An annual decrease in score was not seen in the MMSE or the HDS-R. Conclusions: The results of the longitudinal study over three years demonstrate that the MoCA-J is a useful assessment tool for evaluating the time course changes of cognitive function in patients with early-stage AD.

### MENTAL STATUS EVALUATION IN OLDER PATIENTS IN AN EMERGENCY DEPARTMENT IN ITALY: PRELIMINARY RESULTS

N. Zaffarana<sup>1</sup>, M. Cavallini<sup>1</sup>, S. Vanni<sup>2</sup>, E. Mossello<sup>1</sup>, N. Marchionni<sup>1</sup>, S. Grifoni<sup>2</sup>, R. Pini<sup>3</sup>, M. Di Bari<sup>1</sup>, 1. *Unit of Geriatrics, University of Firenze, Careggi Hospital, Firenze, Italy*, 2. *Emergency Department – Osservazione Breve, Careggi Hospital, Firenze, Italy*, 3. *Osservazione Breve Intensiva, University of Firenze, Careggi Hospital, Firenze, Italy*

**Purpose and Methods:** Older patients presenting to an Emergency Department (ED) often show mental status (MS) alterations that remain undetected. To estimate prevalence and accuracy of delirium (DEL) and dementia (DEM) diagnosis and their correlations with clinical and socio-demographic data, we analyzed retrospectively 1000 randomly selected subjects of the 13,837 presented to the ED of an academic hospital between 1/1 to 31/12/2010. Preliminary data based on first 200 are reported. Subjects with “white” triage code or communication disorders were excluded. Reports of a formal diagnosis of DEL and/or of >1 DSM-IV diagnostic criteria for DEL were noted on medical charts (MC), that were considered “suitable”, “partially suitable” or “unsuitable” for DEL diagnosis according with the accuracy of DSM-IV criteria reporting. A diagnosis of DEM was considered when reported by a patient’s kin or when specific report and/or therapy were recorded in MC. Results: 169 subjects mean age 83±5.3 y were analyzed, 52.7% were admitted to the hospital. Prevalence of DEL and/or DEM diagnosis in MC was 5.9% and 18.9% respectively. Even when DEL diagnosis was detected, accuracy of DSM-IV criteria recording was “unsuitable” to support such a diagnosis in 60% of cases, whereas under-reporting of DSM-IV criteria was as high as 94% in subjects with no DEL diagnosis report. Conclusions: This preliminary report shows a DEL prevalence in elderly subjects admitted to an ED lower than international literature, probably because of under-utilization of validated diagnostic tools. Conversely, the prevalence of a DEM diagnosis was comparable to previous studies in ED.

### MOTOR LEARNING TRAINING IS THE EFFECTIVE TOOL AGAINST COGNITIVE DECLINE

N. Trushkova<sup>1</sup>, G. Zelano<sup>2</sup>, N. Ermolina<sup>3</sup>, 1. *Center of Motor Education, Aprilia, Italy*, 2. *Catholic University, Rome, Italy*, 3. *Astrakhan State University, Astrakhan, Russian Federation*

**BACKGROUND:** People with mild cognitive decline having difficulties to perform the second concurrent cognitive activity during walking (dual task), which affects their independence. In our work we achieved effective action of cognitive-motor training that helps to increase the dual task capacity is equally effective against cognitive decline in elderly. **METHODS:** We established special gymnastics, based on complex motor learning training. We preferred exercises with a cognitive effort in the first phase of motor learning during the initial stages of practice. 62 subjects were recruited (28men and 34women) aged 65-85 years who showed initial problems with concentration and memory and found that in addition to this difficulty in performing the dual task. It was proposed to them to perform an hour of activity twice a week for

4 months. **RESULTS:** All participants showed improvement in all tests. The mean values obtained before and after surgery in the following tests: MMSE: 23.8 - 25.9; TMT-A: 78.9 - 60.8; GDS(30): 11.7 - 9.9; Digit Span Forward: 4.2 - 5.1; Rey Auditory Verbal Learning Test(first attempt): 3.8 - 5.6; Rey Auditory Verbal Learning Test(15’): 8.1- 9.9; Token test: 9.1 - 10.5; Tinetti tests: 26.0- 27.5; Time “Get -Up and Go”10.96- 9.56; Dual task 1:19.39-15.63; Dual task2:21.3-18.4 **CONCLUSION:** The practical method of complex motor learning training developed by us proved to be an important tool that helps increase the walking speed during dual task and improve cognitive function in people with mild cognitive decline.

### NEUROPSYCHOLOGICAL CORRELATES OF MOTOR PERFORMANCE IN OLDER ADULTS WITH COGNITIVE IMPAIRMENT

A. Mello, E. Mossello, D. Simoni, G. Rubbieri, C. Baroncini, M. Cavallini, N. Marchionni, M. Di Bari, *Unit of Gerontology and Geriatric Medicine, University of Florence, Florence, Italy*

**OBJECTIVE:** To evaluate neuropsychological and neuro-radiological features related to lower extremity performance in older adults with mild-to-moderate cognitive impairment, referred to an Italian geriatric outpatient memory clinic. **METHODS:** Each subject underwent a comprehensive geriatric assessment, including a physical performance test (Short Physical Performance Battery, SPPB) and a neuroimaging exam. Neuropsychological evaluation included Mini Mental State Examination (MMSE), immediate and delayed recall of Auditory Verbal Learning Test and of Story Recall Test, Digit Span Forward (DSF) and Backward, Trail Making Test A (TMTA) and B, Controlled Oral Word Association Task (COWAT), Semantic Verbal Fluency Test, Digit Cancellation Test (DCT), Colored Progressive Matrices, Freehand Copying of Drawings. **RESULTS:** 62 patients were enrolled (mean age 78, MMSE 25.7), 39% of them with mild dementia (92% Alzheimer’s Disease with or without white matter lesions - WML), 53% with Mild Cognitive Impairment and 8% with subjective memory impairment. 25% of sample had moderate-to-severe WML. Lower SPPB score was significantly associated with worse COWAT, TMTA, DSF and DCT score, as well as with female gender, WML and comorbidity. In several linear regression models, each including a single cognitive test, independent predictors of worse physical performance were female gender, WML, COWAT (p=0.02) and DCT (p=0.011). Lower physical performance and lower MMSE score were independently associated to disability in basic (p=0.012) and instrumental (p=0.011) activities of daily living, respectively. **CONCLUSIONS:** In this sample of cognitively impaired older adults, an independent association between frontal cognitive dysfunction and lower physical performance was observed, partly explained by coexistent WML.

### DIFFERENCE IN RATINGS ON THE PROFESSIONAL CAREGIVER BURDEN INDEX (PCBI) BY CHARACTERISTICS OF NURSING HOME RESIDENTS WITH DEMENTIA AND THEIR NURSING CAREGIVERS

J. Song, *College of Nursing, Korea University, Seoul, Republic of Korea*

Differently from the past, when extended family used to participate in caring for older generations, many Korean families today would like to seek professional care provided by skilled nursing facilities especially when the older adults suffer from dementia. Despite many studies have reported difficulties of professional caregivers who provide care for residents with dementia (RWD), little data is available among Korean nursing home (NH) caregivers. In this study, caregivers (N=145, mean age=50.69±5.70; men 3%) from six NHs (≥ 80 beds) were asked to complete the PCBI. RWDs cared for by the caregivers were evaluated by the Mini-Mental Status Exam (MMSE), Activities of Daily Living (ADL), and Cohen-Mansfield Agitation Inventory (CMAI); and their

demographic information was obtained by chart review. Pearson's correlation coefficients, t-tests, and ANOVAs were used for data analysis. Among the characteristics of RWDs, only CMAI score were correlated with the PCBI score ( $r=.275, p<.05$ ); and higher PCBI scores ( $p<.05$ ) were obtained in six of the 29 CMAI items including hitting, kicking, grabbing, inappropriate sexual behavior, and screaming. Caregivers who perceived themselves as "novice" or "experienced" in dementia care had higher PCBI scores than those indicated as "expert" ( $F=3.63, p=.029$ ). Findings of this study have important implications for study, care, and policy making related to those affected. Replication with a larger random sample is necessary to confirm this outcome. This work was supported by the Korea Research Foundation Grant funded by the Korean Government (KRF-2008-331-E00411) and by a Korea University Grant. Correspondence to Jun-Ah Song, RN, PhD (E-mail: [jasong@korea.ac.kr](mailto:jasong@korea.ac.kr)).

### **A PILOT STUDY TO EXAM THE PSYCHOMETRIC PROPERTIES OF A NEWLY DEVELOPED EVERYDAY MEMORY QUESTIONNAIRE**

Y. Chiu<sup>1,2</sup>, C.N. Huang<sup>1</sup>, H. Huang<sup>1,2</sup>, W. Hsu<sup>1,2</sup>, 1. *Chang-Gung University, Taoyuan, Taiwan*, 2. *Healthy Aging Research Center, Taoyuan, Taiwan*

Recent estimates suggest 15-24% of patients with dementia (PWDs) have impaired awareness. However, most of them focused on memory problems. Few have taken a multi-domain perspective to explore which domains of awareness may impact PWDs in different ways. Therefore, the purpose of this study was to test the psychometric properties of an innovative questionnaire, Everyday Memory Questionnaire (EMQ). It is a self-reported instrument, covering cognitive, behavioral and affective domains of awareness used by PWDs with early to mild stages. This study was a cross-sectional study design to recruit 153 elderly people living in community and PWDs from a memory clinic at a teaching hospital in northern Taiwan. The mean age was  $66.92\pm 19.05$  years old with the mean educational level of  $7.17\pm 5.87$  years. Among them, 31.1% was cognitively intact, 35.1% MCI, 24.5% AD. The Chronbach's alpha values for the cognitive, behavioral and affective domains of the EMQ were 0.93, 0.87, 0.88, respectively. The ICC values of inter-rater reliability for the three domains were 0.99, -0.62, 0.83, respectively (all  $p < 0.01$  except for the behavioral domain). The principal component factor analysis with varimax rotation resulted in an eight-factor solution for the cognitive domain of the EMQ, explaining 67.38% of variance, a six-factor solution for the behavioral domain, explaining 64.17% of variance, and a five-factor solution for the affective domain, explaining 67.00% of variance. The results showed the EMQ had good psychometric properties. Future studies should delineate the inter-correlations among these three domains and their relationships with other cognitive functions in PWDs.

### **EXECUTIVE DIFFICULTY AND APATHY IN BEHAVIORAL VARIANT FRONTOTEMPORAL DEGENERATION**

L.M. Massimo, L.K. Evans, B. Morgan, J. Powers, M. Grossman, *University of Pennsylvania, Philadelphia, Pennsylvania*

**Objective:** To investigate executive difficulty in apathetic subjects with behavioral variant Frontotemporal Degeneration (bvFTD) **Background:** The syndrome of apathy, defined as a reduction in self-generated or voluntary behavior is caused in part by disruption of the frontostriatal system. Impaired executive function, a common finding in bvFTD, has been associated with apathy. Previous approaches to measuring apathy have depended upon caregiver ratings, but are confounded by stress. Here we describe an objective, quantitative assessment of apathy. **Design:** We assessed apathetic bvFTD subjects (MMSE=26.92;  $n=17$ ) and demographically-matched controls (NC; MMSE=29;  $n=12$ ). To quantify apathy we assessed reaction time on two levels of task difficulty on a computerized experiment. We measured the total reaction time to lift the finger from the start key in response to a visual stimu-

lus and to press a target key to complete a trial (total latency). "Executive scores" were created to measure the difference in total latencies on the two levels of task difficulty. Executive scores were related to grey matter atrophy using voxel-based morphometry. **Results:** bvFTD subjects were slower on the simple task (bvFTD=991.67ms; NC=708.90ms;  $p=.017$ ) and the complex task (bvFTD=1874.29ms; NC=1021.63ms;  $p=.000$ ). They had larger difference scores than NC (bvFTD=859.77; NC=312.71;  $p=.000$ ). Executive scores in bvFTD were related to atrophy in several frontal regions including the right dorsolateral area. **Conclusion:** Patients with bvFTD have executive difficulty that contributes to apathy. These impairments cause an inability to carry out plans of action. This is related to atrophy in frontal regions important for goal-directed behavior.

### **THE FEELING TONE QUESTIONNAIRE (FTQ) AND ITS PSYCHOMETRIC PROPERTIES: ASSESSING DEPRESSIVE SYMPTOMS IN DEMENTED, COMMUNICATION-IMPAIRED OLDER PERSONS IN LONG TERM CARE FACILITIES**

J.A. Toner<sup>1,2</sup>, J.A. Teresi<sup>1,2</sup>, B. Gurland<sup>1</sup>, F. Tirumalasetti<sup>1</sup>, 1. *Columbia University Stroud Center, New York, New York*, 2. *New York State Psychiatric Institute, New York, New York*

This research aimed at developing a means of uncovering the subjective inner life of persons who are seriously limited in their ability to communicate feelings of distress associated with depression and other affective disorders. These analyses further developed a reliable and valid measure of affective disorder in communication-impaired elderly demented patients. The FTQ builds upon the existing knowledge in the field of assessment of depression in dementia by combining a direct assessment focus and clinical observation method and adding behaviorally anchored ratings of affect, or feeling-tone. It consists of 16 questions and 16 corresponding observation ratings of affect and was specifically designed for use with the communication-impaired demented patient. The FTQ uses standardized questions with simple wording. The total sample size was 764 respondents from four samples of respondents in New York City and upstate New York nursing homes and a psychiatric hospital. The mean age of the combined sample was 84. Internal consistency reliability and interrater reliability were good across all four samples, as was test-retest reliability. Concurrent convergent construct validity and discriminant validity coefficients were generally high. Criterion-related validity was provided in two samples utilizing DSM ratings by geriatric psychiatrists. These findings provide support for the view that the FTQ works well as a method of facilitating the recognition of depressive signs in the more severely communication-impaired group of demented older persons. Preliminary findings regarding the application of the FTQ in an evaluation study of staff training being conducted by the Consortium of New York Education Centers (CNYGEC), will be discussed.

### **TREATMENT DECISION-MAKING PREFERENCES OF ELDERLY DEPRESSED PRIMARY CARE PATIENTS**

P. Raue<sup>1</sup>, M.L. Bruce<sup>1</sup>, H.C. Schulberg<sup>1</sup>, D. D'Angelo<sup>1</sup>, M. Das<sup>2</sup>, B. Ladds<sup>2</sup>, M. Rodriguez<sup>2</sup>, J. Bell<sup>2</sup>, 1. *Psychiatry, Weill Cornell Medical College, White Plains, New York*, 2. *Lincoln Hospital, Bronx, New York*

**Purpose:** We examined factors associated with preferences for involvement in treatment decision-making among elderly depressed, inner-city primary care patients not currently receiving treatment. **Methods:** 53 primary care subjects aged 65+ who scored positive on the PHQ-9 ( $>10$ ) via standard physician screening were interviewed. Subjects were assessed for their preference for involvement in decision-making regarding depression, on a spectrum ranging from making decisions solely by themselves to shared decision-making to physician taking full responsibility. Subjects were also assessed for their preference for a variety of treatment approaches, depression severity, and other medical and psychosocial factors. **Results:** Subjects were predominantly Hispanic (47; 88%). Subjects were categorized as pre-



ferring sole (6; 11%), shared (30; 57%), or physician (17; 32%) responsibility for depression treatment decisions. Lower depression severity ( $r=-.33$ ,  $p=.02$ ) and higher MMSE ( $r=.30$ ,  $p=.04$ ) were associated with greater patient preference for taking sole responsibility for treatment decision-making. Most subjects (37; 70%) ranked some form of active treatment (psychotherapy or medication) as their first choice, while 16 (30%) ranked complementary approaches (exercise, religious activities, herbal remedies) as their first choice. Younger age ( $t=-3.8$ ,  $p=.001$ ) and prior treatment ( $\chi^2=4.9$ ,  $p=.03$ ) were associated with preference for active treatment. Conclusions: Among untreated elderly depressed patients from an inner city hospital, a number of sociodemographic and clinical variables were associated with preference for level of involvement in depression treatment decision-making, and for type of treatment preferred. Findings suggest that one way primary care physicians may provide patient-centered care is by understanding patients' preferred level of involvement in decision-making.

### **BRAIN-DERIVED NEUROTROPHIC FACTOR AND DEPRESSIVE SYMPTOMS IN THE HEALTH ABC STUDY**

W. Santos-Modesitt<sup>1,2</sup>, K. Yaffe<sup>1,2</sup>, A.L. Byers<sup>1,2</sup>, E.M. Simonsick<sup>3</sup>, S. Satterfield<sup>4</sup>, J.A. Cauley<sup>5</sup>, T.B. Harris<sup>3</sup>, D.E. Barnes<sup>1,2</sup>, 1. *University of California, San Francisco, San Francisco, California*, 2. *San Francisco Veteran's Affairs Medical Center, San Francisco, California*, 3. *National Institute on Aging-National Institutes of Health, Bethesda, Maryland*, 4. *University of Tennessee Health Science Center, Memphis, Tennessee*, 5. *University of Pittsburgh, Pittsburgh, Pennsylvania*

Background: Serum brain-derived neurotrophic factor (BDNF) levels have been found to be lower in clinically based studies of patients with major depressive disorder (MDD) and to increase with antidepressant treatment. However, little is known about the association between BDNF and depressive symptoms in community-dwelling, healthy older adults, and few prior studies have included older adults or non-white subjects. We examined the cross-sectional associations between serum BDNF, depressive symptoms and antidepressant usage in HABC, a community-based cohort study of white and black older adults. Methods: Cross-sectional analyses of 923 subjects (mean age=75±3; 52% women; 42% Black), in year two of study, were performed. Depressive symptoms were assessed with the 15-item Geriatric Depression Scale (GDS-15) with scores ≥6 suggesting depression. BDNF was assayed using ELISA. ANOVA was used to compare mean GDS scores across BDNF-quartiles (quartiles 1-4=low-high) and mean BDNF levels as a function of depressive symptoms and antidepressant use. Results: Mean (standard deviation [SD]) GDS-15 scores did not differ across BDNF-quartiles: 1.4 (1.8), 1.4 (1.9), 1.3 (1.7), and 1.3 (1.5) respectively, ( $F=0.40$ ,  $df=3$ ,  $p=0.7253$ ). Likewise, mean BDNF levels did not differ by depressive symptoms or antidepressant usage (mean [SD] ng/mL): low symptoms/no antidepressant, 24.0 (8.7); low symptoms+antidepressant, 21.5 (8.2); high symptoms/no antidepressant, 22.6 (8.3); high symptoms+antidepressant, 26.7 (11.3) ( $F=1.92$ ;  $df=3$ ;  $p=0.12$ ). Conclusions: We found no concurrent associations between depressive symptoms, antidepressant medications and serum BDNF in this older adult cohort. BDNF may not be associated with lower-level depressive symptoms, or longitudinal studies may be needed to observe associations in healthy elders.

### **IMPACT OF STRESS IN ADULT CHILDREN CARING FOR PARENTS WITH DEMENTIA**

L.M. Solberg<sup>1</sup>, L.B. Solberg<sup>2</sup>, E.N. Peterson<sup>1</sup>, 1. *Internal Medicine and Public Health, Vanderbilt University School of Medicine, Nashville, Tennessee*, 2. *Meharry Medical College, Nashville, Tennessee*

Background: Adults caring for parents and their own children are the "sandwich generation". Their stress is noted in the behavioral sciences, but largely absent in medical literature. Clinically adult children accompanying parents with dementia verbalized distress. This IRB-

approved survey determined, among a convenience sample, the impact of emotional and social changes and financial burden in the caregiver role. Methods: Study setting was a geriatric private practice. Respondents completed a 51-item survey (Cronbach's alpha .80) on impact of caregiving on emotion, stress, finances, and coping mechanisms. Descriptive statistics were conducted using SPSS. Results: Of those surveyed 85/95(89%) were returned and 45/85(53%) were included. On average caregivers were 54 years old, 36/45(80%) women, 28/45(62%) were married, 38/45(84%) had children, 18/45(40%) were "sandwich generation." There was no significant difference in mean caregiver burden between sandwich and non-sandwich generations. Caregivers reported little impact on professional lives. Over a third reported stress providing daily care, felt more irritable, and more feelings of anxiety. 24/45(53%) reported taking their parent to doctors' appointments emotionally difficult. Participating in activities of interest/hobbies decreased, but not time spent with friends. Helpful services were seminars on care of demented parents (58%) and on coping mechanisms (53%), and meetings with social workers for resource availability (63%). Conclusions: Adult children caring for demented parents were negatively emotionally impacted with stress, anxiety, and sadness. Attention should be directed to the caregivers' emotional well-being during routine care of the elderly. Further program development supporting adult children caregivers with coping mechanisms identified may be beneficial.

### **RELATIONSHIP AMONG FAMILIARITY, DEPRESSION, COGNITION, AND ACTIVITY OF DAILY LIVING IN ELDERLY RESIDING IN LONG TERM CARE FACILITIES**

Y. Lee, G. Hong, *Hanyang University, Seoul, Republic of Korea*

The concept of familiarity is pretty well applied in environments in long-term care facilities; however, little information exists about the relationship between familiarity and other health outcomes. Therefore, the purpose of the study was to understand the relationships among familiarity, depression, cognition, and activities of daily living (ADLs). Descriptive study design was used through face-to-face interviews. Data collection was done from October to December, 2011. Subjects were taken from 6 long-term care facilities of more than 80 beds in Korea, and a convenient sample of 162 elderly who were over 65 years of age, had lived in the facility for more than a month, had agreed to participate, and scored more than 13 out of 30 on the Korean version of Mini-Mental Status Examination for screening dementia (MMSE-DS). Instruments were included familiarity scale, Korean version of the Modified Barthel Index, the Cornell Scale for Depression and Dementia (CSDD), and MMSE-DS. Mean age was 79.7(SD=7.27), and the majority of the subjects was female (77.2%). Familiarity was significant by the duration of education ( $F=3.237$ ,  $p=.042$ ). Mean score of MMSE-DS was 18.03, and showed a significance in education ( $F=8.713$ ,  $p=.000$ ), current diagnosis ( $F=3.782$ ,  $p=.025$ ), and existence of life-long occupation ( $F=-2.190$ ,  $p=.030$ ). There was a significant negative correlation between familiarity and depression ( $r=-.192$ ,  $p=.016$ ), while depression and ADLs showed a significant positive correlation ( $r=.281$ ,  $p=.000$ ). It is important to understand the individualized familiarity of elderly living in long-term care facilities, and it is necessary to develop intervention programs that allow for patient centered nursing.

### **CROSS-LAGGED ANALYSES OF COGNITIVE FUNCTION AND DEPRESSIVE SYMPTOMS IN THE KOREA LONGITUDINAL STUDY OF AGING**

J. Yoon, R.L. Brown, *School of Nursing, Univ of Wisconsin-Madison, Madison, Wisconsin*

Studies have shown an association between depressive symptoms and cognitive decline in older adults; however, the nature of this relationship remains ambiguous. This study provides evidence

for prospective associations between cognitive function and depression using a cross-lagged panel model, a specific application of structural equation modeling to draw inferences about or causal relationship between multiple constructs over time based on a longitudinal research design. The data from a longitudinal panel study, the Korean Longitudinal Study of Aging, surveyed a nationally representative sample in the community every two years. Completed surveys for 2006 (T1) and 2008 (T2) were analyzed for 3,469 adults. An auto-regressive, cross-lagged path analysis was performed to examine the reciprocal relationship between depressive symptoms and cognitive function over time, controlling for age, gender, satisfaction with income, marital status, number of children, comorbidity, and IADL. Results indicate that the two-year cross lagged effect of depressive symptoms (T1) on cognitive function (T2) was significant ( $\gamma = -0.032$ ); however, the two-year cross lagged effect of cognitive function (T1) on depressive symptoms (T2) did not achieve significance. Results of this study show that depressive symptoms predicted subsequent changes in cognitive function but not vice versa. To help understand these relationships, additional models were run to examine whether the association between depressive symptoms and cognitive function might be attributed to the social activity level or having close relationships with friends or relatives; however, the lagged effects of the two social network variables were not significant for depressive symptoms nor cognitive function.

#### **IMPROVED MMSE AND 3MS SCORES POST REAL COGNITIVE TRAINING INTERVENTION**

R.E. Herman, E.K. Smith, K. Mees, K.N. Williams, *School of Nursing, Univ of Kansas, Kansas City, Kansas*

The Reasoning Exercises in Assisted Living (REAL) study tested an intervention designed to improve reasoning and problem solving skills for AL residents. As part of this study The Mini-Mental Status Exam (MMSE) and the Modified Mini-Mental State Examination (3MS), were administered to assess the cognitive status of participants. The MMSE has been widely used as a brief cognitive screening tool since its introduction (MMSE; Folstein, Folstein, & McHugh, 1975). Teng & Chui (1987) developed the 3MS, to address shortcoming of the MMSE. In the 3MS four subtests were added and a modified scoring system allowed for partial credit on some items increasing the maximum score from 30 to 100 points. Since both the MMSE and the 3MS can be administered at the same time, we used both screening tools to measure cognitive status. Test-retest scores generally remain stable over short intervals (<3 months) for non-impaired older adults (Tombaugh, 2005). Three groups of resident volunteers were tested, the intervention group, an attention control (placebo) group, and a no treatment (control) group. The intervention and placebo groups completed six training sessions over a three week period. Pre-intervention and immediate post-intervention MMSE and 3MS assessment scores were compared. Residents' MMSE and 3MS scores in the REAL group increased significantly from pre- to post-intervention ( $t_{mmse} = -4.88$ ,  $p_{mmse} = .000$ ,  $t_{3ms} = -3.73$ ,  $p_{3ms} = .001$ ). Scores in the placebo and control group remained statistically unchanged from pre- to post-intervention. REAL training improved cognitive performance as assessed by the MMSE and the 3MS.

#### **INAPPROPRIATE DRUG USE IN ELDERLY PATIENT WITH ADVANCED COGNITIVE IMPAIRMENT: RESULTS FROM THE SHELTER STUDY**

F. Landi, R. Liperoti, G. Colloca, R. Bernabei, G. Onder, *Geriatric (CEMI), Catholic University of Rome, Rome, Italy, Italy*

**Aim:** The aim of this study was to explore appropriateness of drug use in elderly patients with advanced cognitive impairment living in Nursing Home (NH) in Europe. **Methods:** Analyses are based on a sample of 1449 NH residents with advanced cognitive impairment, admit-

ted to 57 NH in 7 European Countries and 1 non EU country, participating to the Services and Health for Elderly in Long TERM care (SHELTER) study, a project funded by the Seventh Framework Programme of the EU. Drug appropriateness was defined based on Holmes criteria (J Am Geriatr Soc. 2008). Results: inappropriate drug use was observed in 643 residents (44.9%) and it was directly associated with specific disease including diabetes (OR 1.64; 95% CI 1.21-2.24), heart failure (OR 1.48; 95% CI 1.04-2.09), stroke (OR 1.43; 95% CI 1.06-1.93), and recent hospitalization (OR 1.69; 95% CI 1.20-2.39). An inverse relation with inappropriate drug use was shown for a presence of geriatrician in the staff (OR 0.55; 95% CI 0.39-0.7) and assistance required in ADL (OR 0.82; 95% CI 0.71-0.94). **Conclusions:** Inappropriate drugs use is common among NH residents. Its determinants include comorbidities, recent hospitalization and functional status. Geriatric care is associated with reduced rate of inappropriate drug use.

#### **AD PATHOLOGY AND CEREBRAL INFARCTIONS ARE ASSOCIATED WITH MEMORY AND EXECUTIVE FUNCTIONING ONE AND FIVE-YEARS BEFORE DEATH**

F.M. Yang<sup>1</sup>, A. Grigorenko<sup>2</sup>, D. Tommet<sup>2</sup>, S. Farias<sup>3</sup>, D.M. Mungas<sup>3</sup>, D. Bennett<sup>4</sup>, R. Jones<sup>1</sup>, P.K. Crane<sup>5</sup>, *1. Institute for Aging Research, Hebrew SeniorLife, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, 2. Institute for Aging Research, Hebrew SeniorLife, Boston, Massachusetts, 3. University of California, Davis, Department of Neurology, UC Davis Alzheimer's Center, Davis, California, 4. Rush University, Rush Alzheimer's Disease Center, Chicago, Illinois, 5. University of Washington, Department of Medicine, Seattle, Washington*

**Objective:** To understand the differential effects of cerebral infarctions and AD pathology on memory and executive functioning performance. **Methods:** Participants from the Religious Orders Study (n=440) followed from enrollment to death with annual neuropsychological evaluations. Standard procedures for brain removal and neuropathology evaluation were conducted at autopsy. We used structural equation modeling to determine the independent effects of AD pathology and cerebral infarctions at autopsy on overall cognition and on specific cognitive tests. **Results:** AD pathology and cerebral infarctions at autopsy were independently associated with poorer overall cognition one year and five years prior to death (all p values <0.05 except as indicated). AD pathology at autopsy was associated with additional deficits in episodic memory (word list recognition, word list delayed recall, Story A delayed recall, East Boston delayed recall { $p=0.09$ }) but relative preservation of working memory (digit ordering) at five years prior to death. There were no additional effects of cerebral infarctions at autopsy on specific cognitive tests five years prior to death. AD pathology at autopsy was associated with additional deficits in episodic memory (word list recognition, East Boston immediate recall { $p=0.09$ }) and semantic memory (Boston naming) at one year prior to death. Cerebral infarctions at autopsy were associated with additional deficits in perceptual speed (number comparisons and symbol digit) at one year prior to death. **Conclusion:** Understanding the differential effects of AD pathology and cerebral infarctions will help improve clinical detection of AD and potentially vascular dementia using easily-administrable, inexpensive, and well-established neuropsychological tests.

#### **SUBJECTIVE AND OBJECTIVE COGNITIVE DYSFUNCTION IN OLDER ADULTS WITH RHEUMATOID ARTHRITIS**

S. Shin<sup>1</sup>, P. Katz<sup>2</sup>, M.I. Wallhagen<sup>1</sup>, L. Julian<sup>2</sup>, *1. Department of Physiological Nursing, University of California, San Francisco, San Francisco, California, 2. Department of Medicine, University of California, San Francisco, San Francisco, California*

**Purpose:** Research shows a gap between perceived cognitive dysfunction and objective neuropsychological performance in persons with chronic diseases. This study explored this relationship in older adults

with RA. Methods: Individuals (age $\geq$ 55) from a longitudinal cohort study of RA participated in a study visit that included physical, psychosocial, and biological metrics. Subjective cognitive dysfunction was assessed using the Perceived Deficits Questionnaire (PDQ). Objective cognitive impairment was assessed using a battery of 12 standardized neuropsychological measures yielding 16 indices. On each test, subjects were classified as 'impaired' if they performed 1 SD below age-based population norms. A total cognitive impairment score was calculated by summing the transformed scores. Multiple regression analyses controlling for gender, race, marital status, income, education, disease duration, disease severity, depression, and fatigue were conducted to identify the relationship between objective and subjective cognitive measures. Results: 84 subjects with mean ( $\pm$ SD) age of 64 ( $\pm$ 6.9) years were included. Mean total cognitive impairment score was 2.5 ( $\pm$ 2.1). Mean PDQ score was 5.6 ( $\pm$ 3.8). In the multivariate analysis, there was no significant relationship between PDQ score and total cognitive impairment score. However, depression and fatigue ( $\beta$ =0.27,  $p$ =0.024;  $\beta$ =0.25,  $p$ =0.026) were significantly associated with the PDQ score. Conclusion: There was no significant relationship between perceived cognitive dysfunction and objective neuropsychological performance in this cohort. Depression and fatigue were significantly associated with perceived cognitive dysfunction. Findings emphasize the gap between subjective and objective measures of cognitive impairment and the importance of considering psychological factors in the context of cognitive complaints in clinical settings.

#### **CREATIVE ART ENHANCING COGNITIVELY LIMITED SENIORS' LIVES: AN EVALUATION OF THE ARTMAIL PROJECT**

S. Shreeniwas<sup>1</sup>, L. Miller<sup>2</sup>, E. Thomas<sup>1</sup>, E. Chia<sup>1</sup>, 1. *Human Devpt and Family Studies, UNC Greensboro, Greensboro, North Carolina*, 2. *Creative Aging Network-NC, Greensboro, North Carolina*

Participating in structured art programs is said to improve physical and mental health and social functioning of older adults including those with dementia. However, research on this subject is new, and awareness of these programs is limited. Feedback for improved program design and delivery is also needed. In a partnership between UNC Greensboro and the Center for Creative Aging, NC, we conducted a pilot project in North Carolina (USA) in 2011 to evaluate whether participating in a 10 week art exchange project called ARTmail improved mood and social connectedness among seniors. Although 60 seniors took part in the ARTmail program, most of them with a cognitive limitation, only 31 seniors took part in the evaluation, mostly because the legal representative of many cognitively limited seniors did not give permission for them to participate in the evaluation. We collected baseline and endline information on socio-demographic background; physical health, functional status; and depression, loneliness, and mood / connectedness scales appropriate for dementia and non-dementia groups. We also conducted qualitative interviews with selected site staff, volunteers, and participants. Our findings indicated that among seniors with cognitive limitations, the mean of mood scores at endline was lower than at baseline, suggesting improved mood (approaching significance at the .10 level). A larger sample would likely have shown significant results. We conclude with a discussion of observations and suggestions from staff, volunteers, and participants, on experiences with the program and suggestions for improved implementation in future.

#### **ANTIPSYCHOTIC AND OTHER PSYCHOPHARMACOLOGICAL MEDICATION USE IN NURSING HOME RESIDENTS WITH DELIRIUM**

L. Simoni-Wastila<sup>1</sup>, Y. Wei<sup>1</sup>, C.S. Franey<sup>1</sup>, M. Luong<sup>1</sup>, G.B. Rattinger<sup>1</sup>, T. Huang<sup>1</sup>, I.H. Zuckerman<sup>1</sup>, J.A. Lucas<sup>2</sup>, 1. *School of Pharmacy, University of Maryland, Baltimore, Maryland*, 2. *Rutgers University, New Brunswick, New Jersey*

Delirium in nursing home residents is prevalent, problematic, and potentially preventable. Individuals with dementia are at increased risk for developing delirium, especially when exposed to medications with anticholinergic properties. Thus, minimizing psychopharmacological medication (PPM) use can reduce delirium occurrence. Although antipsychotics effectively treat delirium, they are reserved for individuals with severe agitation, for short duration, at lowest possible dose. In this study, we examine antipsychotic and PPM treatment patterns in NH older adults with delirium. Using 2006-2007 Medicare data (Parts A, B, and D) linked to Minimum Data Set files, we developed a national cohort of continuously-enrolled Medicare beneficiaries in NHs for  $\geq$ 100 days ( $n$ =69,832). Dependent measures included: 1) prevalence of antipsychotic and PPM use; and 2) appropriateness of antipsychotic and PPM use by indication, duration, and dose. In 2007, 35.2% of residents exhibited delirium; of these, 43.2% received at least one antipsychotic. Other PPM use ranged from 38.4% (antidepressants) to 39.4% (anxiolytics). Among residents with delirium who received an antipsychotic, 23.5% had no other clinically appropriate diagnosis warranting antipsychotic use. The mean duration of use among delirium-only antipsychotic users was 195 ( $\pm$ 121) days, with 20.1% receiving  $\geq$ 1 antipsychotics daily and 5.8% exceeding the mean recommended maximum geriatric dose. Findings suggest antipsychotic and other PPM use and exposure is prevalent and persistent among NH residents with delirium, contrary to recommended treatment guidelines. Further longitudinal findings investigating the temporality of symptoms relative to antipsychotic and PPM use, as well as delineating precipitating factors and outcomes, will be presented.

#### **PROCESS FOR RECRUITING PERSONS WITH LATE-STAGE DEMENTIA FOR NURSING HOME RESEARCH**

M.B. Aselage<sup>1,2</sup>, E.J. Amella<sup>3</sup>, J. Zapka<sup>3</sup>, M. Mueller<sup>3</sup>, C. Beck<sup>4</sup>, 1. *Duke University School of Nursing, Durham, North Carolina*, 2. *John A. Hartford BAGNC Scholar, New York, New York*, 3. *Medical University of South Carolina School of Nursing, Charleston, South Carolina*, 4. *University of Arkansas for Medical Sciences College of Nursing, Durham, North Carolina*

Background: In 2010, the Department of Health and Human Services announced a proposal to enhance the Common Rule. "Additional safeguards" are recommended when recruiting persons with dementia (PWD) into research studies, but no clear or consistent guidelines exist for researchers working with this vulnerable population. Purpose: To discuss a process of recruiting, screening, and enrolling persons with late-stage dementia into nursing home research studies. Methods: The sampling procedure used in this study was based on an algorithm developed from a 2009 literature review, titled the "Partnership of Consent". This study, conducted in 2 for-profit southeastern United States nursing homes enrolling 5 PWDs per facility, was the first to implement the algorithm. From onset through conclusion of the study, researchers partnered with the legally authorized representatives and nursing home staff to minimize research burden on the PWD and used a continued assent process. Findings: After implementation, the algorithm was enhanced by grouping components into phases of the research process: recruitment, obtaining informed consent, and assent of the PWD during screening and as an ongoing process. New techniques for improving recruitment efficiency by were discovered, including maximizing use of the Minimum Data Set for initial screening of subjects. Conclusions: Information related to specific approaches and process information about the consent process being used with PWD in the nursing home is much

needed. This study provides a potential best practice standard regarding informed consent and assent for PWD; guidelines much needed by regulatory agencies and researchers to protect human subjects.

#### **“GETTING TO KNOW ME”: ENHANCING SKILLS IN THE CARE OF PEOPLE WITH DEMENTIA IN GENERAL HOSPITALS: THE DEVELOPMENT AND EVALUATION OF A TRAINING PROGRAMME**

R. Elvish<sup>1,3</sup>, S. Burrow<sup>1</sup>, J. Keady<sup>1,2</sup>, K. Harney<sup>2</sup>, P. Graham<sup>4</sup>, J. Gregory<sup>1,4</sup>, R. Cawley<sup>1</sup>, 1. *School of Nursing, Midwifery and Social Work, University of Manchester, Manchester, United Kingdom*, 2. *Greater Manchester West Mental Health NHS Foundation Trust, Greater Manchester, United Kingdom*, 3. *Pennine Care NHS Foundation Trust, Greater Manchester, United Kingdom*, 4. *Royal Bolton Hospital NHS Foundation Trust, Greater Manchester, United Kingdom*

**Background:** Recent findings suggest that the care of people with dementia in general hospital settings in the UK should be improved. The aims of the current study were: i) to design and develop a dementia care training programme to be used within general hospitals; ii) to evaluate the impact of the training programme; and iii) to design scales with good psychometric properties to measure knowledge in dementia and confidence in working with people with dementia. **Methods:** The “Getting to know me” training programme was designed as a flexible training package comprising: i) a range of materials to be used by staff and patients; and ii) a DVD made in collaboration with people with dementia and carers. The training programme was delivered to staff at a hospital in Greater Manchester, UK (n=59). The evaluation of the programme consisted of a pre-post design using questionnaire and focus group methodology. **Results:** Following attendance at the training programme, knowledge in dementia increased (n=59), and confidence in working with people with dementia improved (n=51). The presentation will also report on additional findings, and on the psychometric properties of newly developed scales that have been designed as part of the study: Knowledge in Dementia Scale (n=111) and Confidence in Dementia Scale (n=105). **Discussion:** Significant changes in knowledge in dementia and confidence in working with people with dementia occurred in general hospital staff following attendance at the “Getting to know me” training programme. The interpretation and wider impact of the findings will be discussed.

D.L. Woods, M. Yefimova, *Center for the Advancement of Gerontological Nursing Science, School of Nursing, University of California, Los Angeles, Los Angeles, California*

**Background:** Circadian rhythm disruption, alterations in sleep wake activity and daytime napping is consistently reported in NH residents with dementia. Normally, within individual sleep-wake and daytime napping activity are relatively stable, while day-to-day instability is an indication of a circadian rhythm disruption. The concept of allostatic load, a measure of cumulative biological burden over a lifetime, may be a helpful model for cortisol diurnal rhythm and daytime napping activity. The purpose of this study was to examine the association between intra-individual daytime napping episodes, and basal cortisol diurnal rhythm in NH residents with dementia. **Method:** In this within-individual longitudinal design (N = 51), we observed and recorded daytime napping every 20 min for 10 hr per day for 4 days. We obtained saliva samples 4 times daily for 4 days (upon participants’ waking within 30–45 min, 6 hr, and 12 hr after participants’ wake time). **Results:** Participants were categorized as high changers (HCs), day-to-day instability, or low changers (LCs), day-to-day stability. There was a significant difference between HC and LC in napping episodes ( $F = 4.86$ ,  $p = 0.03$ ) with an interaction effect of evening cortisol on napping episodes in the HC group ( $F = 10.161$ ,  $p = .001$ ). There were no significant differences in resident characteristics between groups. **Conclusions:** NH

residents with unstable daytime day-to-day napping episodes are more responsive to alterations in evening cortisol, an index of a dysregulated HPA axis. They may also be more amenable to environmental intervention, an avenue for further research.

#### **WHAT CHANGES AND WHAT REMAINS: PERCEPTIONS OF QUALITY OF LIFE BY PEOPLE WITH DEMENTIA**

K. Samsi, *Social Care Workforce Research Unit, King’s College London, London, United Kingdom*

Change is inherent in narratives of the lived experience of dementia. The concept of continuity, however, is less well understood. Using Interpretative Phenomenological Analysis, this paper explores the significance of continuity, as a means for people with dementia to cope on a daily basis. Nine people with dementia and their 9 carers were interviewed about change in quality of life in dementia; all had previously participated in a longitudinal study measuring change in their quality of life. Interviews revealed that, alongside discussions of change and deterioration, people with dementia were keen to emphasize continuity and retained factors, abilities that could be managed and components of their lives that had remained intact, such as lifelong personality characteristics, habits and an innate internal sense of self. Change was discussed in the context of techniques used to manage and accommodate change. Coping strategies used often related to past habits and personality characteristics, which in turn further reinforced continuity of individual’s sense of self. Reports of positive life quality appeared related to the level of continuity people with dementia expressed. The role of carers in supporting these feelings is also explored. This is the first study to look in detail at how elements of continuity can enhance the lives of people with dementia and carers and enable them to cope more effectively and experience greater well-being. This study has methodological relevance for the field of quality of life, and in the development of long-term support strategies for people with dementia.

#### **EVIDENCE BASED INTERVENTIONS IN DEMENTIA: THE EVIDEM EARLY DIAGNOSIS TRIAL**

S. Iliffe, J. Wilcock, M. Griffin, P. Jain, I. Thune-Boyle, F. Lefford, D. Rapp, *Primary care and population science, UCL, London, England, United Kingdom*

**Background:** Previous research has shown that the ability of primary care physicians to recognise dementia can be improved by education, but that the subsequent management of the patient does not change. Incentivisation of dementia diagnosis and management in the UK since 2006 has not altered recorded incidence or prevalence. **Aim:** To improve clinical management of people with dementia in primary care **Methods:** Cluster randomised controlled trial of an educational intervention to enhance diagnostic and management skills in dementia among primary care staff. The educational intervention was developed by expert users, including carers, based on state-of-the-art educational principles for adult learning, and was used within the primary care workplace. **Participants & settings:** 22 group practices in SE England **Measures:** Case ascertainment, clinical reviews of patients with dementia, and concordance with management guidelines. **Results:** Twenty two practices participated and identified 800 people with dementia, of whom 167 gave permission for detailed analysis of their medical records. The trial’s findings will be reported, including case ascertainment, frequency of dementia clinical reviews and concordance with dementia management guidelines on counselling and provision of information, support for carers and management of BPSD (including use of anti-psychotic medication) **Conclusions:** The implications of the trial for clinical practice in will be discussed, in terms of professional learning and system design.

## RESEARCHING THE CARE-BASED HAIR SALON EXPERIENCE: DEVELOPING A FULL-BODIED APPROACH TO DEMENTIA CARE

S. Campbell, R. Ward, *School of Nursing, Midwifery and Social Work, University of Manchester, Manchester, United Kingdom*

Until recently, research in dementia care has been characterised by a fairly limited methodological repertoire. In particular, a reliance on observational approaches has meant that the evidence-base emphasises that which can be seen or heard and the 'readable' aspects of care. Much that is unobservable and non-discursive has been neglected and its significance underplayed. In this paper we advocate a more 'full-bodied' approach to dementia research as we discuss the challenges and insights associated with a two-year ethnographic study of care-based hair salons. The Hair and Care project used a qualitatively-driven mixed method approach to investigate the experience of attending the hair salon for people with dementia residing in care. Our aim was not only to explore the representational and symbolic importance of appearance and image in care but also the intrapersonal, embodied and sensory aspects of appearance-related encounters. In order to do this we have employed methods less familiar to dementia studies drawing particularly upon visual and sensory ethnography. Using our own bodies as research tools has been integral to this process. Our experiences underline the importance of the sensory and embodied realm in the maintenance of a social presence for people whose capacity to communicate and interact in more conventional ways may have deteriorated. The research signals the importance for practice and policy of attending to the unobservable and non-discursive domains and for research to extend beyond conventional approaches and thinking in order to gain a fuller appreciation of the everyday lives of people living with dementia.

## THE WATERMEMORIES SWIMMING CLUB

C. Neville<sup>1</sup>, T. Henwood<sup>1</sup>, K. Clifton<sup>1</sup>, E. Beattie<sup>2</sup>, *1. School of Nursing and Midwifery, The University of Queensland, Ipswich, Queensland, Australia, 2. Queensland University of Technology, Brisbane, Queensland, Australia*

This pilot project aimed to try something different - rekindle positive memories of swimming in people with dementia who enjoyed swimming throughout their lives, and involve them in active swimming again using a swimming club intervention. Club members were recruited from two residential aged care facilities in Queensland, Australia (n=25 recruited, n=18 commenced, n=11 (median age=88.4, IQR=12.3; 1 male) completed the intervention). The 12 week program consisted of two, 45 minute sessions per week held at a municipal pool, using a trained instructor and assistants. Measures, taken at baseline, Week 6, Week 9 and post intervention included psychosocial and physical assessments such as the Revised Memory and Behavior Problems Checklist, Psychological Well-Being in Cognitively Impaired Persons, Seniors Physical Performance Battery and bioelectric impedance analysis. Stakeholder focus groups determined the barriers and facilitators for the club. Three outcomes have been achieved: 1) the development of a dementia specific, evidence-based, aquatic exercise program. This valuable resource will ensure that the benefits will be maximized with tailored exercises for strength, agility, flexibility, balance, relaxation and stress reduction, 2) improved quality of life for members, with statistically significant improvements in psychological wellbeing ( $\chi^2=8.66$ ,  $p<0.05$ ), BPSD expression ( $\chi^2=16.91$ ,  $p=0.001$ ) and staff distress ( $\chi^2=16.86$ ,  $p=0.001$ ) and 3) an informative website with instructional video clips and a manual to assist others in implementing and maintaining a Watermemories Swimming Club. This pilot project has provided strong evidence that aquatic exercise can produce positive physical, psychosocial and behavioral outcomes for people with dementia.

## THE MENTAL ACTIVITY AND EXERCISE (MAX) TRIAL

D.E. Barnes<sup>1,2</sup>, W. Santos-Modesit<sup>1,2</sup>, A.L. Byers<sup>1,2</sup>, G. Poelke<sup>2</sup>, W. Goodson<sup>1</sup>, L.E. Middleton<sup>3</sup>, K. Yaffe<sup>1,2</sup>, *1. Psychiatry and Epidemiology & Biostatistics, University of California, San Francisco, San Francisco, California, 2. San Francisco Veterans Affairs Medical Center, San Francisco, California, 3. University of Waterloo, Waterloo, Ontario, Canada*

Background: Physical and mental activity have a variety of beneficial effects in older adults, but few randomized, controlled trials (RCTs) have compared the effects of different physical and mental activity interventions, particularly in individuals with cognitive complaints, who may be at a critical point for intervention. Methods: We performed an RCT with a factorial design in which 126 sedentary elders with cognitive complaints were randomized to 12 weeks of physical activity (aerobic exercise or stretching, 60 minutes, 3 days/week) plus mental activity (computer training or educational DVDs, 60 minutes, 3 days/week). Outcomes included cognitive function (summary score from an extensive neuropsychological battery), physical performance (Senior Fitness Test), health-related quality of life (SF-12), depressive symptoms (Geriatric Depression Scale) and sleep (abbreviated Sleep Disorders Questionnaire). Results: Study participants had a mean age of 73 and were 63% women and 35% Hispanic or non-white. Overall, participants experienced significant improvements in physical performance (chair stands:  $p<.001$ ; arm curls:  $p<.001$ ; steps in 2 minutes:  $p=0.007$ ; inches from touching toes:  $p=.002$ ), physical health-related quality of life ( $p=0.05$ ) and depressive symptoms ( $p=.008$ ), with no differences between groups. In subjects with poor memory, cognitive function improved significantly more with computer training than educational DVDs ( $p=.03$ ). In subjects with poor sleep, sleep quality improved significantly more with stretching than aerobic exercise ( $p=0.02$ ). Conclusions: A 12-week physical and mental activity intervention had wide-ranging beneficial effects, with some interventions better for some outcomes. Lifestyle changes should be recommended to preserve function and quality of life in older adults with cognitive complaints.

## DEVELOPMENT OF SCREENING WEB SITES FOR ALZHEIMER'S AND AGE-RELATED MEMORY DECLINE: PROGRESS UPDATE

C.B. Ashford<sup>1</sup>, K. Hamrick<sup>2</sup>, T.L. Rose<sup>3</sup>, S. Kaib<sup>4</sup>, J. Vogelmann<sup>5</sup>, A. Wetherell<sup>6</sup>, R.J. Martin<sup>3</sup>, J. Ashford<sup>7</sup>, *1. MemTrax LLC, Redwood City, California, 2. Veteran's Health Administration Palo Alto Health Care System/War Related Illness and Injury Study Center, Palo Alto, California, 3. Research, MMT Corporation, Sherman, Connecticut, 4. Kronos Science Laboratory, Phoenix, Arizona, 5. Orentreich Foundation for the Adv of Sci, Cold-Spring-on-Hudson, New York, 6. Retired, London, United Kingdom, 7. Stanford/VA Aging Clinical Rsch Center, VA Palo Alto Health Care System, Palo Alto, California*

BACKGROUND: To determine which measurements provide highest reliability per minute of measurement, the MemTrax, Kronos (H-Scan) and Blueberry Study (BBS) groups compared results obtained by the same participant cohort over a 10 day measurement period. METHODS: Methods and measurement sites are available at MemTrax.com and Blueberrystudy.com. These sites link to hand-held tablet, Android, iPhone and Kindle book reader versions under development to provide inexpensive screening alternatives. RESULTS: For offline (H-Scan) highest audible pitch (HAP) and online HAP, MemTrax photo recognition, BBS word recall and face recognition (FR), test-retest and split half reliability (correlation, r) ranged from poor ( $r < 0.7$ ) to high (MemTrax  $\leq 0.87$ ; BBS word recall 0.96; offline H-Scan HAP 0.98) depending on number of repeated measurements averaged before reliability calculation. Correlations with age were HAP offline, -0.610; HAP online, -0.787; MemTrax (beta), 0.610. MemTrax and FR correlated more closely with HAP than chronological age (e.g., MemTrax(beta)-age  $r=0.610$ ; MemTrax(beta)-HAP  $r=0.767$ ) suggesting that HAP may reflect biological rather than chronological age. Correlations between online

MemTrax and FR response times were 0.752; between offline and online HAP, 0.927. Within-person standard deviations for vertical finger movement times were approximately half as large as horizontal, resulting in large power increases. MemTrax discriminability ( $d'$ ) values from this investigation matched those obtained previously (Ashford et al. *J. Alzheimers Dis.* 2011;27(4):885-95). **CONCLUSIONS:** MemTrax photo recognition, BBS word recall and H-Scan highest audible pitch had high test-retest reliability values (0.87-0.98) indicating that relatively precise measurements can be obtained via online measurements for either screening or long-term performance monitoring.

### HELP SEEKING PATHWAYS AND ASSOCIATED FACTORS IN ELDERLY WITH DEPRESSIVE SYMPTOMS

M.U. Pérez-Zepeda, V.E. Arango-Lopera, C. Garcá a-Peñ a, *Research, Instituto de Geriatria, México, D.F., Mexico*

It is widely recognized that depression in the elderly is associated with multiple adverse outcomes such as high health services utilization rates, low pharmacological compliance, and synergistic interactions with other comorbidities. Moreover, help seeking process, which usually starts with the “feeling that something is wrong” and ends with an appropriate medical care is influenced by several factors. Explore the associated factors of the pathway of help seeking of older subjects with depressive symptoms. Data reported here come from the “Integrated Study of Depression Among Elderly Insured by Instituto Mexicano del Seguro Social (IMSS) in Mexico City”. A questionnaire applied by trained nurses explored the process of health care seeking in four stages: depressive symptoms, help seeking, help acquisition and specialized mental health. Associated factors with the health care seeking process were assessed, grouped in sociodemographic, comorbidity, functionality, depression, anxiety, executive function and cognitive status. To explore the associated factors of this path, three outcomes were assessed: help seeking, not getting help and getting specialized mental health. These three main outcomes (help seeking, acquisition of help and specialized mental health) were tested in a bivariate fashion and then a logistic regression was done. A total 2,322, 57.92% had depression symptoms. A total of 337 (25.05%) subjects seek for help, and 271 (80.41%) got help. Finally 103 (38%) subjects got specialized mental health care. Previous use of health care, scholarship, executive function and anxiety were significantly associated in the logistic regression with help seeking (Odds ratio=1.06, 2.71, 1.02 and 1.08 respectively). Hypertension was inversely associated with help acquisition OR 0.32 (CI 0.16-0.65,  $p$  0.002). Finally, the variables associated to receiving specialized mental-health care, were scholarship and limitation in vigorous physical activity. Appropriate mental health care is rather complex and is influenced by several factors.

### IMPACTS OF AEROBIC EXERCISE: A QUALITATIVE STUDY OF INDIVIDUALS WITH ALZHEIMER'S DISEASE AND THEIR CAREGIVERS

F. Yu<sup>1</sup>, R. Swartwood<sup>2</sup>, 1. *University of Minnesota School of Nursing, Minneapolis, Minnesota*, 2. *University of Minnesota, Minneapolis, Minnesota*

**Background:** Aerobic exercise has shown potential to be an effective behavioral therapy for reducing cognitive decline in Alzheimer's disease (AD). However, emerging aerobic exercise studies in AD have reported inconsistent findings and poor exercise compliance. **Methods:** The purpose of this qualitative study is to examine the feasibility and perceptions of the impact of a 6-month moderate intensity cycling program from the perspectives of community-dwelling older adults with AD (participants) and their family caregivers. Participants ( $n=10$ ) and their caregivers ( $n=10$ ) participated in a total of four focus groups after the participants completed the 6-month cycling program. **Results:** An inductive analysis was used for analyzing data and revealed four converging themes from both participant and caregivers interviews, respectively: 1) There was no perceived positive change in cognitive symp-

oms; 2) The 6-month exercise program was socially rewarding; 3) The 6-month exercise program increased physical strength; and 4) The assessment of the exercise program was unanimously positive. Two additional themes were identified from focus groups with family caregivers: “The exercise program led to improved attitude in participants” and “The exercise program reduced caregiver stress.” **Discussion:** Findings from this study suggest that aerobic exercise is a feasible and well-perceived intervention and may be able to stabilize cognitive decline and reduce caregiving burden, thus, improving quality of life for both older adults with AD and their family caregivers. Subsequent research should compare these qualitative results with quantitative measures to determine the effect of aerobic exercise on cognition, caregiver burden, and quality of life.

### EFFECTS OF A WEB-BASED EDUCATION PROGRAM FOR PRIMARY CAREGIVERS TO MANAGE BPSD OF NURSING HOME RESIDENTS WITH DEMENTIA

J. Song, Y. Kim, H. Kim, *College of Nursing, Korea University, Seoul, Republic of Korea*

The purpose of this study was to develop and evaluate a web-based educational program for primary caregivers to help their practice in management of BPSD (WebED-BPSD) exhibited by nursing home residents with dementia (NHRDs). Based on the Network-Based Instructional System Design (NBISD), four sessions of WebED-BPSD were developed and operated through a web server for 4 weeks. Participants, who have been working for more than one month in the study nursing homes ( $N=6$ ) located in the city of Seoul or Kyounggi province, South Korea, were randomly assigned into the experimental ( $N=37$ , mean age=53.54±4.49) or control group ( $N=30$ , mean age=52.57±4.60). Pre- and post-tests were performed to assess participants' knowledge about BPSD management, self-efficacy, and perceived problem solving ability for both groups; and program satisfaction for the experimental group only. The data was analyzed using descriptive statistics,  $\chi^2$ -test, t-test, paired-t-test. The WebEd-BPSD was effective on participants' knowledge about BPSD management ( $t=2.87$ ,  $p=.006$ ) and self-confidence about problem solving ( $t=-2.08$ ,  $p=.045$ ), while being not effective for self-efficacy and overall perceived problem solving ability about BPSD management. Participants' overall satisfaction about system and contents of the WebEd-BPSD was pretty high. The WebEd\_BPSD may be useful to improve nursing caregivers' knowledge, skills, attitude about BPSD management in dementia care. However, it is necessary to conduct further research in advance to evaluate longitudinal effects about the program on self-efficacy and overall perceived problem solving ability. This work was supported by the Korea Research Foundation Grant funded by the Korean Government (2010-0023525). Correspondence to Jun-Ah Song (E-mail: jasong@korea.ac.kr).

### PREVENTING LOSS OF INDEPENDENCE THROUGH EXERCISE (PLIÉ) FOR OLDER ADULTS WITH DEMENTIA

D.E. Barnes<sup>1,2</sup>, M.A. Chesney<sup>3</sup>, K. Yaffe<sup>4,2</sup>, C. Flores<sup>5,6</sup>, E. Wu<sup>3</sup>, W.E. Mehling<sup>3</sup>, 1. *Psychiatry and Epidemiology & Biostatistics, University of California, San Francisco, San Francisco, California*, 2. *San Francisco Veterans Affairs Medical Center, San Francisco, California*, 3. *Osher Center for Integrative Medicine, University of California, San Francisco, San Francisco, California*, 4. *Psychiatry, Neurology and Epidemiology & Biostatistics, University of California, San Francisco, San Francisco, California*, 5. *School of Nursing, University of California, San Francisco, San Francisco, California*, 6. *Institute on Aging, San Francisco, California*

This study examines the effects of a new, integrative, group exercise program for older adults with dementia called Preventing Loss of Independence through Exercise (PLIÉ). PLIÉ incorporates elements of Tai Chi, yoga and Feldenkrais with traditional exercises and focuses on improving body awareness of the functional movements necessary to perform basic activities of daily living as well as relaxation and group

enjoyment. Prior studies have found that traditional exercise programs that include aerobic, strength and flexibility training improve physical function in older adults with dementia, but little is known about the effects of other types of exercise. We hypothesized that enhancing traditional exercises with those that emphasize body awareness, ease and 'mindfulness' in movement would improve cognitive as well as physical function. PLIÉ is being pilot-tested in subjects who are attending an adult day program in San Francisco, CA. Subjects have been placed in an intervention group (n=7) or a usual care group (n=5) based on their attendance schedules. Intervention subjects participate in PLIÉ 2-3 days/week for 45 minutes for 18 weeks while usual care subjects participate in 15 minutes of standard chair-based exercises. The groups cross over after 18 weeks. Outcomes are assessed at baseline, 18 weeks and 36 weeks and include physical function, cognitive function, quality of life, dementia-related behaviors, fall self-efficacy, incontinence and caregiver burden. To date, exercise instructors and caregivers report that PLIÉ participants have experienced improvements in physical function and general awareness. Full results will be available at the time of the conference.

### **EVALUATION OF DEMQOL IN ASSESSING THE QUALITY OF LIFE (QOL) IN RESIDENTIAL CARE. ROGER WARNE, SHARON NG, IRENE TAN, CENXUE WANG, DOUG MCKITRICK, JOHN METAXAS**

R.W. Warne, *Geriatric Medicine, Royal Perth Hospital, Perth, Western Australia, Australia*

Outcome measures: comprised Information Orientation Scale (IOS), Behavior Rating Scale (BRS) Dependency, Dementia Quality of Life (DEMQOL) and DEMQOL proxy scores. Results: 85 residents (29 men and 54 women) mean age 85.5 years was reviewed. 40 residents completed DEMQOL and 80 DEMQOL Proxy Scores. 29 residents were not able to complete DEMQOL owing to the severity of dementia. The correlation between DEMQOL and Proxy scores were greatest in independent and frail elderly, and least in dependent persons. Health and well being, social relationships sub categories, DEMQOL and Proxy scores were highly correlated in independent and frail persons, while in the most cognitively impaired the correlation between DEMQOL and Proxy was highest. Conclusions: DEMQOL was established as a community QOL which has a role in residential care. The utility of DEMQOL is limited in the most severe demented elderly in residential care. Reference: Smith SC, Lamping DL, Banerjee S, Harwood RH, Foley B, Smith P, et al. Development of a new measure of health-related quality of life for people with dementia: DEMQOL. *Psychological medicine*. 2007;37(5):737-746.

## **SESSION 375 (POSTER)**

### **DEATH AND END OF LIFE**

#### **POLYPHARMACY AND LIMITED LIFE EXPECTANCY IN NURSING HOME RESIDENTS WITH ADVANCED DEMENTIA**

G. Onder<sup>1</sup>, R. Liperoti<sup>1</sup>, G. Gambassi<sup>1</sup>, E. Topinkova<sup>2</sup>, D. Fialova<sup>2</sup>, F. Landi<sup>1</sup>, R. Bernabei<sup>1</sup>, *1. Università Cattolica del Sacro Cuore, Rome, Italy, 2. Charles University, Prague, Czech Republic*

Background: advanced dementia is associated with limited life expectancy (LLE) and benefits of drugs may be reduced in this population. However, polypharmacy is common among patients with this condition. The aim of the present study is to assess prevalence of polypharmacy and the effect of polypharmacy on 1-year mortality according to life expectancy among nursing home (NH) residents with advanced dementia. Methods: 822 NH residents with advanced demen-

tia participating to the SHELTER project, a study collecting information on NH residents in Europe. Polypharmacy was defined as use of  $\geq 10$  drugs. LLE was defined by an ADEPT score  $\geq 13.5$  (Mitchell S. *JAMA* 2010). Results: mean age was 84.9 (SD 8.6) years and 104 residents (12.7%) had a LLE. Polypharmacy was observed in 16/104 (15.4%) residents with LLE and in 98/718 (13.6%) residents without LLE ( $p=0.64$ ). Among residents with LLE, 11/16 (68.8%) on polypharmacy (crude incident rate (CIR) per person-year (p-y)=1.50) and 37/88 (42.0%) not on polypharmacy (CIR per p-y=0.63) died during the follow-up; among residents without LLE 28/98 (28.6%) on polypharmacy (CIR per p-y=0.36) and 136/620 (21.9%) not on polypharmacy (CIR per p-y=0.27) died during follow-up. After adjusting for potential confounders, polypharmacy was associated with significantly increased mortality (HR=2.25, 95% CI 1.09-4.62) in the LLE group, but not in the group without LLE (HR=1.05, 95% CI 0.69-1.60). Conclusion: in NH residents with advanced dementia prevalence of polypharmacy is not influenced by LLE. Polypharmacy is associated with increased mortality in residents with LLE. Estimating life expectancy is necessary to improve the quality of prescribing in advanced dementia.

#### **RISK OF IN-HOSPITAL DEATH IN ELDERLY INPATIENTS RECEIVING PALLIATIVE CARE BY SITE OF CONSULTATION**

K. Sekiguchi<sup>1</sup>, C.L. Bell<sup>2</sup>, K. Masaki<sup>2</sup>, D. Fischberg<sup>3,2</sup>, *1. University of Hawaii John A. Burns School of Medicine - Internal Medicine Residency Program, Honolulu, Hawaii, 2. The John A. Hartford Center of Excellence in Geriatrics, Department of Geriatric Medicine, John A. Burns School of Medicine, University of Hawaii, Honolulu, Hawaii, 3. The Queen's Medical Center, Honolulu, Hawaii*

Background: Data are limited on predictors of in-hospital mortality for elderly inpatients receiving palliative care consultations. Methods: This prospective observational study included inpatients  $\geq 65$  years old receiving palliative care consultations in a 542-bed tertiary-care hospital in Honolulu, Hawaii from 1/2005 through 12/2009. In-hospital death included deaths with or without hospice care. Consultation site was categorized as ICU, non-ICU medical, non-ICU surgical and rehabilitation settings. Diagnoses were categorized as cardiac, pulmonary, cancer, surgical and other. Consultation intensity was categorized as intense plan-of-care (addressing goals of care) and non-plan-of-care (pain or symptom management). Results: Of 1,835 elderly inpatients receiving palliative care, 299 (18%) died in-hospital. In-hospital death was significantly associated on multiple logistic regression with age  $\geq 75$  (OR=1.39, 95%CI=1.01-1.90), intense consultation (OR=1.98, 95%CI=1.39-2.83), and longer preconsult length-of-stay (OR=1.02/each day, 95%CI=1.01-1.03); reduced odds for non-ICU (vs. ICU) sites (ORs=0.32-0.49, 95%CI=0.12-0.89) and Karnofsky scores (OR=0.66/10% increase, 95%CI=0.59-0.73). In-hospital death among non-ICU medical patients was associated with older age (OR=1.42, 95%CI=1.00-2.02), intense consultation (OR=1.97, 95%CI=1.34-2.90) and preconsult LOS (OR=1.02, 95%CI=1.00-1.03); reduced odds for higher Karnofsky scores (OR=0.73, 95%CI=0.65-0.81); primary diagnoses were non-significant. In-hospital death among ICU patients was associated with cardiac diagnoses (OR=41.19, 95%CI=1.91-889.42) and cancer (OR=9.24, 95%CI=1.31-65.11); reduced for higher Karnofsky scores (OR=0.37, 95%CI=0.21-0.64); intense consultation was non-significant. Conclusions: In-hospital death was associated with longer preconsult length-of-stay in all patients; intense consultation in non-ICU patients and cardiac and cancer diagnoses in ICU patients. Recognizing risk of in-hospital death might allow palliative care patients to avoid in-hospital death if they prefer to die at home.

## PRE-DEATH ENCOUNTERS: EMERGENCY DEPARTMENT VISITS AMONG OLDER ADULTS IN THEIR LAST TWO YEARS OF LIFE

M. Cadogan<sup>1</sup>, L.R. Phillips<sup>1</sup>, H. Aronow<sup>2</sup>, S. Takayanagi<sup>1</sup>, 1. *UCLA School of Nursing, Los Angeles, California*, 2. *Cedars-Sinai Medical Center, Los Angeles, California*

Older adults are frequent users of the emergency department (ED) and recent studies document rapidly increasing rates of ED use for this group. Little is known about patterns of ED visits in the context of pre-death trajectories. This presentation will focus on patterns of visits (range 1-13) to an urban ED among 1167 adults age 65 – 106 (mean = 82) over a two year period prior to their deaths. The sample was 82% Caucasian and evenly divided by gender (50% male and female). Of the final ED encounters, 90% resulted in a hospital admission prior to death. The average number of hospital days in the final encounter was 12.6 with a range of 1-323 days. Symptoms and diagnoses associated with all ED encounters along with ED dispositions, intervals between visits for those with multiple encounters, and implications of findings will be discussed.

## EFFECT OF SOCIAL SUPPORT AND DECISIONAL CONFLICT ON ADVANCE DIRECTIVES ATTITUDES AMONG OLDER ADULTS IN KOREA

J. Lee<sup>1</sup>, D. Jung<sup>2</sup>, 1. *Yonsei University College of Nursing, Seoul, Republic of Korea*, 2. *Ewha womans university, Seoul, Republic of Korea*

Purpose: The purpose of this study was to examine the relationship of social support and decisional conflict on older adults' advance directive attitudes in South Korea. Methods: This study used a descriptive and cross-sectional survey design. Subjects were Korean community-dwelling older adults over 65-years-of-age living in S city, South Korea (n=209). Data collection was conducted from September 2011 to January 2012. Standardized questionnaires were applied to measure perceived social support, decisional conflict, and advance directive attitudes. Descriptive statistics, Pearson's correlation, and multiple regression analyses were conducted using SPSS 18.0 program. Results: Subjects' advance directives attitudes were more likely to have negative attitude toward advance directives. Among decisional conflict scale, uncertainty domain revealed difficulty in decision making. Overall, social support and decisional conflict had a statistically significant relationship with advance directives attitudes ( $p < .001$ ). Decisional conflict had a statistically significant negative relationship with perceived social support system ( $p < .01$ ). Advance directives attitudes had positive association with perceived social support ( $\beta = .238, p < .01$ ) and negative association with decisional conflict level ( $\beta = -.519, p < .01$ ). Social support was found to mediate the relationship between decisional conflict and advance directive attitudes. Conclusion: The study results contributed to the understanding of advance directives attitudes among older adults in South Korea. The knowledge gained from this study will be used to develop culture-specific and timely nursing interventions for older adults and social policies.

## DYING WITH DIGNITY DURING END OF LIFE CARE

Q. Guo, C. Jacelon, *School of Nursing, University of Massachusetts Amherst, Amherst, Massachusetts*

Purpose: To clarify the meaning of dying with dignity and to identify universal aspects of dignity at the end of life. Background: Dying with dignity is considered to be very important by patients approaching life's end, their families and health care providers. As the population ages, more individuals are dying from disease and often experience a prolonged period of decline prior to death. During this period these individuals are often receiving care from both formal and informal caregivers. Methods: This research was an integrative review, using the matrix method to analyze all identified articles. The author performed keyword searches of the following electronic databases: PubMed,

CINAHL, PsycINFO, Academic Search Premier, and Social Sciences Abstracts. The final sample includes 30 empirical articles and 2 theoretical articles. Results: Patients and health professionals have similar definitions on "dying with dignity". Factors that influence dignity include: demographic factors, illness-related factors, treatment and care, communication, functional status, negative feelings, relationship with others, and so on. Three models of dignity were identified: Dignity-Conserving Care Model, Model of Preservation of Dignity, and Dignity Conceptual Model. The Dignity-Conserving Care Model is the most widely used. While several instruments have been developed to measure dignity at the end of life, interventions to maintain or support dying patients' dignity are increasing but still limited. Conclusions: This review provides comprehensive information on dignity at the end of life. Dignity is at the heart of end of life care, more efforts need to be done on how best to support it.

## EXPLORING PATIENT PERSPECTIVE AT END OF LIFE: QUALITATIVE INTERVIEWS WITH TERMINALLY ILL PATIENTS

K.T. Nguyen, M.A. Drickamer, *Yale University, Fremont, California*

Background: Patient perspective should guide end of life of care. Prior studies offer valuable information on patients' thoughts regarding specific issues but the issues were predetermined by the researchers, and did not allow patients to shape the discussion. There is a need for a qualitative study enabling terminally ill patients to be the primary drivers of end of life discussion. Objective: This study aims to attain a more comprehensive, in-depth understanding of issues important to terminally ill patients in order to provide better care at end of life. Methodology: Semi-structured interviews were conducted with fifteen terminally ill patients. The interviews were recorded and transcribed, and common topics were identified. The transcripts were coded using NVIVO software. The content of each topic was reviewed, and themes were identified. Results: Fifteen commonly discussed topics were identified: quality of life, course of illness, approaches to treatment, personal goals, hopes, fears and worries, decisions of daily living, place of living, family, prior experiences with death and dying, religion, timeframes, memories, attitude and emotion toward dying, and adjustment. An overarching theme centered on the issue of self-identity, and how illness changed this concept for patients. Conclusion: Many patients related their experiences to how illness affected their self-identities, and how they strive to subsequently preserve their identities. Understanding patient experience in the context of their thoughts and feelings, particularly those framed by their self-identities, can help shape discussions of goals of care and treatment, and improve end of life care.

## SESSION 380 (POSTER)

### DISABILITY, FALLS, AND MOBILITY

#### COMORBIDITY AND MOBILITY LIMITATION IN OBESE AND NON-OBESE OLDER WOMEN

S. Jung, S. Seino, N. Yabushita, M. Nemono, Y. Osuka, Y. Okubo, K. Tanaka, *University of Tsukuba, Tsukuba, Japan*

Objective: The objective of this study was to examine the combined association of obesity and comorbidity with mobility limitation. Methods: This cross-sectional study included pooled data of 762 older women, aged 65-91 years, in local communities in Japan between 2007-2011. They were divided into obese (BMI:  $\geq 25$  kg/m<sup>2</sup>) and non-obese ( $< 25$  kg/m<sup>2</sup>) and also classified into three categories (0, 1 and 2 or more) according to the self-reported number of chronic diseases. Main outcome was mobility limitation assessed by self-reported (ability to walk 400m or climb one flight of stairs). Multivariate logistic regression analysis was performed to determine the combined associations using age, exercise habit, smoking status and alcohol intake as covariates. Results: A total of 312 participants (43.3%) had mobility limitation.



Compared with non-obese without morbidity, the adjusted odds ratios (95% confidence interval) for mobility limitation were 1.29 (0.81-2.04) in non-obese with a disease, 2.73 (1.58-4.69) in non-obese with two or more diseases, 2.01 (1.80-3.76) in obese without morbidity, 1.91 (1.08-3.39) in obese with a disease and 5.27 (2.85-9.74) in obese with two or more diseases. The odds ratio in obese with two or more diseases was significantly greater than that in non-obese with two or more diseases. Conclusion: The non-obese with comorbidity showed higher risk of mobility limitation than obese without morbidity and obese with a disease. Specifically, the results suggest that obesity with comorbidity is associated with mobility limitation to a greater extent than non-obese with comorbidity.

#### **RACE, GENDER AND DISABILITY: CALIFORNIA HEALTH INTERVIEW SURVEY IN 2005**

L. Quach<sup>1,2</sup>, H. Lee<sup>2</sup>, S.G. Leveille<sup>2</sup>, M.T. Hannan<sup>1,3</sup>, M. Nguyen<sup>2</sup>, E. Dugan<sup>2</sup>, 1. *Hebrew SeniorLife, Roslindale, Massachusetts*, 2. *University of Massachusetts Boston, Boston, Massachusetts*, 3. *Harvard Medical School, Boston, Massachusetts*

In later life, women have higher rates of disability than men. This disparity could be caused partly by the higher rate of chronic conditions among women compared to men. Little is known about the association of race with disability. We conducted a cross-sectional analysis using data from the 2005 California Health Interview Survey with a diverse population of adults aged  $\geq 65$  ( $n=9695$ ). Disability was measured based on physical, mental, and emotional conditions with self-reported questions and coded as present or absent. Race was classified into five categories: Latino, Asian, Black, White and Other. Logistic regression models were performed to determine whether race is associated with disability stratified by gender. The mean age was 74.5 years (range 65 to 85) and 62.7% of respondents were female. Respondents' race/ethnicity was as follows: 82.1% White, 4.9% Latino, 6.2% Asian, 3.7% Black, and 3.1% others. About half of Asian or White respondents had disability (50.7%, 51.0% respectively); and more than half of Latino or Black respondents had disability (58.9%, 57.8% respectively). Among women, compared to Whites, being Latino or Asian increased the odds of disability by 30% adjusting for age, education, marital status, cigarette smoking, arthritis, hypertension, and diabetes (OR= 1.33, 95% CI= 1.02-1.74; OR=1.29, 95% CI=1.02-1.64 respectively). No associations were observed in men or in other races. In summary, we observed the likelihood of disability was higher in Latino and Asian women compared to Whites. Further research is needed to understand racial differences in disability among older women.

#### **COEXISTENCE OF SENSORY DIFFICULTIES PREDICTS FEAR OF FALLING IN OLDER WOMEN**

A. Viljanen<sup>1</sup>, M. Rantakokko<sup>1</sup>, J. Kulmala<sup>1</sup>, M. Koskenvuo<sup>2</sup>, J. Kaprio<sup>2,3,4</sup>, T. Rantanen<sup>1</sup>, 1. *Department of health sciences, University of Jyväskylä, Gerontology Research Center, Jyväskylä, Finland*, 2. *University of Helsinki, Hjelt Institute, Helsinki, Finland*, 3. *National Institute for Health and Welfare, Helsinki, Finland*, 4. *University of Helsinki, Institute of Molecular Medicine, Helsinki, Finland*

Aim of the study was to explore whether coexistence of sensory difficulties predicts fear of falling (FOF). Self-reported hearing, vision and balance difficulties, as well as FOF were assessed using structured questionnaires at the baseline and after a three-year follow-up in 63-76 year-old community-dwelling women ( $n=416$ ). Logistic regressions were used for analyses. Forty percent ( $n=173$ ) of women feared falling at baseline. In cross-sectional baseline analyses the odds ratio (OR) for FOF was higher among persons who reported several sensory difficulties compared to persons who had no sensory difficulties. Among women without FOF at baseline, new FOF developed for 42% ( $n=101$ ) of participants during follow-up. Women with one sensory difficulty at baseline had a modestly increased risk (OR 1.4, 95% CI 0.7-2.8) for development of FOF during follow-up compared to those who had no sensory

difficulties at baseline. The OR was 2.3 (95% CI 1.1-4.9) in participants with two and 8.3 (95% CI 1.9-35.1) in participants with three sensory difficulties. All regression models were adjusted for age, number of chronic diseases and occurrence of a previous serious fall. According to our results coexistence of sensory difficulties predicted FOF. The coexistence of sensory difficulties may hinder older people from receiving compensatory information about body position and the environment, thus jeopardizing a person's confidence in maintaining a balanced position. Regular screening of sensory functions followed by appropriate actions may prevent the development of FOF, and thus contribute to prevention of falls and promotion of healthy aging.

#### **COGNITIVE SCREENING AND FUNCTION AMONG OLDER AFRICAN AMERICAN AND WHITE MEN AND WOMEN**

S.L. Garrett<sup>1,4</sup>, P. Sawyer<sup>2,4</sup>, R.M. Allman<sup>3,4</sup>, 1. *Morehouse School of Medicine, Atlanta, Georgia*, 2. *University of Alabama at Birmingham (UAB), Center for Aging, Birmingham, Alabama*, 3. *Birmingham/Atlanta GRECC and University of Alabama at Birmingham (UAB), Center for Aging, Birmingham, Alabama*, 4. *Deep South RCMAR, Birmingham, Alabama*

BACKGROUND: Little is known regarding racial-gender specific differences in Mini-Mental State Exam (MMSE) scores and how these correlate with disparities in functional measures. OBJECTIVES: (1) To determine if there are differences in the associations between MMSE scores and difficulties in BADL and IADL by racial-gender groups. (2) To assess whether these differences remain after adjusting for education, age, income, and comorbidities. METHODS: We used data from the baseline in-home assessment from the UAB Study of Aging. Baseline data included socio-demographics, co-morbidity, BADL, IADL difficulty, and MMSE. We excluded participants with a diagnosis of dementia or with missing data. We performed analyses to determine differences in the prevalence of MMSE, BADL, and IADL by race-gender specific groups, to assess correlations between BADL and IADL with MMSE, and used multivariable logistic regression to test the significance and independence of observed associations. RESULTS: The sample ( $N=974$ ) (Mean Age (SD) = 75.2 (6.71 years) included 238 (24.4%) African American (AA) women; 243 (24.9%) AA men; 246 (25.3%) White (W) women; and 247 (25.4%) W men. After adjusting for age, education, and income, multivariable logistic regression showed that MMSE scores were independently and significantly associated with BADL and IADL difficulty among AA men and only BADL among W men. CONCLUSION: These data suggest MMSE scores are associated with BADL difficulty among both African American and White men, but associated with IADL difficulty only among AA men. Difficulties in BADL and IADL among women were not associated with MMSE among African American or White women.

#### **PREDICTING DECREASED COMMUNITY MOBILITY IN OLDER MEN AND WOMEN. A 13-YEAR PROSPECTIVE STUDY**

S. Fristedt<sup>1</sup>, A.K. Dahl<sup>2,1</sup>, A. Wretstrand<sup>3</sup>, A. Björklund<sup>1</sup>, T. Falkmer<sup>4,1,5</sup>, 1. *School of Health Sciences, Jönköping University, Jönköping, Sweden*, 2. *Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden*, 3. *Faculty of Engineering, Lund University, Lund, Sweden*, 4. *School of Occupational Therapy and Social Work, Curtin University, Curtin, Western Australia, Australia*, 5. *Department of Medical and Health Sciences, Division of Community Medicine, Faculty of Health Sciences, Linköping University, Linköping, Sweden*

Community mobility defined as "moving self in the community and using public or private transportation" seems to have a unique ability to promote older peoples' wellbeing by enabling independence. Early predictors of decreased community mobility among older men and

women are valuable to develop health promoting strategies, but long-term prediction is rare. The present study describes factors associated with community mobility, as well as decreased community mobility over time. In total, 119 men and 147 women aged 82-96 years at follow-up responded to a questionnaire in 1994 and 2007. After 13 years, 40% of the men and 43% of the women had decreased their community mobility. Cross-sectionally independent community mobility was associated with higher rating of subjective health ( $p < 0.01$ ), having no depression and sport activities ( $p < 0.05$ ) among men and for women with subjective health ( $p < 0.05$ ) and more I-ADL outside home ( $p < .001$ ). Further, lower subjective health predicted decreased community mobility ( $p < 0.05$ ) for men and women ( $p < 0.01$ ) over time, while self-reported physical health conditions did not. For women higher age ( $p < 0.05$ ) was also associated with decreased community mobility. Societal measures and individual interventions aiming to improve community mobility should acknowledge older persons' subjective health.

#### **INPATIENT FALL PREVENTION: USE OF IN-ROOM WEBCAMS**

S.R. Hardin<sup>1</sup>, P. Rudisill<sup>2</sup>, J. Dienemann<sup>1</sup>, K. Mills<sup>2</sup>, 1. *University of NC at Charlotte, Charlotte, North Carolina*, 2. *Health Management Associates, Mooresville, North Carolina*

**Objectives:** Patient falls are a challenging safety and quality issue in acute care settings. This study compared inpatient falls on medical-surgical units with and without webcams and assessed the Morse Risk Assessment (MRA) for effectiveness in identifying fall risk. **Methods:** Ten hospitals in one health system that exceeded the benchmark for falls were chosen for a 6 month study. One medical-surgical unit in each of the ten hospitals was randomly assigned to an intervention or control group. The intervention group utilized webcams that viewed the bed with a central monitoring system. A "virtual bed rail" function was used for those patients with a Morse Risk Assessment (MRA) of greater than 25. **Results:** There were 185 falls for all 10 hospitals. The majority of falls were with older adults that had a Morse Risk Assessment score of 50+. A significant difference ( $p < 0.05$ ) between groups was found in fall rate per 1000 admissions. The Morse Risk Assessment was a significant predictor of risk. **Conclusion:** Webcams are one option to increase surveillance for high risk patients. The use of the MRA with a 50+ score for high risk is recommended. More research is needed on patient acceptance of this form of intervention and effectiveness in preventing falls on various inpatient units or with specific age groups.

#### **FACTORS CONTRIBUTING TO FEAR OF FALLING IN PEOPLE WITH PARKINSON'S DISEASE**

M.H. Nilsson<sup>1,2</sup>, S. Iwarsson<sup>1,2</sup>, 1. *Department of Health Sciences, Lund University, Lund, Sweden*, 2. *Centre for Ageing and Supportive Environments (CASE), Lund University, Lund, Sweden*

Fear of falling (FOF) results in activity limitations, restrictions in participation and may cause social isolation, and is thus an important issue to address in order to promote activity and participation. In order to design robust intervention studies, it is however imperative to have a thorough understanding of influential factors on the main outcome. That is, if actively targeting contributing factors to FOF, this may reduce FOF. In comparison to age-matched controls, a FOF is both more common and pronounced among people with Parkinson's disease (PD). Furthermore, balance impairment constitutes one of the hallmarks of PD, and approximately 70% of people with PD experience falls. A FOF can however be present also among those who do not experience any falls. The latter further underlines the importance of addressing FOF specifically. This presentation will provide an overview of studies targeting FOF in people with PD, followed by examples from our ongoing studies. The content will cover aspects such as prevalence and consequences, but the strongest focus will be on studies investigating influential factors. Although the majority of such studies have used bivariate analysis, there are presently three studies that used multivariate analysis when

investigating contributing factors to FOF in people with PD. To briefly summarize, these prior studies indicate that gait and balance problems are the strongest contributing factors to FOF in people with PD.

#### **ASSOCIATION OF CARDIOVASCULAR RISK FACTORS WITH WALKING SPEED DIFFERS BY AGE, GENDER AND APOLIPOPROTEIN E GENOTYPE: A POPULATION-BASED STUDY**

A. Welmer<sup>1,2</sup>, S. Angleman<sup>1</sup>, E. Rydwick<sup>1,3</sup>, L. Fratiglioni<sup>1,4</sup>, C. Qiu<sup>1</sup>, 1. *Karolinska Institutet, Stockholm, Sweden*, 2. *Karolinska University Hospital, Stockholm, Sweden*, 3. *Research and Development Unit, Jakobsbergs Hospital, Järfälla, Sweden*, 4. *Stockholm Gerontology Research Center, Stockholm, Sweden*

**OBJECTIVES:** To examine to which extent different vascular risk factors (VRFs) are associated with impaired walking speed, and whether the possible associations vary by age (<80 vs. ≥80 years), gender or Apolipoprotein E (APOE) genotype. **DESIGN:** Cross-sectional study. **SETTING:** Community-based. **PARTICIPANTS:** A random sample of 2883 people, aged 60 years and older, who were free from clinical stroke and dementia. The sample included people living either at home or in institutions from the Swedish National Study on Aging and Care in Kungsholmen. **MEASUREMENTS:** Walking speed was assessed by trained nurses, and functional impairment was defined as walking speed <0.8 m/s. VRFs or disorders (e.g., hypertension, diabetes, high total cholesterol, heart disease, obesity, heavy alcohol consumption and smoking) was ascertained based on clinical examination by a physician, self-reported history, inpatient register, and use of medications. **RESULTS:** Diabetes, ischemic heart disease, heart failure, underweight, obesity, and current smoking were associated with an increased odds ratio of functional impairment, whereas high cholesterol and alcohol consumption were associated with lower odds of functional impairment. These associations were particularly strong among people under 80 years and in women. APOE epsilon 4 allele amplified the association of functional impairment with diabetes, but diluted the association with heart failure. **CONCLUSION:** VRFs and related morbidities are associated with impaired functional ability; however the associations vary by age, gender, and genetic susceptibility.

#### **PATIENT SAFETY IN HOSPITALS: INFLUENCE OF SAFETY CULTURE ON A FALLS PREVENTION**

A.A. Zecevic, A. Li, C. Davy, M. Halligan, A. Kothari, *Western University, London, Ontario, Canada*

Safety of elderly patients is a growing concern in hospitals as the cost of adverse events, such as serious injurious falls, poses a significant economical burden. Organizational safety culture can mediate the success of falls prevention interventions. The purpose of this study was to explore the influence of safety culture on implementation of the Systemic Falls Investigative Method (SFIM) in two high risk hospital units. A mixed methods design and the Ottawa Model of Research Use (OMRU) framework guided data collection and analysis. A Modified Stanford Patient Safety Culture Survey Instrument, interviews and focus groups were used to explore the barriers and facilitators of SFIM implementation. Axial coding analysis identified emerging themes that were fitted into the OMRU elements. Survey results revealed that the staff perceived unit safety culture as poor. Facilitators of SFIM implementation were: hospital accreditation, patient safety as priority, good teamwork, history of falls prevention programs implementation, champions, and SFIM's capacity to uncover systemic contributors to falls. The barriers were: heavy workloads, high patient-staff ratios, chronic lack of time, limited resources, absence of incentives for safety improvements, patient demographic, communication breakdowns, and competing demands. The SFIM implementation was achieved by the efforts of the research team, good staff training and improved safety awareness. Findings demonstrate that unit safety culture greatly influenced implementation of a falls prevention intervention. With adequate resources, staff

time and staff training, the SFIM has the potential to contribute to safety culture improvements in high risk hospital units.

### **OPERATIONALIZATION AND SELECTION OF FUNCTIONAL FITNESS OUTCOME VARIABLES**

C.E. Rogers<sup>1</sup>, C.K. Craven<sup>1</sup>, C. Keller<sup>2</sup>, 1. *Nursing, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*, 2. *Arizona State University, Phoenix, Arizona*

**Introduction:** Conceptualization and operationalization of mediating and outcome variables is critical to testing intervention efficacy in theory-driven research. In our research, Adaptation-level theory and the Specific Adaptations to Imposed Demands Principle are used in concert to identify the factors needed to promote adaptation to healthy aging that reduces the risk of progression to functional decline. Our research is used as an exemplar to guide geriatric investigators and clinicians in the selection of appropriate measures to evaluate outcomes in research designed to maintain and improve physical function among sedentary older adults living in the community. The aims of this presentation are to 1) outline the theoretical framework used to conceptualize the measurement of functional fitness outcomes. 2) Compare and contrast the laboratory versus field measures selected for our research in the community. **Methods:** A review of the best laboratory and field measures of functional fitness was conducted. Considerations in the selection of responsiveness include construct and content validity, sensitivity and specificity to change in response to the intervention, floor and ceiling effect, reliability, participant burden, field versus laboratory, and cost. **Results:** The functional fitness outcomes and best field measures for the conceptualization and operationalization of mediating and outcome variables in our research include: balance (Timed Up & Go), endurance (6-minute walk), strength (arm curls and chair stands), and flexibility (back scratch and chair sit-and-reach). We report on the selection of valid and reliable field measures that provided strong conceptualization and operationalization of outcome variables of functional fitness outcomes for our research.

### **THE MANY FACETS OF MULTIMORBIDITY IN OLD AGE: INTERRELATIONS AND INTERDEPENDENCIES IN THE CONTEXT OF QUALITY OF LIFE**

M. Holzhausen<sup>1,2</sup>, B. Rhode<sup>1</sup>, B. Gaertner<sup>2,1</sup>, C. Scheidt-Nave<sup>2</sup>, 1. *Charité - Universitaetsmedizin Berlin, Berlin, Germany*, 2. *Robert Koch Institut, Berlin, Germany*

Multimorbidity in old age is more than just medical conditions. Complex health states can be conceptualized as comprising of physical morbidity, physical limitations, and limitations in everyday activities. These facets (separately and in interaction) are thought to affect patients' autonomy, participation, and quality of life. The identification of interdependent patterns of multimorbidity and correlations with quality of life outcomes can help to identify those older patients with special psychosocial or health care needs. In a representative urban sample of older people (N=299), we describe prevalences of multimorbidity's facets in their various combinations: 'physical multimorbidity' (at least two out of 22 organ-related disease clusters affected), 'limitations in physical functioning' (sub-threshold performance in at least one out of four physical performance tests), and 'limitations in everyday activities' (dependency in at least one activity of IADL). Overall life satisfaction and subjective health were assessed as proxies of subjective quality of life. Linear regression analyses were carried out in order to elucidate multimorbidity's effect on these outcomes. We found differential prevalences and interrelations between the three facets of multimorbidity. Isolated physical multimorbidity was the most prominent one (34.8%), while limitations of IADL or physical functioning were hardly observed in isolation. Also, physical multimorbidity was the most influential predictor of subjective life satisfaction and subjective health.

### **MOBILITY RECOVERY TRAJECTORIES IN HIP FRACTURE PATIENTS**

A. Salpakoski<sup>1</sup>, T. Törmäkangas<sup>1</sup>, J. Edgren<sup>1</sup>, M. Pekkonen<sup>4</sup>, A. Heinonen<sup>2</sup>, M. Kallinen<sup>3</sup>, T. Rantanen<sup>1</sup>, S. Sipilä<sup>1</sup>, 1. *Gerontology Research Center and Department of Health Sciences, University of Jyväskylä, Jyväskylä, Finland*, 2. *Department of Health Sciences, Jyväskylä, Finland*, 3. *Department of Physical Medicine and Rehabilitation, Central Finland Central Hospital, Jyväskylä, Finland*, 4. *Peurunka – Medical Rehabilitation and Physical Exercise Center, Laukaa, Finland*

We studied mobility changes related to hip fracture and investigate the characteristics which correlate with different recovery trajectories. This prospective follow-up study uses pre-trial data of a randomized controlled trial (ProMo, ISRCTN 53680197). The Population-based sample consisted of 81 community-dwelling, 80±7 year-old, hip fracture patients. Self-reported mobility difficulty walking 500 meters was assessed at discharge (3.2±2.2 weeks after the surgery) and 6.0±3.3 weeks after discharge from the hospital. Pre-fracture mobility had been queried during hospital stay. Recovery trajectories were identified using linear latent trajectory model based on mixture distribution methodology. Two recovery trajectories were found. From no to minor difficulty -trajectory includes 27 patients with no pre-fracture difficulty walking 500 meters, followed by at most minor difficulty. In Catastrophic -trajectory (n=54) many had pre-fracture mobility difficulties followed by steep decline at discharge and only minimal improvement at 6 weeks after discharge. Pre-fracture, patients in Catastrophic -trajectory used walking aids indoors (p=.023) and outdoors (p<0.001) and had sustained falls indoors a year before fracture (p=.041) more often than patients in the From no to minor difficulty -trajectory. Patients in Catastrophic -trajectory were older and had longer inpatient period (p<0.001), their functional balance (p=.004) and knee extension force (p=.050) was 6 weeks after discharge poorer while they experienced more lower body pain (p=.002) compared to patients in From no to minor difficulty -trajectory. Trajectories of mobility differ among hip fracture patients. Identifying recovery prognoses at the early stage enables individualized rehabilitation.

### **SESSION 385 (POSTER)**

#### **EDUCATIONAL EVALUATION**

#### **RATING GOALS PRIORITY OF PRESCRIBING DRUG THERAPY FOR ELDERLY PATIENTS AMONG MEDICAL INTERNS: A PILOT STUDY ON TEACHING PATIENT-CENTERED OUTCOMES AND DECISION MAKING**

H. Cheng, *medicine, university of virginia, Charlottesville, Virginia*

**Background:** elderly patients often take multiple drugs due to multiple co-existing chronic conditions. The goals of care can be varied among elderly patients. This could be a challenging for young physicians such as medical interns to prescribe drug therapy for this population. Furthermore, it is unknown how they rate goals priority of drug therapy for elderly patients. Therefore, the author explored medical interns how to rate goals priority of prescribing drug therapy for elderly patients among five goals: 1). Relieve symptoms; 2). Reduce complications; 3). Live longer; 4). Reduce hospitalization; 5). Improve independent function. **Methodology:** It was an observational study. Medical interns were asked to rate goals priority of drug therapy for elderly patients from most important to very important, important, less important, and maybe important before a dialectic lecture on drug use in elderly patients. Descriptive analysis was performed using SPSS. **Results:** 91% medical interns (30/33) has rated goals priority. Overall, relieving symptoms was rated as the most important goal and living longer rated as the least important goal of prescribing drug therapy for elderly patients. 97% medical interns rated relieving symptoms as most important or very

important goal and 83% medical interns rated living longer as less important or maybe important goal of prescribing drug therapy for elderly patients. However, goals priority varied among medical interns. Conclusions: this small pilot study demonstrated that medical interns rated relieving symptoms as top goal priority of prescribing drug therapy for elderly patients.

#### **INTERDISCIPLINARY TEAM TRAINING: DISCIPLINE SPECIFIC PERSPECTIVES OF TRAINEES LEARNING TO WORK IN HEALTHCARE TEAMS**

A.G. Rothrock<sup>1</sup>, P. Sawyer<sup>1</sup>, C. Ford<sup>1</sup>, C.J. Brown<sup>1,2</sup>, C. Ritchie<sup>3</sup>, 1. *University of Alabama at Birmingham, Birmingham, Alabama, 2. Birmingham/Atlanta VA GRECC, Birmingham, Alabama, 3. University of California, San Francisco, San Francisco, California*

Health systems are encouraging providers to participate in interdisciplinary team meetings to gain a full perspective on patient care and to provide their insights and recommendations that allow for the most comprehensive, collaborative care. The University of Alabama at Birmingham Geriatric Education Center has offered the Interdisciplinary Team Training (IDT) experience six times over the past three years, which has included 1089 students from 9 health professions. The 2 ½ hour activity includes observation of an older adult interview by faculty members from each discipline. Trainees then divide into small groups where faculty members lead development of care plans, based on the interview. Evaluation data from the last 4 sessions (Fall 2010-Spring 2012) is presented. Attendees for these sessions included 914 trainees from dentistry (N=51), medicine (N=324), nursing (N=79), nutrition (N=25), occupational therapy (N=72), optometry (N=58), pharmacy (N=135), physical therapy (N=72), and social work (N=98). Overall the IDT experience was rated as a valuable experience, relevant, and a recommended activity (4.2, 4.3, 4.1 respectively on a 5-point scale) with the interview/observation and small group activities rated equally. Participants rated the impact of the interview and small group sessions on their awareness of the multiple perspectives to consider in designing a care plan and what their individual disciplines could contribute. Both the interview and small group sessions received high ratings from all 9 disciplines, ranging by discipline from 3.6 to 4.9 on a 5-point scale. Ratings were consistently and significantly higher ( $p < .001$ ) from nursing, occupational therapy, pharmacy, and social work trainees.

#### **THE DEVELOPMENT OF A COMMUNITY-BASED CURRICULUM IN AGING: THE GEC OF MICHIGAN EXPERIENCE**

L.J. Keilman<sup>1,2</sup>, J.D. Yonker<sup>1,2</sup>, M. Ensberg<sup>1,2,3</sup>, J. Ilardo<sup>1,2</sup>, G.J. Thomas<sup>2</sup>, 1. *Michigan State University, East Lansing, Michigan, 2. Geriatric Education Center of Michigan, East Lansing, Michigan, 3. Sparrow Hospital, Lansing, Michigan*

The Geriatric Education Center of Michigan (GECM) was established in 1987 and since then has been educating interdisciplinary health care professionals in aging knowledge and concepts. As the number of older adults increases, health care professionals will need to be more knowledgeable about the unique multidimensional issues facing this population. One of the overarching goals of the GECM has been enhancing the geriatric/gerontology knowledge of individuals working with older adults in the community. Health care professionals, both those with and without formal education/training in geriatrics/gerontology, have been the focus of the GECM curriculum development. One strategy in accomplishing this goal has been through development and delivery of fundamental aging content in a variety of methodologies and venues. A multitude of strategies and techniques have been utilized in the past 25 years and many lessons have been learned. The basic principles, concepts, and decision-making process of creating aging curriculum materials will be described. Demographic and organizational variables influencing the development of innovative models of curriculum are presented, including determining basic competencies. Pitfalls and point-

ers will be shared. Results of the GECM experience may be helpful to clinicians, educators, and administrators looking to establish successful interdisciplinary teams of aging experts in their communities.

### **SESSION 390 (POSTER)**

#### **END-OF-LIFE**

#### **DOES SELF-REFLECTION ON MORTALITY RELATE TO ANXIETY AND DEPRESSION IN HOSPICE PATIENTS?**

E. Meier, R. Farokhpay, L. Montross, N. Karuvannur, A.E. Zautcke, S. Irwin, *San Diego Hospice and The Institute for Palliative Medicine, San Diego, California*

Depression and anxiety are common among patients with advanced illness. However, little is known about how patients' self-reflection on their mortality may relate to these symptoms. The aim of this study was to measure the prevalence of self-reflection on mortality, as well as the relationship between mortality contemplation, depression, and anxiety among hospice patients. Twenty-one hospice patients completed standardized tests of depression and anxiety. Patients completed qualitative interviews assessing levels of self-reflections on mortality and how these thoughts may have changed since entering hospice. Patients had a mean age of 79 (range = 45-94), were 85% Caucasian, and 57% male. Patients' levels of mortality contemplation significantly increased upon entering hospice ( $t_{20} = -3.681$ ,  $p = 0.001$ ). Prior to hospice care, patients reported contemplating their mortality an average of once per year. After entering hospice, patients contemplated mortality an average of once per month. Patients' level of depression or anxiety was not significantly correlated with levels of self-reflection on mortality. In qualitative interviews, patients most frequently discussed "good care and comfort" received in hospice and acceptance of death. Patients reported a fear of physical pain associated with death more than death itself. The quality of hospice care and the comfort patients received while on service alleviated concerns of mortality. Despite facing imminent death, patients did not endorse depression or anxiety, accepted death, and were more concerned with the physical pain associated with dying. These findings provide useful data for clinicians regarding psychological concerns of hospice patients.

#### **EXPLORING CLINICIAN-FAMILY COMMUNICATION IN ACTIVE HOSPICE INTERDISCIPLINARY TEAM MEETINGS**

K. Washington<sup>1</sup>, D. Parker Oliver<sup>2</sup>, E. Wittenberg-Lyles<sup>3</sup>, G. Demiris<sup>4</sup>, S. Shaunfield<sup>5</sup>, 1. *Kent School of Social Work, University of Louisville, Louisville, Kentucky, 2. Department of Family and Community Medicine, University of Missouri, Columbia, Missouri, 3. Markey Cancer Center, University of Kentucky, Lexington, Kentucky, 4. School of Nursing, University of Washington, Seattle, Washington, 5. Department of Communication, University of Kentucky, Lexington, Kentucky*

Technology enables family caregivers to participate in hospice interdisciplinary team (IDT) meetings from geographically remote locations as part of the ACTIVE (Assessing Caregivers for Team Intervention via Video Encounters) intervention. Research suggests that effective communication is critical to the success of ACTIVE team meetings. The purpose of this study was to obtain a better understanding of the attributes of clinician-family communication during ACTIVE team meetings involving family caregivers of hospice patients. Using a template approach to text analysis, researchers analyzed clinician-family communication during 84 video-recorded IDT meetings conducted as part of a randomized controlled trial of the ACTIVE intervention supported by an R01 grant from the National Institute of Nursing Research. Results indicate that members of the IDT regularly employ communication to more fully involve caregivers in decision-making and executing the hospice plan of care. Less frequently, communication is used to address

emotional aspects of care and to better understand patients and family members in a holistic manner. Discussion of study results includes practical guidance on effective communication with family caregivers in IDT meetings.

### **THE TRAJECTORY OF PALLIATIVE CARE CONSULTATION RECOMMENDATIONS**

E. Kozlov, B.D. Carpenter, *Psychology, Washington Univ, St. Louis, Missouri*

**Introduction:** In 2008, the Veterans Association mandated that all VA hospitals have a palliative care consult team (PCCT) in place to provide specialized services to veterans with severe, life-limiting illness. The goal of these teams is to offer guidance to the originating medical team regarding holistic treatment that maximizes quality of life. The purpose of the current study was to examine systematically what recommendations are made by a PCCT and how they are implemented. **Methods:** This medical records review study examined initial palliative care consultations conducted between January 1st, 2009 and December 31st, 2010. Data extraction focused on PCCT recommendations, timing of implementation, and nature of implementation. **Results:** PCCT recommendations ranged in their focus from symptom management, to placement suggestions, to goals of care adjustments. The mean number of recommendations made by the PCCT was 2.14 (SD=1.88) per consult. Over half (58.8%) of the recommendations were implemented by the originating care team. Of the recommendations that were implemented, the mean time to implementation was 1.03 days (SD=1.35), and most recommendations were implemented as instructed by the PCCT. **Conclusions:** In this setting, the PCCT is active in offering a wide range of recommendations that are implemented frequently and efficiently. Nonetheless, the medical chart review methodology raises questions about what informal care decisions and conversations occur outside of the formal documentation system. Additional research methods may provide further insight into how palliative care consultation teams can function most effectively.

## **SESSION 395 (POSTER)**

### **ADULT PROTECTION AND ELDER ABUSE**

#### **PHYSICAL ABUSE IN THE ELDERLY: AN EPIDEMIOLOGIC STUDY IN ATLANTA, GEORGIA**

T. Price<sup>1</sup>, R.L. Dillard<sup>1</sup>, S. Strasser<sup>2</sup>, P.S. King<sup>3</sup>, K. Johnson<sup>1</sup>, *1. Division of Geriatric Medicine, Emory University, Atlanta, Georgia, 2. Georgia State University, Atlanta, Georgia, 3. Georgia Division of Aging Services, Atlanta, Georgia*

Increased awareness of elder mistreatment (EM) in the United States has led to prevalence and risk factor research, but few studies to date have investigated legal consequences of cases processed within the judicial system. Researchers in DeKalb County, Georgia reviewed EM cases from 2009-2010. These cases were obtained through a unique collaboration of academic centers of Gerontology and local law enforcement officials (solicitor general, district attorney, and local police departments) as part of a greater effort to identify and care for the victims of elder mistreatment in Atlanta, Georgia. Using standardized epidemiological methods, 41 cases of elder physical abuse crimes, risk factors, and outcomes were categorized. These EM cases were all filed as misdemeanors in state court. Findings include: EM recurrence among 77% of cases; familial perpetrator in 61% of cases; and simple battery as the most frequent charge filed. One-third of cases were dismissed before trial due to lack of evidence or testimony (*nolle prosequi*), half involved guilty pleas without subsequent trial, and the remainder dismissed for other reasons. Results may indicate that the victim-abuser relationship may lead to reluctance to testify or prosecute; thus cases are not fully

resolved in the judicial system. Of particular concern is the high rate of recidivism, which may be perpetuated by insufficient consequences of EM crimes.

### **ANALYSIS OF ABUSE AND CARE WORKERS' SATISFACTION WITH THEIR WORKPLACES: A NATIONWIDE STUDY IN JAPAN**

K. Masuda, T. Tatara, *Japan Rec Cross Kyusyu International Nursing College, Munakata, Japan*

This study had the following three aims: 1) to evaluate the extent of elder abuse and abuse of people with disabilities while receiving care, 2) to assess the extent to which environmental factors affect care workers using a scale to measure their satisfaction in their workplaces, and 3) to analyze the relationships between the extent of abuse and the care workers' satisfaction. Between February 10 and March 12, 2011, a mail survey was conducted on 1,713 individuals working as care workers at 564 institutions. A total of 1,135 (66.3%) valid responses were received. The following major findings were observed: 1) slightly more than 25% of all respondents indicated that they had committed physical or psychological abuse in their workplaces, 2) 48.1% of respondents were not satisfied with their salary because they considered it to be very low compared to other jobs, 3) 35% of all respondents were very dissatisfied with their work hours, 4) abuse and neglect were strongly related to the care workers' level of satisfaction with their workplaces, and 5) the level of abuse and neglect differed depending on the education level of the respondents. Currently, Japan has child protective services and adult protective services for the elderly and a similar program will be started for people with disabilities on October in 2012. However, the results of this study indicate the urgent need to improve the work environment of care workers in Japan. These and several other findings will be discussed in this session.

### **A LATENT GROWTH MODEL OF SPOUSAL VIOLENCE AND ELDERLY DEPRESSION TRAJECTORY IN KOREA**

M. Park<sup>1</sup>, H. Jun<sup>1</sup>, J.I. Wassel<sup>2</sup>, *1. Department of Child & Family Studies, Yonsei University, Seoul, Republic of Korea, 2. The University of North Carolina Greensboro, Greensboro, North Carolina*

Little is known about the long-term effects of spousal violence on the mental health of the perpetrators and the victims. Using the longitudinal data of South Korea Welfare Panel Study (2006-2009), we explored the association between spousal violence and elderly depression among South Koreans aged 55 and over. For analyses, a Latent Growth model was used. The results indicated that experiencing spousal violence both as a victim or a perpetrator was associated with elderly depression. Older Koreans, who had perpetrated verbal or physical violence towards spouses, demonstrated higher levels of depression at the first wave compared to those with no reported spousal violence. The higher effect was found for perpetrators across all four waves. Older Koreans who were victims of spousal abuse marked high initial levels of depression (2006) compared to those who reported no spousal violence; however the cross-sectional differences between the two groups tended to decrease across all four waves. The results indicate that the perpetrators of spousal violence are more likely to experience negative long-term effects on mental health compared to victims. These findings strongly suggest that the policy makers, practitioners, and researchers need policies and resources not only for the victims, but also for the perpetrators. Addressing the needs of both groups may both to reduce domestic violence and to improve the mental health of the victims and the perpetrators of domestic violence.

## CONTEXT EXAMINED: ORGANIZATIONAL DYNAMICS AND ELDER MISTREATMENT IN LONG-TERM CARE SETTINGS

A. Kille<sup>1</sup>, D. Burns<sup>1</sup>, P. Hyde<sup>2</sup>, F. Poland<sup>1</sup>, A. Kenkmann<sup>1</sup>, R. Gray<sup>1</sup>, *1. Faculty of Medicine and Health Sciences, University of East Anglia, Norwich, United Kingdom, 2. The University of Manchester, Manchester, United Kingdom*

**Objective:** To examine the organizational factors and interactions associated with mistreatment of older people being cared for in long-term care settings. **Background:** Research into elder abuse in long term care settings has examined risk factors associated with the older person, and with the staff group, with calls for more contextual approaches. **Design:** Comparative case study design incorporating participatory research. **Setting:** Eight long-term care settings in England. **Participants:** 167 residents, relatives and staff. **Methods:** In eight case studies in a purposive sample of long-term care settings organizational factors were used to direct ethnographic observation and interviews. Peer researchers (people aged over 60 with interest in/experience of care homes) contributed to data collection and analysis. **Results:** Organizational factors were identified by literature review and expert panel discussion with service users, family carers and care providers. The case study research revealed organizational factors to be in interaction. Such 'organizational dynamics' at times led to good care becoming unstable. Some systems could adapt, limiting fluctuations in care quality. However, organizational dynamics led in places to mistreatment, preventing 'good' people from providing good care. **Conclusions:** Quality assurance processes should examine how organizational factors are interacting (organizational dynamics) to affect care quality. Poor practice can become embedded in workplace cultural norms, and no longer recognised as concerning. Further development of processes to facilitate contribution of residents and staff to quality assurance processes would tap an as yet unrealised source of knowledge about how a long-term care setting is functioning at an organizational level. This paper is based on a research study funded by the Department of Health and Comic Relief. The views expressed in this paper are not necessarily the views of the Department of Health and Comic Relief.

## EXPERIENCING ABUSE AND FEELING ABUSED: EXPERIENCES FROM THE CANADIAN PILOT STUDY ON ABUSE & NEGLECT

C. Thomas<sup>1</sup>, L. McDonald<sup>2</sup>, S. Hirst<sup>3</sup>, P. Silva<sup>1</sup>, M. Beaulieu<sup>4</sup>, *1. Westat, Rockville, Maryland, 2. National Initiative for the Care of the Elderly (NICE), University of Toronto, Toronto, Ontario, Canada, 3. University of Calgary, Calgary, Alberta, Canada, 4. Sherbrooke University, Quebec, Quebec, Canada*

The Canadian pilot study on abuse and neglect was conducted in the summer of 2011. Some respondents noted that although they said "yes" to one or several items of abuse, they did not feel they experienced abuse during cognitive testing of the survey instrument. Because of this finding, we included a summary question that addressed this issue in the telephone interviews with older adults living in the community and institutionalized older adults. Respondents were given a definition for each type of abuse (neglect, psychological abuse, physical abuse, sexual abuse and financial abuse). If respondents said "yes" to any abuse item, they were asked if they felt they had experienced that particular type of abuse (e.g. physical abuse). To further understand how they felt, we asked them to describe their experiences. While 122 (46%) of respondents said "yes" to one or several abuse items, only two-thirds of them (78) felt they had been "abused." In classifying a series of events as abuse, we found that it is important and relevant to take account of respondents' own perceptions and descriptions of the situation. By including objective items and respondents' interpretations of events, there can be more sensitive and accurate estimates of prevalence. It may be necessary to make qualitative judgments about whether a specific case constitutes abuse. This is an important and unique contribution to

the measurement of elder abuse prevalence. This poster will show how respondents viewed their experiences and the kinds of situations they experienced.

## MIND THE GAP: IMPROVING CRIMINAL JUSTICE AGENCIES AND SOCIAL SUPPORT AGENCIES RESPONSES TO INTIMATE PARTNER VIOLENCE AGAINST OLDER WOMEN

B. Penhale<sup>1</sup>, B. Nagele<sup>2</sup>, O. Toth<sup>3</sup>, W. Goreham<sup>1</sup>, B. Haller<sup>4</sup>, H. Perista<sup>5</sup>, T. Goergen<sup>6</sup>, *1. School of Nursing Sciences, University of East Anglia, Norwich, Norfolk, United Kingdom, 2. Zoom-prospektive NGO, Göttingen, Germany, 3. Institute of Sociology, Budapest, Hungary, 4. Institute for Conflict Research, Vienna, Austria, 5. CESIS NGO, Lisbon, Portugal, 6. German Police University, Munster, Germany*

**Context:** This EU-funded (Daphne III programme) study on Intimate Partner Violence (IPV) and Older women includes partners from Austria, Germany, Great Britain, Hungary, Poland, and Portugal. The project is running between March 2011 and March 2013 and addresses the issue of how to improve responses by criminal justice and social support agencies to intimate partner violence against older women. Until now, comparatively little has been known about this issue and this project helps to address that knowledge deficit. This work builds on previous work in this area, specifically a study undertaken between 2009-2011. **Method:** The first phase of the study consisted of analysis of case files held by the police and other criminal justice agencies in each country. Phase two consists of the development of guidance and training material for criminal justice agencies. The final phase consists of the development of guidance and PR and awareness raising material in conjunction with social support agencies. **Results:** The case file analysis was undertaken in 7 different police forces across England and Wales and 150 cases were analysed across a number of different fields. Likewise the expert workshops with criminal justice and social support agency representatives consisted of representatives from both countries, who contributed to the development of guidance, training and PR materials concerning intimate partner violence and older women. The results of the case file analysis will be presented and work in progress in the subsequent phases of the project will be described and discussed.

## PROTECTING VICTIMS OF FINANCIAL EXPLOITATION: THE EFFECT OF AN ELDER ABUSE FORENSIC CENTER

A.E. Navarro<sup>1,2</sup>, Z.D. Gassoumis<sup>2</sup>, K. Wilber<sup>2</sup>, *1. Azusa Pacific University, Azusa, California, 2. University of Southern California, Los Angeles, California*

Elder financial exploitation is defined as the taking or misappropriation of an older person's property, possessions, or financial assets. For cases reported to Adult Protective Services (APS) arriving at a remedy can be time-consuming and complex, requiring cooperation from a diverse array of institutions. This National Institute of Justice study focused on outcomes from a specialized multidisciplinary team—the elder abuse forensic center (the Center)—comprised of a diverse collaborative of professionals, meeting weekly with an overarching goal of protecting vulnerable adults. The sample consisted of community-dwelling adults, aged 65 and older, residing in Los Angeles County, California (n=482). Propensity score matching compared the "value added" from the Center to usual APS care. Each victim reviewed at the Center (n=241)—January 2007 through December 2009—was matched with unduplicated APS clients (n=33,650) served during the same period. Covariates included socio-demographics, additional abuse types, and referral sources. Referrals were tracked by Office of the Public Guardian (PG) revealing those with a PG investigation (17.8%, n=86). Outcomes included PG conservatorship, third party conservatorship, determination of self-sufficiency, and other. Preliminary evidence suggests the combined expertise of health, social service, and justice professionals enhanced conservatorship outcomes aimed at protecting financial

exploitation victims, as Center cases were over seven times more likely to be investigated (OR 8.5, CI:4.6-15.9,  $p < .001$ ) and over six times more likely to be conserved by PG (OR 7.3, CI:2.1-25.6,  $p < .05$ ). These results have implications for policy and practice related to the national replication of elder abuse forensic centers.

### **NURSING STAFF PERCEPTIONS OF ELDER ABUSE IN KENTUCKY**

T. Wangmo<sup>2</sup>, P.B. Teaster<sup>1</sup>, 1. *Health Behavior, Univ of Kentucky, Lexington, Kentucky*, 2. *University of Basel, Basel, Switzerland*

It is estimated that one in ten older persons living in the U.S. in community settings have experienced abuse or neglect during the previous year. Abuse and neglect of older persons also occurs in facilities such as nursing homes, where elders are dependent on professional staff due to health care conditions and limitations in performing activities of daily living. Some providers may be under stress to complete their responsibilities, resulting in neglectful acts. The aim of this study was to examine nursing staff members' perceptions of elder abuse in Kentucky. Using questions from a number of validated instruments (e.g., the revised Conflict Tactic Scale, Social Support Instrument, Elder Neglect Assessment, and Elder Abuse Screening Test) a survey was constructed and sent to registered nurses (RN) and licensed practical nurses (LPN) in Kentucky. The study population included 8,528 RNs and LPNs registered with the Kentucky Board of Nursing. A sample of 4,000 RNs and LPNs were randomly selected and stratified into rural, urban, and metro regions. In our effort to oversample rural area, 80% of the rural population received the survey, while 39% of urban and metro populations were selected. Preliminary results suggest that only 5% of the surveys were returned. These responses (approx. 25% each) were from RNs and LPNs living in rural and urban regions. Almost 40% of respondents had been working at a nursing facility for more than one year and another 36% had worked in their current workplace for more than 6 years. Almost all respondents (95%) were white, female (90.3%), and most (90%) had either a college diploma or degree. The results of this study highlight perceptions of the prevalence of elder abuse in Kentucky's nursing homes and provide information about measures that can be taken to prevent and intervene in elder abuse in nursing homes.

### **ELDER FINANCIAL ABUSE: CRIMES OF OCCASION, DESPERATION AND PREDATION**

P.B. Teaster<sup>1</sup>, K.A. Roberto<sup>2</sup>, R. Blancato<sup>3</sup>, J. Migliaccio<sup>4</sup>, 1. *Health Behavior, Univ of Kentucky, Lexington, Kentucky*, 2. *Virginia Tech, Blacksburg, Virginia*, 3. *Matz Blancato and Associates, Washington, District of Columbia*, 4. *MetLife Mature Market Institute, Westport, Connecticut*

Elder financial abuse, the unauthorized use or illegal taking of funds or property of people aged 60 and older, is regarded by some as the "Crime of the 21st Century." Our study compared three months of national news articles from 2008 and 2010 to examine trends in financial elder abuse. The annual financial loss by victims in 2010 was estimated at 2.9 billion, which was a 12% increase in the amount estimated in the 2008 study. Fraud perpetrated by strangers was present in 51% of articles; 34% concerned financial abuse perpetrated by family, friends, and neighbors. Women were nearly twice as likely to be victims of financial abuse as were men. The majority of victims was 80-89 years of age, lived alone, and needed assistance with either health care or home maintenance. Nearly 60% of perpetrators were males between 30-59 years of age. In most instances, perpetrators practiced deceit, threats, and emotional manipulation to exploit the elders. Empowering elders and families to prevent and reduce elder financial abuse is an important policy initiative. Study findings have been cited in congressional hearings on elder justice and have implications for educating older adults and the public at large about the widespread occurrence of this problem.

### **SOCIAL WORKER ABILITY TO IDENTIFY ELDERLY WITH HIGH ADULT PROTECTIVE SERVICE (APS) RECIDIVISM RISK**

D.H. Sommerfeld<sup>1</sup>, G.A. Aarons<sup>1</sup>, L.B. Henderson<sup>2</sup>, 1. *University of California, San Diego, La Jolla, California*, 2. *Human Services Agency, County of Ventura, Ventura, California*

**Introduction:** Research on Adult Protective Service (APS) recidivism for elders is limited. This study assesses the ability of APS social workers to accurately (and prospectively) evaluate the likelihood of requiring future APS intervention following case closure. **Methods/Data:** Data came from Ventura County, California, elder adult APS episodes with a confirmed self-neglect and/or abuse-by-other allegation between 11-1-2009 and 3-31-2011 (n=648). Recidivism was measured dichotomously (yes/no) based on whether a subsequent APS episode with a confirmed allegation occurred within 180-days of initial episode closure. APS social workers indicated the prognosis for "non-recurrence" at case closure on a 6-point ordinal scale. We utilized chi-square tests and multilevel, multivariate logistic regression analyses to assess the relationship between 180-day recidivism and social worker prognosis overall and by allegation type. **Findings:** Overall, 12.7% experienced 180-day recidivism. This rate varied by allegation type from 6.5% (abuse-by-other), to 14.8% (self-neglect), and 38.0% (both abuse-by-other/self-neglect). Social worker determined prognosis was associated with recidivism overall and for each allegation type. Overall, a low, medium, or high prognosis for non-recurrence corresponded to a 22.0%, 12.2%, and 1.0% actual 180-day recidivism rate. In the multivariate logistic analyses, prognosis continued to be a significant and substantial predictor of actual 180-day recidivism. **Conclusions:** The capacity of APS social workers to successfully identify clients most likely to experience future maltreatment combined with variations in recidivism evident by allegation type indicates that APS can accurately target longer term monitoring and support services to clients with high recidivism risk. This prospective shift can help prevent future maltreatment.

### **INSIDE THE BLACK BOX OF MULTIDISCIPLINARY TEAM PROCESS: MANAGING CONFLICT AND AGREEMENT**

J. Wysong, M. Riparetti-Brown, K. Wilber, *Davis School of Gerontology, University of Southern California, Los Angeles, California*

A multidisciplinary team (MDT) approach is an important tool to address complex elder abuse cases; building trust between disciplines is necessary for successful teamwork. Knowledge of team member roles, decision-making processes, and group dynamics will aid promotion of group cohesion without compromising interdisciplinary creativity. This study used case discussion transcripts and written observations of non-verbal communication to qualitatively examine an elder abuse MDT's discussion processes (n=38). The Team Observation Protocol was used to classify each interaction by function. Of all interactions, 72.3% were either questions or information; the majority of questions were asked by the team Geriatrician (22.7%), the Neuropsychologist (20.0%), Adult Protective Services (18.7%), and the District Attorney (12.0%). The case presenter was the primary source of information (73.6%). The most frequent decision-makers were the Geriatrician (38.5%) and the Public Guardian (30.8%). Narrative analysis found that themes within information-gathering are "victim characteristics," "suspected abuser profile," and "case facts." Themes in decision-making were "support services," "protective interventions," and "further evaluation." Sub-categories within each theme are detailed in a discussion process model. Verbal conflicts consisted of the expression of opposing views, and were often followed by humor or affirmation for the work of the team or case presenter. Findings from this study and the case discussion process model contribute to improving the efficiency and effectiveness of MDT case review processes. Findings suggest team members sometimes express opposing views that are necessary for advancing case objectives and for innovative case plans. Simultaneously supportive

interactions diffuse the corrosiveness of disagreement and perceived conflict.

### **SLOWING THE REVOLVING DOOR: THE EFFECT OF AN ELDER ABUSE MULTIDISCIPLINARY TEAM ON RECIDIVISM WITHIN ADULT PROTECTIVE SERVICES**

J. Wysong, Z.D. Gassoumis, J.M. Yonashiro Cho, K. Wilber, *Davis School of Gerontology, University of Southern California, Los Angeles, California*

Empirical research on recidivism of suspected elder abuse victims within Adult Protective Services (APS) is lacking. Of the two previous studies, complexity of suspected abuse type, advanced age, and living alone were predictors for re-referral to APS after case closure. More evidence is needed to better understand why recidivism occurs and how to enhance case resolution. Building on previous findings that analyzed predictors of recidivism among elder abuse cases referred to Los Angeles County APS between 2007 and 2009, this presentation includes APS investigation findings in a predictive model of recidivism and analyzes recidivism outcomes among cases referred to the Los Angeles County Elder Abuse Forensic Center (the Center). The sample consists of 592 APS clients, selected by propensity score matching of APS usual care cases to those seen by the Center. A majority (40%) of the Center clients were recidivists prior to intervention compared to 17% of the control group ( $p < 0.001$ ), indicating that recidivism is a basis for referral to the Center. This finding was confirmed in a logistic regression model controlling for demographics and suspected abuse types ( $OR = 3.17, p < .001$ ); however, the odds of Center cases exhibiting recidivism after presentation at the center was markedly lower ( $OR = 2.18, p < .05$ ). The Center reduced recidivism by 50% compared to 37% for clients in usual care. APS is an over-burdened public service. Evidence-based information on recidivism will aid policy decisions on staff training, investigation procedure, and the role of forensic multidisciplinary intervention as means to reduce elder abuse recidivism.

## **SESSION 400 (POSTER)**

### **AGING AMONG MINORITY AND DIVERSE POPULATIONS**

#### **ETHNIC IDENTITY AND THE ISSUE OF AUTHENTICITY: THE MIDLIFE PERSPECTIVES OF SECOND-GENERATION KOREAN AMERICAN BABY BOOMERS**

L.S. Park, C.E. Barber, *Human Development and Family Studies, University of Wisconsin-Madison, Madison, Wisconsin*

Much of the research on ethnic identity has centered on the experiences of adolescents and young adults. By contrast, this study focuses on ethnic identity from the perspective of middle adulthood. Of particular interest is the issue of authenticity, wherein individuals grapple with being viewed both as a “racial foreigner” in one cultural context, and as a “cultural foreigner” in another. The 16 middle-aged participants in this qualitative study are second-generation Korean Americans born between 1953 and 1965. In semi-structured interviews, participants shared retrospective thoughts and experiences about being seen as “neither a real American nor a real Asian” (Tuan, 1999). Identity issues related to being a “racial foreigner” were revealed in attempts to blend in with white peers, particularly during their youth into college and young adult years. However, as participants tried to assimilate into the predominant American/white culture, they began to understand how different they were and subsequently sought out co-ethnic peers as the Korean immigrant communities grew around them. Importantly, in the latter cultural context, participants experienced “othering” and exclusion from their co-ethnic community and peers; that is, they were viewed as “cultural foreigners”. From their midlife perspective, the experience of being viewed as cultural foreigners within the immigrant Korean communities was more distressing than being viewed as “racial foreig-

ners” earlier in life. While the combination of these experiences resulted in participants often questioning their authenticity as a Korean, the midlife period of their adulthood brought a new appreciation and sense of their identity.

### **MENTAL HEALTH SERVICE NEEDS & USE AMONG DEPRESSED OLDER ADULTS: THE ROLE OF ACCULTURATION**

H. Lee, M.S. Yang, E. Dugan, *University of Massachusetts Boston, Boston, Massachusetts*

Mental health service use is related to one’s help needs. Discrepancy between help needs and actual use might be related to one’s attitudes toward mental health and mental health service use. Immigrants may have different ideas about these, depending on the level of acculturation. This study aims to examine the role of acculturation in mental health service needs and use among older adults with depression. This study analyzes foreign and native born older adults (age 50 and over) who have depressive symptoms ( $N = 1,547$ ) from the 2001 California Health Interview Survey (CHIS). Acculturation is measured with immigration status and English proficiency. Descriptive, bivariate, and multinomial logistic regression are conducted. 47.3% of respondents do not report any perceived help needs for mental concern. Less than half of respondents who have help needs actually used mental health services. Immigrants are less likely to perceive help needs than US born ( $OR = .66, p < .05$ ). Lower English proficiency is a risk factor of not using mental health services ( $OR = .20, p < .05$ ). Older adults who are relatively younger, female, White, and have higher education, good health, and mental health insurance are more likely to have perceived help needs and to use mental health services. This study helps to identify risk groups who need help but do not have help needs and who need help but do not have access to services among older adults with depression with respect to the acculturation.

### **UNINSURED OLDER ADULTS: PREDICTORS OF ELEVATED RATES IN 50 STATES AND DC**

P. Huffman-Oh, C. Lee, L. Quach, N. Xie, E. Dugan, *University of Massachusetts, Boston, Boston, Massachusetts*

Uninsured older adults are disproportionately located in a few States. Although small in number, those aged 65+ without medical insurance represent a potentially significant cost to state healthcare systems. This study explores variations in rates by examining state population characteristics and state healthcare policy. State level data was derived from the 2010 Current Population Survey, Annual Social and Economic Supplement. Descriptive, bivariate, and multivariate analyses were conducted. The proportion of uninsured older adults was computed for each of the 50 States and DC. Based on the observed distribution, states were grouped into those with low ( $\leq 1\%$ ), moderate ( $> 1\% - \leq 3\%$ ), and high ( $\geq 3\%$ ) rates. Un-insurance rates varied dramatically across states and groups. 3.6% of older adults in high-rate states were uninsured compared to 1.4% in the remaining states ( $t\text{-test} = -9.0243, p < .001$ ). Bivariate analysis comparing low-rate with high-rate States showed significant differences in the percentage of older adults who were Hispanic (5% vs 8.9%,  $p = .009$ ), Black (1.6% vs 3.1%,  $p = .038$ ), Asian (5.2% vs 12.3%,  $p = .019$ ), immigrants (4% vs 13%,  $p = .002$ ), and living at or below 150% of poverty (19.4% vs 24%,  $p = .01$ ). Multivariate regression showed that population characteristics (e.g., % non-citizen immigrant, % minority, % 65-69 years) contributed to state older adult un-insurance rates but that per capita Medicaid expenditure and un-insurance among those 18-64 did not ( $F = 48.40, p < .001$ ). These findings suggest State rates of older adult un-insurance are influenced by different factors than rates among younger ages. Implications for state healthcare policy are discussed.



## **SOCIAL COHESION AND TRUST AMONG OLDER MEXICAN AMERICANS LIVING IN HIGH DENSITY ETHNIC NEIGHBORHOODS**

K.G. Emerson<sup>1</sup>, K. Eschbach<sup>2</sup>, 1. *Institute of Gerontology, University of Georgia, Athens, Georgia*, 2. *University of Texas Medical Branch, Galveston, Texas*

**Background:** Extant research shows that neighborhoods with a high proportion Mexican Americans can have a positive effect on mortality as well as both good physical and mental health outcomes for older Mexican Americans. Researchers speculate that this is due to social processes at work in these neighborhoods. **Purpose:** We test the hypothesis that social networks for older Mexican Americans living in high density ethnic neighborhoods differ from those that do not live in such neighborhoods. **Methods:** Using data from Wave 5 of the Hispanic Established Population for the Epidemiological Study of the Elderly (Hispanic EPESE; N=1,716) we test this hypothesis by examining the impact of individual level social ties and neighborhood-level characteristics on social cohesion and trust (SC&T). We employ multi-level regression modeling, which considers individual factors nested within county-level data. **Results:** Hierarchical models suggest that persons living in neighborhoods with a higher density of Mexican Americans report higher rates of SC&T ( $p$ -value<.05). Additionally, models showed that while having family in the neighborhood was not significantly associated with SC&T, having a few friends ( $B=1.38$ ) or many friends ( $B=3.49$ ) compared to having no friends in the neighborhood was highly and significantly correlated with the outcome. **Conclusions:** The original hypothesis is supported, suggesting that the protective effect of high density Mexican American neighborhoods could be due to higher rates of social cohesion in these neighborhoods. Results also showed that friends in the neighborhood are more important to forming SC&T rather than family. Implications of the results will be discussed.

## **ETHNICITY, CAPITAL, ACCULTURATION, AND FUNCTIONAL STATUS AMONG OLDER ASIAN IMMIGRANTS IN THE U.S**

Y. Jeong, H. Igarashi, R. Nath, N. Toyokawa, *School of Social and Behavioral Science, Oregon State University, Corvallis, Oregon*

Despite the rapid growth and large presence of Asian immigrants in the U.S (U.S. Census Bureau, 2012), their health status and its heterogeneity among subgroups is poorly understood. Based on empirical studies with the general population and non-Asian groups (Gong, et al., 2011; Frisbi, et al., 2001), this study examined the links between older Asian immigrants' functional status and underlying mechanisms such as ethnicity, capital, and acculturation. Using the 2010 American Community Survey, we sampled older immigrants (65 years or older) from Philippines, China, India, Vietnam, and South Korea (N = 8566). Functional status questions asked whether respondents had self-care and ambulatory difficulty. Capital included education, household income, and enrollment in health insurance. Acculturation was measured by duration of residence in the U.S and English proficiency. Logistic regressions were used for the analysis. Controlling for demographic characteristics, Filipino, Indian, and Vietnamese immigrants were more likely to have self-care difficulty than U.S-born White counterparts. Chinese, Vietnamese, and Korean older adults were less likely to report ambulatory difficulty than US-born White counterparts although Filipino and Asian Indian immigrants showed a higher chance of having this difficulty. Capital was less associated with the functional status among Asian immigrants than U.S-born White counterparts. For Asian immigrants, longer residence in the U.S and decreased a chance to have self-care difficulty, and better English proficiency did ambulatory difficulty. The effects of capital and acculturation on functional status varied by ethnicity. This study highlights the diversity of health among older Asian immigrants.

## **EFFECTS OF PARTICIPATION IN ADULT DAY HEALTH CARE (ADHC) ON QUALITY OF LIFE AMONG LOW-INCOME OLDER KOREAN IMMIGRANTS**

B. Kim<sup>1</sup>, L.B. Maradik Harris<sup>2</sup>, 1. *School of Social Work, University of Hawaii at Manoa, Honolulu, Hawaii*, 2. *UCLA, LA, California*

**BACKGROUND:** Social activity benefits elders by improving their quality of life. Community-based long-term care for older participants is especially beneficial in enhancing their quality of life because it includes engagement in activities such as exercise, teaching, taking classes, and volunteering. Few studies have examined the association between participation in adult day health care (ADHC) and quality of life among low-income older Korean immigrants. The purpose of this study was to explore the correlation between participation in adult day health care and quality of life of low-income older Korean immigrants. **METHODS:** The study uses a cross-sectional survey design with a sample of 215 older Korean immigrants in Los Angeles County. Participation variables (number of years in ADHC and number of days in ADHC) were used to measure participation. To measure quality of life, the Rand SF-36 scale was utilized. The study was conducted through questionnaires administered to 215 older Korean participants at 9 adult day health care centers in Los Angeles County. **RESULTS:** The study found that participants who attended more years in ADHC were more likely to have higher QOL. However, no correlation was found between number of days in ADHC and QOL. In particular, female participants in adult day health care had stronger positive correlations with QOL. **IMPLICATIONS:** Findings suggest that participation in ADHC is significantly associated with QOL among low-income older Korean immigrants, in particular female elders. Practitioners and community leaders can use these findings to encourage older Korean immigrants to participate in community-based long-term care such as ADHC.

## **HEALTHY EATING HURDLES: A QUALITATIVE INVESTIGATION OF OLDER ADULTS' FOODSCAPE MANEUVERABILITY IN URBAN NEIGHBORHOODS**

M.L. Boehm, *Sociology, Case Western Reserve University, Cleveland, Ohio*

It has been consistently documented that healthy eating is one of the core contributors to disease prevention (Shepherd et al. 2006). Moreover, there is a large body of literature demonstrating the relationship between social structures and health (Coveney 2004). To date, there has been little attention paid to barriers within neighborhood Total Food Environments (TFEs), particularly in regards to older adults residing in public housing. Determining what these barriers are is even more critically important in understanding what can be done to positively aid in breaking down these barriers to healthy eating in low-income neighborhoods. This qualitative study is one of the first to determine healthy eating barriers in urban neighborhoods, particularly for aging seniors who reside in public housing. Data consist of 20, one-on-one semi-structured interviews with CMHA (Cuyahoga Metropolitan Housing Authority) Senior (50+) residents in the Cleveland, Ohio area. Through use of a qualitative design, this methodological approach has been used rarely, if at all, in research on urban food environments. Preliminary results indicate that safety and dishonest pricing methods in neighborhood cornerstores limits the already barren food choices available within their neighborhood boundaries. These data will inform efforts to increase access to healthy foods in underserved neighborhoods, including future programming, sustainability of interventions, and neighborhood infrastructure planning.

## **AGING ORGANIZATIONS IN A TIME OF ECONOMIC DOWNTURN: FINDINGS FROM THE 2011 TITLE VI AGING NETWORK SURVEY**

K. McGrew<sup>1</sup>, E. Carpio<sup>1</sup>, J. Straker<sup>1</sup>, M. Kaschack<sup>2</sup>, 1. *Miami University, Oxford, Ohio*, 2. *National Association of Area Agencies on Aging (n4a), Washington, District of Columbia*

Organizations serving older adults have faced unusual challenges in the past three years of economic downturn; increased demand for

services and reduced or threatened funding require organizations to do more with less. One network of organizations, the 249 Older Americans Act Title VI American Indian, Alaska Native and Native Hawaiian programs, is relatively understudied as it works to maintain services, build capacity, and expand programs in these challenging times. With a grant from the Administration on Aging (AoA), the National Association of Area Agencies on Aging (n4a) partnered with the Miami University Scripps Gerontology Center to conduct the 2011 survey of Title VI programs. The survey assessed the role of Title VI programs in providing services and supports to elders in their communities. The survey was completed by 207 Title VI programs (83%). Respondents reported ongoing fiscal pressures; over three-quarters (77.6%) of Title VI programs have been faced with the likelihood of running out of funds for services. They also reported a range of strategies employed to meet the growing needs of their community elders. Among these strategies are engaging in partnerships with organizations within and beyond their communities, including collaborations with Area Agencies on Aging; developing improved access to services; developing business planning and outreach activities; and the use of volunteers. Finally, respondents reported strong interest in training and technical assistance to enhance strategic planning, resource development, grant writing, and the development of outcome measures. Implications for advocacy, policy development, training, and research are suggested.

#### **HEALTH INSURANCE COVERAGE AMONG OLDER ASIAN AND HISPANIC IMMIGRANTS: CITIZENSHIP STATUS AND ETHNIC DIFFERENCES**

S. Lee, *Gerontology, Univ Mass Boston, Boston, Massachusetts*

The purpose of this study is to compare health insurance coverage (Medicare, Medicaid, private health insurance (PHI), and no health insurance (NHI)) across older Asian and Hispanic immigrants. The data are drawn from the American Community Survey 2010. The sample consisted of Asian and Hispanic immigrants, who are noninstitutionalized and older than 65 years. The findings for Asians show that the effect of being a US citizen is significant for all health insurance indicators, where the odds of having PHI and Medicare is 2 and 4 times greater, respectively, than among the Asians who don't have that insurance. In contrast, the likelihood of having Medicaid and having NHI decrease by 20% and 99% for US citizen Asian than among the non-citizen Asian, respectively. Very similar results are found among Hispanics. In terms of Asian ethnicity, the odds of having PHI or Medicare are much lower for Chinese, Filipino, Indian, Korean, and Vietnamese than for Japanese. Moreover, the odds of having Medicaid or NHI are much higher across all Asian groups than for Japanese. In terms of Hispanic ethnicity, the odds of having PHI or Medicare are much lower for Mexican and Cuban than for Puerto Rican (PR). In addition, the odds of having Medicaid or NHI are much higher across all Hispanic groups than for PR. This study shows that Asian and Hispanic ethnic groups experience disparities in health insurance coverage. In order to decrease a late-life gap in health insurance coverage, barriers to obtaining health insurance should be reduced.

#### **HEALTH CARE UTILIZATION AND LANGUAGE PREFERENCES AMONG OLDER ASIANS IN CALIFORNIA**

M. Nguyen, S. Wang, L. Quach, E. Dugan, *University of Massachusetts, Boston, Boston, Massachusetts*

The quality and satisfaction with care is related to the ability to communicate. The aim of this study is to investigate the role of language in health care utilization among older Asian adults in California. This cross-sectional analysis used 2009 California Health Interview Survey (CHIS) to examine the health care utilization among older Asians aged 50 and over (N=2,596) who report speaking English "not well or not at all". The ethnicities looked at are Chinese (n=570), Vietnamese (n=757), and Korean (n=535). Descriptives, bivariate, and SEM analyses were conducted. When asked if language was a barrier to going to see the doc-

tor, subjects responded "no" including those who self-reported poor to no knowledge of English. Of Asians aged 50 and over, 44% speak poor to no English. When broken down by ethnicities, Vietnamese and Koreans self-report speaking poor English at 70% and 67% respectively. The number of doctor visits and patients speaking "poor to no" English are not dependent of each other  $c2(6, N=2,596) = 7.22, p=.30$ ). In addition, older Asians with poor English prefer to go to their doctor and more than 80% visit a doctor that speaks their native language in each ethnic group. Thus, the older Asian adults in this study seem to overcome the language barriers to obtain health care. The value of translation services, family translators, and multilingual healthcare providers was demonstrated.

### **SESSION 405 (POSTER)**

#### **AGING AND TECHNOLOGY; APPLICATIONS AND IMPLICATIONS**

##### **THEORISING THE IMPACT OF SURVEILLANCE TECHNOLOGIES ON OLDER PEOPLE**

A. Sixsmith, W. Mortenson, R. Woolrych, *Simon Fraser University, Vancouver, British Columbia, Canada*

Surveillance technologies are increasingly being used to monitor the activities and health status of older people living at home. While these systems can improve safety and security, little attention has been given to the way they impinge on the lives of users. Ambient Assistive Living (AAL) systems involve "activity monitoring", using data collected from environmental and body-worn sensors to build a profile of the dweller's typical pattern of living. Variations from this pattern may be a source of concern, possibly requiring intervention. Activity monitoring can be used to track changes in the health and functional status of people in the longer-term. Although AAL aims to facilitate autonomy, safety and security, there remain concerns over how activity monitoring may affect user's privacy and everyday behaviour. Using Foucault's concepts of observation and self-discipline, the paper explores the nature and experience of surveillance and the potential impacts on the everyday lives of older people. Activity monitoring blurs the division between intimate and public spaces, creating new mechanisms and forms of coercion (restraints and constraints). Surveillance technologies create a "pseudo-panopticon" that has the potential to change the way social relationships are negotiated and mediated. The way AAL is developed and used must progress from a technological construction of the problem space, to one that sees surveillance technology as part of a wider socio-technical system. Concern over privacy must extend beyond technical matters of data security and confidentiality, to include how monitoring technologies affect social relationships, everyday behaviour and the experience of home.

##### **CAREGIVERS' DEMENTIA RELATED DRESSING ISSUES INFLUENCING DEVICE DESIGN AND DEVELOPMENT**

D.F. Mahoney<sup>1</sup>, E.L. Mahoney<sup>2,1</sup>, W. Burseson<sup>2</sup>, *1. Nursing, MGH Institute of Health Professions, Boston, Massachusetts, 2. Arizona State University, Tempe, Arizona*

Prior research indicates that dressing is the most common daily concern for family caregivers of persons in late early to mid-stage Alzheimer's disease (AD). The purpose of this study was to: 1) identify and explore dementia related dressing problems and 2) obtain caregivers' critique of a mockup automated dressing coach. Methodology: Qualitative focus group study of 20 primary caregivers who helped to dress relatives with AD using a semi-structured probative discussion format. Conversations were audio-taped and transcribed. The PI moderated each session and analyzed data with a second reader, using standard content analysis procedures. Results: Three focus groups were conducted and six individual telephone interviews for those unable to attend a group. Caregivers reported being fatigued

and emotionally drained by the constant prompting and cueing. Strategies involved simplifying choices and pre-organizing clothes. The adult children were most enthusiastic about the prototype, expressing discomfort from crossing their personal intimacy boundaries when dressing their parents. Spouses viewed the opportunity to extend independence in dressing as a means to sustain their loved one's dignity. Everyone desired ways to help maintain "normalcy" at home and saw the proposed technology as an innovative means to do so. Most prototype features were affirmed, others redesigned. Unexpectedly, the infrared privacy camera was desired. Conclusions: Dressing issues were prevalent and a common source of caregiver distress. Current dressing assistive devices are not practical for persons with dementia. Developing a device that addresses the needs of the caregiver-care recipient dyad is not only particularly challenging but also highly desirable.

#### **OLDER PEOPLE'S USE OF ASSISTIVE TECHNOLOGY: FORMULATING A SOCIOLOGICAL RESEARCH AGENDA**

G.W. Pritchard, K. Brittain, *Institute of Health and Society, Newcastle University, Newcastle upon Tyne, United Kingdom*

Assistive Technology (AT) incorporates a wide and increasing range of devices and services. According to the Audit Commission they include 'any item, piece of equipment, product or system that is used to increase, maintain or improve the functional capabilities and independence of people with cognitive, physical or communication difficulties' (2008: 3). Although traditionally discussed in relation to disability, the UK government and others have identified AT as something of a 'magic bullet' that will work as a panacea for the plethora of cost and care-related challenges associated with the ageing populations of Western nations. It has also been celebrated at the level of the individual by being heralded as an enabler that allows an often-maligned social group to live independently in their own homes for longer and forgo the immediacy of institutionalization. However, despite these perceived benefits, evidence suggests that uptake of AT among older people has been low and an emerging area of academic inquiry has speculated on the reasons for this. This paper offers a critical commentary on this literature with particular reference to its tendency to be uncritical, overly schematic and reliant on psychological models. I further argue that overall, this developing canon has failed to fully exploit the meaningful conceptual insights from social theory and the article concludes by suggesting a more sociologically-focused research agenda organized around the three central themes of identity; social inequality and the emerging 'social model of ageing'

#### **A "CALL TO ACTION": EMPOWERING KANSAS SENIOR CITIZENS THROUGH PARTICIPATION IN TECHNOLOGY**

T. Paul, *Senior Services, Inc. of Wichita, Wichita, Kansas*

One of the principal problems encountered when working with senior citizens is their tendency to isolate and withdraw from activities. A research project used technology as to enhance the quality of life for seniors; reducing their isolation, and studying physical and social changes. Participants received instruction on the use of the Internet and either a desk top computer or an Apple iPad. One hundred and eleven seniors from two senior centers participated in the project. Accumulated data included both focused on individuals age 50 and over. The participants were volunteers and individually completed report forms. Demographic data and monthly physical measures and pre/post self-report anxiety, participant comments and user satisfaction were accumulated for analysis. Participating organizations included an African American senior center. Preliminary analyses suggest both physical and social behavior of participants improved over the duration of the project. Data supporting the improvements and implications thereof will be provided.

#### **EXPLORING ONLINE HEALTH MANAGEMENT TOOL ADOPTION AMONG OLDER ADULTS**

L. Zettel-Watson, E. Chang, *California State University, Fullerton, Fullerton, California*

As the population ages and chronic diseases become more abundant, our health care system will be strained beyond anything our society has seen before. The current system is ill-equipped to handle the abundance of patients/needs in the years to come. Consequently, individuals will be called upon to help manage their own health. Already in existence and quickly increasing in popularity are online health management tools. These tools have the potential to diminish or even replace in-person contact with health professionals, but their efficacy has not been tested and current usage trends are unknown. The goal of the current study was to explore perceptions and usage patterns among users of online health management tools, and to identify barriers and barrier-breakers among non-users. In collaboration with our local Osher Lifelong Learning Institute (OLLI), we obtained in-depth information from 169 computer users over the age of 50 who use/do not use online health management tools. Analyses revealed that a sizable proportion (37%) of participants use online health management tools and most users (89%) are satisfied with these tools. However, a limited number of tools are being used and usage occurs in relatively limited domains. For non-users, most seem open to using this technology, but they need more information on existence and capabilities, as well as internet security assurances. Detailed findings will be presented and the implications for individuals, caregivers, health care providers, program planners and policy makers will be discussed.

#### **BRIDGING THE PROFESSIONAL DIGITAL DIVIDE: COMPARATIVE ANALYSIS OF TECHNOLOGY USAGE BEHAVIORS ACROSS THE WORKING LIFESPAN OF PROFESSIONAL SOCIAL WORKERS: A QUANTITATIVE STUDY**

A. Bonner, *1. Howard University, Washington, D.C., District of Columbia, 2. Research and Strategic Analysis, AARP, Washington, District of Columbia*

Technology is a fact for modern day social workers and yet there is a scarcity of research about how social workers adopt or fail to adopt technology. The purpose of this study is to examine the factors that explain the behavioral intent to use computers and computer based technologies by licensed social workers who are age 45 and older. The universe for this study consists of the licensed membership base of the National Association of Social Workers (NASW) which has currently has 133,000 professional social workers enrolled. This study tested the modified theory of the Unified Theory of Acceptance and Use of Technology (UTAUT) that relates the independent variables of computer self-efficacy (CSE), performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) to the dependent variable behavioral intentions (BI) while controlling for the variables of age, gender, experience, ethnicity, and distance to retirement for licensed social workers. The independent variables, FC, PE, EE and SI were found to have a positive linear relationship with the dependent variable BI as seen in previous studies, while FC and PE the strongest predictive power. Contrary to the theory used in the present study, many of the control variables suggested were not found to have any impact on predicting the relationship between the DV and IV's. This leads to two major recommendations: 1) that employers should supply adequate technical and organization support and that employers should seek out CBT that can be directly tied to improving job performance.

#### **NEW TECHNOLOGY TO STORE, RETRIEVE, AND CONVINC FUTURE CLINICIANS TO HONOR PATIENTS' KNOWN WISHES**

S.A. Terman, *Caring Advocates, Carlsbad, California*

Even the clearest, most specific clinical forms can have no effect unless they reach the clinicians providing medical care in time for them

to follow their directions. This poster introduces some technical innovations whose goal is to expedite retrieval of information needed to honor patients' last wishes after they no longer can speak for themselves. The proposed solution is flexible and comprehensive. A clinical example shows how such an innovation might have prevented extreme and prolonged suffering of one patient by facilitating an expedient way to retrieve his most recent and accurate expression of treatment preferences and proxy/agent designation. Poster visitors can appreciate firsthand, an interactive demonstration to see how they can easily upload now, so that others can later view and retrieve critically important forms and videos of interviews. "The MyLastWishes.org Program" offers a unique strategic solution to CONVINCING clinicians to HONOR a person's LAST WISHES by displaying on-demand, videos of short patient-physician or patient-planning professional interviews. After the patient describes WHAT s/he wants and explains WHY, the professional expresses an opinion if the patient possessed mental capacity to give informed consent to two critically important end of life options: A) Palliative Sedation to Unconsciousness that may be the only means to relieve days to weeks of unending, unbearable pain and suffering; and B) Natural Dying that may be the only means to avoid premature dying and still avoid months to years of lingering in Advanced Dementia with its increased risk of unrecognized and under-treated pain and suffering.

## SESSION 410 (POSTER)

### AGING RELATED POLICY STUDIES

#### OLDER ADULTS' FAMILY LEISURE ACTIVITIES AND FAMILY FUNCTIONING: DO ASSETS MATTER?

S. Hong<sup>1</sup>, C. Han<sup>2</sup>, 1. *Social Work, National Univ Singapore, Singapore, Singapore*, 2. *Sungkyunkwan University, Seoul, Republic of Korea*

**Purpose.** Using nationally representative data in Singapore, this study examines how older adults' assets influence family leisure activities and family functioning in Asian contexts. **Methods.** We collected 955 paired data from older adults and their family members about household asset profiles (homeownership and the value of financial assets), the Family Leisure Activity Profile developed by Zabriskie and McCormick (2001), and family functioning measured by Family Adaptability & Cohesion Evaluation (FACE) IV. For family leisure activities, Latent Class Analysis (LCA) was used to identify the patterns of the leisure activities and multinomial logistic regression analysis was adopted to examine the relationship between assets and leisure activities. On the other hand, we used OLS regressions to look into the relationship between assets and family functioning with three standardized ratio scores. **Results.** LCA classified four different groups based on family leisure activities: low, mild, moderate, and high family leisure classes. Controlling for socioeconomic demographics and health status, we found that both homeownership and financial assets were likely to be engaged in higher family leisure activities. In addition, we found that financial assets were positively associated with better family functioning measured by family cohesion, flexibility, and total circumplex ratio. **Implication.** The findings confirmed the positive asset effects on family leisure and functioning among older adults. Assets may be a crucial determinant enhancing older adults' family activities and relationships, which is meaningful information for gerontological practice. Gerontological social

workers and health professionals should pay more attention to asset-based programs and their effects in later life.

#### A SUBGROUP ANALYSIS OF LEGAL NEEDS AMONG OLDER ADULTS IN RURAL COMMUNITIES

D.C. Wihry<sup>1</sup>, J. Crittenden<sup>1</sup>, L.W. Kaye<sup>1</sup>, J.L. Martin<sup>2</sup>, 1. *University of Maine, Orono, Maine*, 2. *Legal Services for the Elderly, Augusta, Maine*

Understanding differences in legal issues among subgroups of older adults is key to effectively tailoring services to low income older adults living in small towns and rural communities. This research examines legal problems of older adults in Maine identified by survey respondents who are: homebound (N=46); 70+ (N=40); or received a denial or reduction of benefits from DHHS (N=22). Low-literacy and limited English proficiency populations were examined through proxy surveys of providers (N=41). More than half (56%) of respondents reported having legal problems in the previous year. Based on the percentage of individuals reporting problems, the most common issues across subgroups include financial scams (38%), home repair problems (19%), obtaining or retaining government benefits (18%), debt collection (18%), and accessing medical services (14%). Homebound older adults were less likely ( $p < .01$ ) to report having difficulties obtaining medical services compared to other groups although 50% of this population stated that they had faced one or more legal issues in the previous year. Among those 70 years of age and older, a majority (67%) reported having legal problems in the previous year, and significant differences ( $p < .01$ ) were discovered when they were compared to other subgroups in terms of the frequency of legal problems related to government benefits, medical services, and relationship violence. Among those elders who had experienced a recent reduction or denial in benefits, almost half (45%) indicated having or being aware of legal problems in the past year. Preferred approaches by older adults for obtaining legal information/assistance will be highlighted.

#### THE EFFECT OF RN AND CNA STAFFING ON RESIDENT OUTCOMES

K. Smith, K. Hyer, A.A. Holup, H. Meng, *School of Aging Studies, University of South Florida, Tampa, Florida*

The primary objective of this study is to examine the effect of registered nurse (RN) and certified nursing assistant (CNA) staffing on resident outcomes. Florida staffing level standards for direct-care workers increased to 3.9 hours per resident day (HPRD) with a daily minimum of 2.7 effective January, 1 2007. Due to reimbursement cuts in July 2008, sanctions for violations of these mandated minimum levels were relaxed for facilities staffing above 3.6 HPRD for a 12-month period. Staffing levels have been found to be associated with quality of care. This study uses the structure, process and outcome model (SPO) to examine the effect of maintaining higher levels of staffing (structural component) on restraint use and indwelling catheterization (process component) and quality measures including pressure sores, four point activities of daily living decline, and bladder incontinence (outcome components). Data from quarterly Florida staffing reports and the Online Survey Certification and Reporting database were used to examine CNA staffing levels of free-standing nursing homes during 2008-2009. Results indicated that relaxed requirements precipitated an immediate drop of CNA staff in 61% of Florida's nursing homes. Nursing homes maintaining higher staffing levels were more likely to be non-profit,  $\chi^2(1) = 14.25, p < .05$  and have lower Medicaid ratios ( $t = 3.48, p = .001$ ). These findings reinforce the importance of adequate state reimbursement for Medicaid residents to insure that all residents receive adequate care and quality of care is not determined by reimbursement. Future research should explore how quality out-

comes vary given different staffing, process of care and reimbursement levels.

### **AGEING PRISONERS HEALTHCARE: ANALYSING THE LEGAL SETTINGS IN EUROPE AND THE UNITED STATES**

W. Bretschneider, T. Wangmo, V. Handtke, B.S. Elger, *Institute for Biomedical Ethics, University of Basel, Basel, Switzerland*

Little is known about the current healthcare situation and the legal rights of ageing prisoners worldwide. To date, only a few studies have investigated their rights to healthcare. Still, elderly prisoners need special attention. Therefore a critical review of healthcare related national and international legal frameworks for ageing prisoners with a particular focus on Switzerland, England/Wales, and the United States was undertaken. This was done to compare and analyse all relevant national and international legal frameworks in order to investigate the obligation of the state in protecting the healthcare of its most vulnerable group, ageing prisoners. The International Plans of Action on Ageing published by the United Nations contribute the most by providing an in-depth analysis to the healthcare needs of ageing persons. Under the principle of equivalence, all mentioned topics should apply to ageing prisoners as well. The decision of the U.S. Supreme Court in *Estelle v. Gamble* in 1976 sets the standard of deliberate indifference applicable and pertinent to medical care and special environmental needs of ageing prisoners. Still, critical analysis of all obtained documents reveals the lack of legislation regarding the healthcare for ageing prisoners. Neither national nor international institutions have specific guidelines or laws that secure the precarious situations of ageing adults in prisons. To initiate a change, this work presents critical issues that must be addressed to protect the rights and well-being of ageing prisoners. Additionally, it is important to design legal structures and guidelines that acknowledges and accommodates the needs of ageing prisoners.

### **RETHINKING AGING: AN INNOVATIVE COMMUNITY-ENGAGED APPROACH TO PLANNING FOR AN AGING SOCIETY**

J. Weinstein, P. Carder, M.B. Neal, A. DeLaTorre, M. Cannon, K. Brown Wilson, M. DeShane, *Institute on Aging, Portland State University, Portland, Oregon*

This poster details a novel approach to engaging a diverse range of community members in discussion on the ways in which our community should respond to an aging society. Through a series of four summits, participants identified the challenges and opportunities that Oregon will face as our population becomes increasingly older and more diverse. Summit participants included academicians committed to education and research on issues in aging, leaders in aging services and policies, and recognized leaders from a broad range of fields and interests outside of gerontology. This engagement model, developed by the Aging Matters, Locally and Globally Initiative of the Institute on Aging at Portland State University in collaboration with Oregon Consensus, utilized a graphic facilitator and a World Café approach to facilitate lively discussion and generate new thinking on topics such as the evolving notion of retirement, the future of long-term care in Oregon, and our value system around aging services. For example, Oregon's noted home and community-based system has for over 30 years embraced the value of independence, but summit participants questioned whether this value is and will continue to be relevant. As a result of this collaborative process and the active participation of over 75 community members, core values emerged, a vision was shaped and an agenda of action items was formulated. This poster illustrates the summit planning and implementation process, as well as a step-by-step framework for replication that can be used by other communities planning for an aging population.

### **HOW TO ASSESS THE LEVEL OF INTEGRATION OF DIFFERENT PROVIDERS? LESSONS LEARNED FROM THE QUEBEC'S PRISMA MODEL ADAPTED FOR THE FRENCH ALZHEIMER PLAN**

D. SOMME<sup>1,5,6</sup>, M. De Stampa<sup>4,6</sup>, H. Trouve<sup>2</sup>, C. Perisset<sup>3</sup>, O. Dupont<sup>3</sup>, N. Armaout<sup>3</sup>, J. Ankri<sup>4,6</sup>, O. Saint-Jean<sup>1,5,6</sup>, 1. *APHP-HEGP, Paris, France*, 2. *Fondation Nationale de Gérontologie, Paris, France*, 3. *Caisse Nationale de Solidarité pour l'Autonomie, Equipe de pilotage nationale, Paris, France*, 4. *APHP-Saint-Périne, Paris, France*, 5. *Université Paris Descartes. Faculté de Médecine, Paris, France*, 6. *Laboratoire Santé Environnement Vieillessement EA 2506 Université de Versailles Saint Quentin, Paris, France*

One problem in implementing integrated services delivery (ISD) is to assess whether experimental projects progressed in level of integration. The 2008-2012 French Alzheimer plan aims to implement an ISD which is based on the PRISMA Québec's model. The level of integration was assessed by crossing 3 data sources from the 17 projects: 1) a 2 years continuing qualitative data collection 2) on-site semi-structured interviews (local pilot, local manager and case managers) 3) a simple tool made-up to measure the integration level according to the Québec's model resulting in a score varying from 0 to 24. The 2 qualitative approaches result in 5 categories of ISD implementation: 1) good implementation (n=3); 2) partial implementation but good diffusion of the concepts comprehension between providers (n=5); 3) difficulties in implementing ISD but good apprehension by the change-management agent of the problem (n=3); 4) difficulties in implementing ISD and ISD not being a high priority (n=4); 5) very high difficulties irreversible in a short term (n=2). The MAIA 24 scoring results in a score of 0-20 at the beginning and 4-21 at the end of the assessment period. It is possible to identify 2 sites with high level of ISD implementation, 3 sites with low level of implementation, and 12 sites in the medium level. Crossing the approaches is very useful because both have some limits. We develop a methodology to measure level of integration in a multi-providers network that was based on a Québec's model of integration adapted in France.

### **LONG-TERM CARE FINANCING REFORM AND THE DEMISE OF THE CLASS ACT: WHERE DO WE GO FROM HERE?**

W. Dawson, *University of Oxford, Oxford, United Kingdom*

This paper explores the determinants of federal long-term care (LTC) policymaking in the United States, specifically the interlinking role of ideology, political institutions and policy actors in the design, legislative success and failure to implement the Community Living Assistance Services and Supports (CLASS) Act. Long-term care financing is a growing policy issue for all advanced industrialized countries of the world, and it is driven by evolving family dynamics, population ageing and rapid advances in medical technology that are prolonging the human lifespan. These challenges are particularly stark in the United States amidst the backdrop of the global economic downturn and a highly charged politically environment. Why, after years of relative stability, did LTC financing reform take place as part of the Patient Protection and Affordable Care (PPACA) Act of 2010? Interviews with LTC policy stakeholders were carried out to explore the impact of ideology, institutions and policy actors on the design and legislative success of the CLASS Act. The subsequent decision not to implement the CLASS program after its legislative success raises several questions about the future of LTC financing and the possibilities for bringing about substantial policy change. Several policy options will be examined that may be able to navigate the varying impediments to policy change and bring about significant LTC financing reform.

## JAPAN'S "LIVING DEAD": AN EXPLORATION INTO THE PHENOMENON OF THE MISSING CENTENARIANS

H. Ueda<sup>1</sup>, S.S. Harasyn<sup>2</sup>, 1. Graduate School of Human Sciences, Osaka University, Suita, Osaka, Japan, 2. University of British Columbia, Vancouver, British Columbia, Canada

Japan has long been known as a country with an aging population and a rapidly increasing number of "centenarians" who are aged 100 and over. The number of this age cohort has reached more than 47,756 in 2011 since the first official report of 153 persons in 1963 when the Act for the Welfare of the Aged was established. Starting with the case in which a family member wrongfully received the pension benefits of a 111 year old man in 2010, many similar cases were later reported by the media. In September 2010, the Japanese Ministry of Justice reported that 234,000 centenarians were missing despite being recorded in the family registration system. To examine the roles in and the correspondence of a municipality dealing with this issue, and to clarify current remaining problems, we interviewed municipality officials in Kobe City where 105 missing centenarians had been reported. We found that there is internal miscommunication between their district office and the central municipality office. The self-report system by a family member of a deceased centenarian is neglected to some extent. The Great Hanshin Earthquake also complicated this issue. Thorough effort by family members and proactive routine correspondence by the municipal office is necessary in order to solve the issue of missing centenarians and also other younger age cohorts.

## WHAT ARE HOSPICES DOING RELATED TO QUALITY? FINDINGS FROM THE CMS VOLUNTARY REPORTING PERIOD

F.S. Rokoske, N. Zheng, B. Lyda-McDonald, A. Kirk, S. Bernard, *RTI International, Research Triangle Park, North Carolina*

Background: Beginning in January 2013, hospices nationwide will be required to report quality data to the CMS Hospice Quality Reporting Program (HQRP) in order to receive their annual payment update. Prior to launching the HQRP, hospices were invited to voluntarily submit quality indicators (QIs) data from their Quality Assessment and Performance Improvement (QAPI) programs. This Voluntary Reporting Period represents the first national look at hospice quality data. Methods: Hospices entered data about their QIs in a web-based data entry system. Two researchers independently coded the entries and established agreement of coding. Indicators were grouped by care domains and topics within those domains, and then content-analyzed. Results: 911 hospices submitted 6,712 QIs addressing patient care domains such as symptom management; psychosocial, spiritual, cultural aspects of care; communication with patients and families; and patient and family/caregiver experiences of care. Many QIs addressed non patient care related topics such as length of stay, employee turnover, and meeting organizational requirements. The data showed a large variation in QIs, even within domains of care for which standardized QIs exist. We found large variation among hospices with regard to the definition and use of QIs; some hospices are quite advanced while others lack basic understanding of what a QI is. Conclusions: Hospices use a wide variety of QIs to monitor their care, including "home-grown" and standardized, endorsed measures. The range of activity suggests that the adoption of standardized QIs by hospices is feasible as a way to improve the quality of end-of-life care.

## THE EFFECTS OF POVERTY AND HEALTH INSURANCE STATUS ON THE TIMING OF HEALTH SERVICE UTILIZATION AMONG OLDER ADULTS

J. Kim, *Northeastern Illinois University, Chicago, Illinois*

The Affordable Care Act of 2010 addresses one of the major concerns of our public health insurance system by expanding Medicaid eligibility to include poor, working-age adults up to 133% of the federal poverty line. Although access to health insurance, whether public

or private, does not necessarily guarantee that one will access health services, the research on health service utilization among the elderly is unambiguous in finding that those who are the most heavily insured use the most health services. Thus, while older adults may eventually find it easier to access the health services that they need due to the recent Medicaid changes, those just exceeding the new eligibility threshold may still find it difficult to access the care that they need. As such, this study extends the current literature by examining the patterns of health service utilization among poor and near-poor older adults as they approach the traditional age of Medicaid eligibility. This investigation uses data from the Rand version of the Health and Retirement Study spanning the years 2002-2008 to estimate a discrete-time hazard model of health service utilization which is used to explain the effect of poverty and health insurance status on the utilization decision. Life table analysis reveals that poor older adults are much more likely to utilize overnight hospital services and much less likely to utilize doctor services relative to non-poor older adults. Moreover, a discrete-time hazard model reveals that poverty status interacts with Medicaid receipt to significantly influence both hospital and doctor service utilization.

## SERVING MULTIPLE AUDIENCES: POPULATION DATA AT THE INTERSECTION OF ACADEMIA AND PUBLIC POLICY

T. Yamashita<sup>1</sup>, S. Mehdizadeh<sup>1</sup>, S. Kunkel<sup>1</sup>, P. Ritchey<sup>2</sup>, 1. Miami University, Oxford, Ohio, 2. University of Cincinnati, Cincinnati, Ohio

With the availability of 2010 census data and related information from the American Community Survey, demographic data about the older populations is especially newsworthy and relevant to planning and decision-making at many levels. Effective communication of high quality population data to a variety of audiences is one of the great opportunities afforded to researchers at the nexus of gerontology, public policy, applied research, and demography. Given their importance and broad accessibility, population projection data need to be effectively communicated. Based on population projections to 2050 using 2010 census data for the state of Ohio, and on state-of-the art information about data visualization, we have created a portfolio of products, and a dissemination strategy, designed to reach a wide range of audiences including policy makers, services providers and planners, Area Agencies on Aging, researchers, and the general public. This presentation will describe target audiences and the strategies and products designed to communicate with them. Products include a wall-chart with static color-coded maps, a dedicated website where individuals may download electronic version of projected data in multiple formats (e.g., Microsoft Excel), and static and interactive visualized data products (such as an interactive online thematic map). This presentation demonstrates the projection data products, and discusses overarching points regarding identification of multiple audiences, development of practically relevant projected data, and multiple means to effectively disseminate final products that can inform planning and decision making.

## SESSION 415 (POSTER)

### ATTITUDES AND PUBLIC OPINION ABOUT AGING

#### LGBT AGING TRAININGS EFFECTUATE POSITIVE CHANGE IN KNOWLEDGE & ATTITUDES OF ELDER SERVICE PROVIDERS

K. Porter, *UMASS Boston, Quincy, Massachusetts*

Background: Lesbian, Gay, Bisexual, and Transgender (LGBT) older adults are a marginalized and stigmatized population needing access to sensitive elder service providers. Elder service providers have a desire to increase their cultural awareness of LGBT older adults in order to serve their full community. Cultural competency trainings for this population have not been evaluated. Data: LGBT cultural sensitivity train-

ings were held at four mainstream aging agencies in Massachusetts and data were collected from pre-and post-surveys of 76 provider participants (N=76). Results: Findings revealed statistically significant improvement in numerous aspects of elder care providers' knowledge, attitudes and behavioral intentions subsequent to the training sessions. For instance, at posttest providers showed 30% or more improvement in knowledge about policy disparities affecting LGBT older adults and 23% more comfortable in knowing how to respond to and LGBT older adult's disclosure of sexual orientation or gender identity. Conclusions: This study concludes that mainstream elder service provider trainings on LGBT aging can effectuate positive change. Based upon the findings, the curriculum was incorporated into statewide trainings by the LGBT Aging Project that added an organizational capacity building component to support agencies committed to culture change.

### **IMAGE OF THE ELDERLY HELD BY UNIVERSITY STUDENTS —A CROSS-CULTURAL STUDY IN JAPAN AND SOUTH KOREA—**

Y. Hosoe<sup>1</sup>, J. Kim<sup>2</sup>, 1. Joetsu University of Education, 1 Yamayashiki - cyo, Joetsu, Nigata-ken, Japan, 2. Seoul National University, Kawanak-or 1, Kawanak-gu, Seoul, Republic of Korea

The purpose of this study was to compare and analyze the image of the elderly held by university students in Japan and South Korea. Despite sharing traditions based in Confucianism, the two countries have quite different social norms and cultural values concerning the elderly. And although both have enjoyed a rapid growth of economy, Japan being a super-aged society and South Korea an aging society also merits comparison. The study was conducted in Japan in 2009 and in South Korea in 2011 employing self-administered questionnaires based on a semantic differential scale using 50 adjective pairs. The sample consisted of 320 students from two universities in Japan (response rate 95.9%) and 384 students from two universities in South Korea (response rate 96.2%). The outcome was as follows: (1) A factor analysis identified four semantic spheres in Japan and five in South Korea. "Capable" and "Cooperative" were common to both countries. "Active" and "Social" were distinctive to Japan; "Noble and intelligent," "Happy," and "Intimate" to South Korea. (2) In the "Active" sphere, students in Japan had a more positive image than those in South Korea. In "Cooperative," students in both countries had a positive image. (3) "Concern for the elderly or the problems of the elderly," "Experience in activity with the elderly," and "Satisfaction for the family" were important factors in shaping the respondents' image. The study suggested that in post-industrial societies, personal factors such as experience with and concern for the elderly became stronger determiners of the resulting image.

### **DON'T WORRY, BE HAPPY: GENDER AND ETHNICITY DIFFERENCES IN PERCEPTIONS OF AGING**

C. Clark, *Psychology, Queens University of Charlotte, Charlotte, North Carolina*

The outlook a person has about aging has been shown to influence both the quality and quantity of older years. Given this relationship, it behooves us to learn as much as we can about the diversity of aging perceptions. The present study (part of a larger survey) asked 1264 participants whether old age was a happy time and what the best/worst things about growing older were. Significantly more females (.70) than males (.65) said old age is a happy time,  $X^2(2) = 6.95, p = .03$ . More African and White Americans (.70 and .69) agreed that aging is happy than did Asian or Hispanic Americans (.64 and .66),  $X^2(3) = 31.38, p = .03$ . For the best things about aging, more women than men (.16 and .10) and more African Americans (.17) than Asian (.11), White (.13) or Hispanic (.13) named wisdom,  $X^2(1) = 7.74, p = .005$  and  $X^2(3) = 17.88, p = .04$ , respectively. More women (.44) than men (.35) named sickness as a worst thing,  $X^2(1) = 11.79, p = .001$ , but there were no ethnic group differences for this naming. The cultural and gender diversity in the many other best and worst things about growing

older named will be presented and discussed with an eye toward determining a typical view of aging. Education and intervention programs can greatly benefit from understanding where diversity in perception exists and recommendations for such programs will be made based on these data.

### **TOWARD A MORE EFFECTIVE USE OF SENIOR VOLUNTEERS: AN EXPLORATORY STUDY**

M. Kuraoka, Y. Murayama, E. Kobayashi, H. Ohba, K. Nonaka, H. Suzuki, H. Jung, Y. Fujiwara, *Tokyo Metropolitan Institute of Gerontology, Itabashi, Tokyo, Japan*

This study explores how school-community coordinators view senior volunteers in Japan and how they utilize the volunteers in their activities. In 2008, the Ministry of Education launched a new policy called School Support Regional Headquarters Project in order to enrich education for children and enhance school functions through the support of local communities, as well as designated coordinators for the headquarters. Although the number of headquarters has increased nationwide (2,540 headquarters in 2010) since the start of the policy, the training for the coordinators to meet the needs for the school and volunteers has not been developed sufficiently or effectively implemented. A semi-structured interview was conducted in four focus groups in three locations, Tokyo, Kisarazu, and Yokohama in Japan. to identify how the current coordinators view the senior volunteers involved in the school support activities and how they utilize such volunteers. Twenty-two coordinators in total have participated in the study. The results indicate that the coordinators did not make any discernible distinction between the more elderly volunteers and the younger volunteers. Although some coordinators have paid special attention to circumstances when they coordinated with senior volunteers, none of the coordinators have been trained to understand the characteristics or special arrangements of the elderly. In order to promote community involvement that includes senior volunteers' participation, it is expected that developing a training program to educate the coordinators about the aged and developing skills to empower the volunteers in school volunteer activities are essential.

### **LOOKING AT THE HEALTH & RETIREMENT SURVEY 2008: FACTORS INFLUENCING OLDER ADULTS' SOCIAL SECURITY EXPECTATIONS**

M. Nguyen, *University of Massachusetts, Boston, Boston, Massachusetts*

The economic recession in late 2007 has affected the lives of many older Americans. The recession changed their outlook on the future of the economy in the United States. Knowing the timing of when the recession took place, the purpose of this study is to look at the characteristics of respondents in regards to expectations of Social Security benefits. This cross-sectional data analysis used the 2008 Health and Retirement study (N=14,339). The dependent variable was expectations of future Social Security benefits. Independent variables included race, socioeconomic status (SES), education, economic expectations, and financial preparedness. The study analyzed the data using logistic regression and structural equation modeling. A significant effect for race,  $t(14,323) = -3.38, p < .001$ , SES  $t(14,323) = 4.77, p < .001$ , and education,  $t(14,323) = 5.676, p < .001$ , were found on low expectations of Social Security benefits. Those who were pessimistic about the economy expected to have lower Social Security benefits ( $t(14,323) = 4.458, p < .001$ ). Financial preparedness did not have a significant effect on Social Security expectations. The old-age generation is extremely active in the policy and advocacy realm. Knowing the future expectations of older Americans will assist policymakers in representing older Americans' beliefs in Social Security and secure supportive programs for future generations.

## ATTITUDES OF UNDERGRADUATE STUDENTS IN GERONTOLOGY TOWARDS THE ELDERLY

M. Vazquez Arias, E. Arlas-Merino, M.J. Arias-Merino, N.M. Mendoza-Ruvalcaba, *Salud Pública, Universidad de Guadalajara, Zapopan, Jalisco, Mexico*

Aging in Mexico is a major challenge now and more in the future, making it necessary to have professionals in the geriatric field to meet the needs and contribute to knowledge in relation to the aging process. The University of Guadalajara, in their role and social commitment of higher education institution, established Degree in Gerontology to prepare professionals in understanding and addressing the psychological, biological and social aspects of a growing population of older adults. However, it is not known, What are the attitudes of new students toward the elderly? Data collection was conducted among students through a structured interview face to face which is divided into two parts. The first part of sociodemographic characteristics. In the second part, we apply an assessment of attitudes toward older adults through cultural assessment of attitudes. Results: participants 37 students, age 18±44 years (Average 23 ±7 years), women 81 %. Positive attitudes: Elderly people are wise 92%, Level of maturity 70%, Guidance to young people 92%, Do things clearly knowing the consequences 78%, Accomplished much in life 75.7%, More mellow 63%, Less frustrations 83.1%, Can laugh at youthful impetuosity 67.6%, Value the relationship with their partner 86%, Can feel some security about life 67.6%, Time to appreciate music 81%, Truly enjoy old friends 70.3%, maintain tradition 100%, truly enjoy children 62.2%. Conclusions. The attitudes shown by undergraduate students of gerontology toward older adults generally show attitudes about aging and old age accorded their own socio-economic and cultural context.

## SESSION 420 (POSTER)

### CIVIL ENGAGEMENT; ADVOCACY AND PARTICIPATION

#### LIFT UP YOUR VOICE! HEALTH CARE ADVOCACY TRAINING PROGRAM: EMPOWERING OLDER ADULTS

A. Gottlieb<sup>1</sup>, K. Barton<sup>2</sup>, N.M. Silverstein<sup>1</sup>, *1. Gerontology Institute, University of Massachusetts Boston, Boston, Massachusetts, 2. Gerontology Department, McCormack Graduate School of Policy and Global Studies, University of Massachusetts Boston, Boston, Massachusetts*

Lift Up Your Voice! is an advocacy training program developed by Community Catalyst and funded through Atlantic Philanthropies aimed at directly engaging older adults with chronic disease in state-based Campaign for Better Care initiatives that seek to achieve changes in the health care delivery system. An evaluation, conducted in 2011-12, included site visits in Pennsylvania, Ohio, and Massachusetts, participant surveys (N=50), and in-depth stakeholder interviews (N=14). We investigated the effectiveness of the training curriculum for engaging older adults in healthcare reform; the level of participant engagement post-training; and pre/post changes in participant empowerment. Over 50% of respondents reported participation in post-training advocacy activities (e.g. contacting elected officials, attending Medicare rallies). Paired sample t-tests revealed a significant increase in multiple dimensions of a consumer-constructed Empowerment Scale, including "You can't fight city hall" ( $t(32) = -1.97, p < .03$ ) and "Experts are in the best position to decide what people should do or get" ( $t(32) = -1.78, p < .04$ ). Compelling outcomes were awareness of problems with the health care system and that participants were not alone. Crafting powerful and concise personal narratives during trainings gave participants a voice regarding broader health care issues. For example, one participant reported, "I put a lot of time into writing the testimony for the health insurance commissioner and was glad that I did it. Sometimes I wonder if one voice really does make a difference, but it doesn't stop me from speak-

ing out..." Findings can inform future health care advocacy programs, especially involving older adults.

#### BRINGING GENERATIONS TOGETHER TO STRENGTHEN RURAL COMMUNITIES AND INDIAN RESERVATIONS

C.M. Mehrotra<sup>1,2</sup>, Z.L. Bail<sup>2</sup>, L.M. Haglin<sup>2</sup>, *1. Psychology, The College of St. Scholastica, Duluth, Minnesota, 2. Northland Foundation, Duluth, Minnesota*

The Northland Foundation launched AGE to age: Bringing Generations Together following a region-wide study to examine civic engagement among older people in northern Minnesota rural communities and Indian Reservations. Research revealed that older adults were highly concerned regarding the well-being of young people. The Foundation worked with 10 communities to develop locally-driven civic engagement projects that meet their needs. These sites range in population from 391 to 12,124 with high poverty rates. Foundation staff initiated a community planning process to identify needs and opportunities, create an intergenerational dialogue, craft a vision, and develop an action plan. Intergenerational activities undertaken to date include: learning to use information technology, sharing cultural traditions, promoting health and wellness, designing and implementing environmental projects, and participating in social and recreational activities. A regional learning community has been created to promote networking relationships, offer continuing education, and share lessons learned. In addition, an annual summit brings together teams of elders and young people from the participating communities. Evaluation indicates that the program has generated sustained enthusiasm and engagement from youth and older adults and has been beneficial in multiple ways: (a) Improved health and well-being of older adults and young people; (b) Increase in their leadership capacity; (c) Development of relationships across generations; (d) Improved understanding of American Indian culture and traditions; and (e) Reduced isolation and age-segregation. A number of state and national funding agencies have provided support to help sustain the momentum the program has generated in northern Minnesota communities.

#### SOCIAL PARTICIPATION OF OLDER PEOPLE: MOTIVATORS AND BARRIERS

L. De Donder<sup>1</sup>, D. Brosens<sup>1</sup>, N. De Witte<sup>1,2</sup>, S. Dury<sup>1</sup>, A. Smetcoren<sup>1</sup>, T. Buffel<sup>1,3</sup>, D. Verté<sup>1</sup>, *1. Vrije Universiteit Brussel, Brussels, Belgium, 2. University College Ghent, Ghent, Belgium, 3. Fund for Scientific Research Flanders, Brussels, Belgium*

Inspired by the World Health Organization the European Commission has declared 2012 to be the European Year of Active Aging and Intergenerational Solidarity. Active Aging refers to the opportunities for health, participation and security as people age. The purpose of this study was to investigate these opportunities for social participation of older people in Belgium. Several dimensions of social participation are examined: voluntary work, participation in associations, informal care; and educational and cultural participation. The following research questions are addressed: What is the activity rate of older people regarding social participation? What is the individual profile of (non) participants? What are the main purposes and thresholds to participate? Data from the Belgian Aging Studies (N = 64 737) indicate that older people realize several active roles in society. However, a considerable amount of older people does not participate. The individual determinants of social participation are discussed in terms of age, gender, marital status, income level, and physical health. Additionally the main reasons (e.g. meeting other people, being personally asked) and thresholds (e.g. timing, price, facilities and services in the local environment) to participate are highlighted. The discussion provides an overview of potential vulnerable groups in terms of social participation. Moreover, it focuses on the implications of these findings for local policymakers and social organizations and provides impetus to organize and increase active aging at the local level.



## **“OF COURSE THEY ARE INVOLVED” RETHINKING POLITICAL ENGAGEMENT AND ADVOCACY AMONG ASIAN AMERICAN AND LATINO OLDER ADULTS**

A. Choi<sup>1</sup>, A. Chin<sup>2</sup>, R. Saborio<sup>2</sup>, 1. *Department of Interdisciplinary Studies, California State University Dominguez Hills, Carson, California*, 2. *St. Barnabas Senior Services, Los Angeles, California*

With the beginning of the retirement of the Baby Boomers, there is a perception that this cohort of older adults will be more politically savvy in drawing political attention to their needs than previous generations of older adults. However, this popular understanding of the well-educated politically engaged older adult fails to recognize how little we know about low income minority immigrant older adults engage politically to advocate for their needs. This presentation examines the obstacles that Latino and Asian American older adults face in their attempts to engage politically and an intervention. “AGENTS of Change” that helped to foster pathways for pathways to political advocacy. Data were collected over a one year-period on 50 Asian American and Latino older adults (age 65 and over). Face-to-face surveys and focus groups were conducted with the older adult. Data were independently coded by at least two researchers. The thematic patterns include obstacles such as language barriers, lack of awareness of how to engage in electoral politics, cultural attitudes about political involvement and social isolation. Strategies to encourage political advocacy included education on social media such as computer training, increasing awareness of local politics, and encouraging intergenerational involvement of the families and friends of these older adults. Enhancing the pathways to political participation of immigrant older adults ultimately contributes to the quality of life and empowerment of these individuals.

## **THE ROLE OF SENIOR UNIVERSITIES IN JAPAN TO PROMOTE CIVIC ENGAGEMENT OF OLDER ADULTS**

L. Chen, *Kwansei Gakuin University, Nishinomiya, Japan*

After the rapid economic growth of the 60s, the Japanese government passed grandeur social welfare laws and programs to enhance the older citizens' quality of life. In the 1970s, health care became free for all older adults, health benefits were improved, pension system was updated with the introduction of the macro-slide measure, and pension benefits were more than doubled in 10 years. Moreover, “Ikigai to sozo no jigyo” or “Program for Meaning in Life and Creativity” was created for the hardworking retirees who helped build the economic wealth of Japan to enjoy their retirement by delving into hobbies and leisure. One of the mandated programs was “Rojin daigaku” or “Senior Universities”, which was established in all 47 prefectures to enhance life-long learning of older adults. After 40 years since its establishment, these universities still maintain their popularity; they continue to become great sources for fostering older adults' interests and maintain civic engagement after their retirement. However, there has been no comprehensive study examining the current state of these universities dedicated to older adults. The aim of this study is to examine the current role of senior universities by conducting a nationwide investigation in Japan. A survey was conducted in Japan on 47 prefectural level senior universities nationwide. Questions include on the features of these institutions as well as the sociodemographic characteristics of the participants. The study found that many of the universities are more alike than different in terms of their management and types of programs offered. Like many other social welfare programs, senior universities are also increasingly facing problems with financing, and attracting seniors to newer classes such as creating leadership in volunteerism. Based on the findings, implications for future pathways of senior universities are discussed, especially for their major potential to expand their role in older adults' civic engagement.

## **WHITHER THE SENIOR CENTER? SERVICE AND ACTIVITIES PREFERENCES OF BABY BOOMERS**

R. McCaslin, J. Chang, *Social Work, Cal. State Univ., San Bernardino, California*

The purpose of the study was to examine baby boomers' intentions to volunteer and types of volunteer and leisure activities they would be interested in after retirement. Also assessed was whether they would attend a senior citizen center for activities and services. Data were collected from 426 baby boomers residing in the southern California. The study employed a survey design with self-administered questionnaires, given to a convenience sample. Participants were recruited from various locations including community agencies, churches, and supermarkets from April through June, 2010. The study found that over 62% reported that they would be interested in volunteering after retirement. There were gender and education differences with women and the college educated showing more interest in volunteering. Participants indicated participating in faith-based activities (57%), mentoring (48%), and civic or political associations (33%) as their preferred type of volunteer activities. Latinos and African Americans were more likely to show interest in faith-based activities than persons of other ethnicities. The study also found that of leisure activities, there was interest in participating in exercise programs (72%), group trips (71%), arts and crafts (64%), guest speaker lectures (52%), games (49%), and dancing (48%). Nearly two thirds (65.6%) indicated they would be interested in activities at a community center, at a community center geared to serve retired people (65.1%), and at a senior citizen center (58%). The findings suggest that human service professionals need to strategize how best to utilize baby boomer volunteers, particularly female boomers. Senior centers need to provide creative programs and leisure activities to reflect the values and needs of active baby boomers. Services and activities should be assessed and refined regularly to match new generations and their changing needs over time.

## **SESSION 425 (POSTER)**

### **CULTURAL AND DEMOGRAPHIC DIVISION OF AGING**

#### **CULTURAL RELEVANCE OF SOCIAL EXCLUSION IN THE GLOBAL CHINESE CONTEXT**

D. Lai<sup>1,2</sup>, H. Tong<sup>1</sup>, X. Bai<sup>2</sup>, 1. *Faculty of Social Work, University of Calgary, Calgary, Alberta, Canada*, 2. *University of Hong Kong, Hong Kong, China*

Social exclusion is a prominent issue in the policy arena in Europe, as well as in many countries in the Western world. The relevancy of social exclusion in addressing poverty and other disadvantages has been widely discussed, but mainly in Western cultural context. Despite of the growth of the aging Chinese population in China and other parts of the world, understanding the cultural relevance of social exclusion in the Chinese context is limited. This presentation will generate discussion on the socio-cultural relevance of social exclusion in understanding older Chinese in the different Chinese contexts (e.g. Chinese in China and Chinese in western societies). The presenters will review the conceptual meanings of social exclusion from a range of social science theories and analyze their relevance to Chinese in different cultural contexts. Multiple empirical data sources were also used to illustrate the indicators of social exclusion in different Chinese communities (China, Canada, & United States) and its relationship with health related outcomes. The results indicate that finance, exclusion related to family and social relationships, institutionalization of age-related discrimination or isolation, and social class associated occupation and rural-urban background, play an important role in social exclusion. While policies and interventions for addressing social exclusion in Western culture often focus on redistribution of tangible resources, addressing social exclusion

among older Chinese in different cultural contexts may require a more holistic perspective that places human and relationship factors as a priority.

### **INTERNATIONAL STUDY OF THE LIFESTYLES AND VALUES OF SENIOR CITIZENS: A JAPAN, KOREA, AND THE U.S. COMPARISON**

N. Tsukada<sup>1</sup>, H. Kim<sup>2</sup>, T. Tatar<sup>3</sup>, 1. *Nihon University Graduate School of Business, Tokyo, Japan*, 2. *Yamaguchi Prefectural University, Yamaguchi, Japan*, 3. *Shukutoku University, Chiba, Japan*

The Cabinet Office of the Government of Japan has conducted the International Study on Lifestyles and Values of Senior Citizens every five years since 1978 to obtain basic information about senior citizens' perceptions of lifestyles and values in different countries. The seventh international study, conducted from October 2010 to January 2011, examined the information from Sweden, Germany, Japan, Korea, and the United States. Using the nationally representative data collected for the seventh international study, this presentation will compare several different aspects of lifestyles and values among Japan (N=1,183), Korea (N=1,005), and the United States (N=1,000). An examination of the data revealed that there are as many similarities as differences in the perceptions of senior citizens about lifestyles and values among Japan, Korea, and the United States. For example, it was found in the three countries that the more senior citizens feel a sense of purposefulness in their lives, the more they are likely to be feeling satisfied with their lives. It was also true in the three countries that the more activities senior citizens are involved with, the more they are likely to be feeling satisfied with their lives. On the whole, the American senior citizens showed the highest degree of life satisfaction among the three, the Japanese came second, and the Koreans were in the third place. Further, the perceptions of senior citizens in the three countries were found to be greatly different in such areas as household chores, care-giving, attitudes towards work, after-retirement preparation, and ideal sources of income.

### **PREDICTORS AND CONSEQUENCES OF CHANGES IN THE STRUCTURE OF RELIGIOUS ORIENTATION IN LATER LIFE**

P. Lam, A. Futterman, *College of the Holy Cross, Worcester, Massachusetts*

Personal religiousness has been thought to develop in predictable ways from childhood to later life. While the development has been sketched both theoretically and empirically in younger adults, few studies have examined changes in personal religiousness in middle age and later life. Using existing standard measures of religious orientation (e.g., Allport and Ross, 1967; Batson and Schoenrade, 1991), we demonstrated relative stability of a three factor – Ends, Means, and Quest – model of religious orientation across late middle-aged (60-74) and older adult (74 and older) random samples of community-dwelling adults living in Worcester, MA. Despite significant differences in stressors, health and functional status, and religious involvement and denominational affiliation between the two samples, only small changes in the structure of the three-factor model were observed (i.e., shifts in the relationships among the Ends, Means, and Quest factors). Also observed were differences in the predictive significance of stress, health and functioning, personality, religious involvement and denominational variables. For example, among late middle age adults health and functioning were unrelated to Quest (questioning and doubt regarding the meaning of life) whereas among older adults, diminished health and functioning were strongly associated with diminished Quest. Such findings are discussed in light of both developmental and stress and coping theories of personal religiousness (e.g., Fowler and Pargament).

### **COMMUNICATION AND CULTURAL COMPETENCE IN HOME HEALTH AND HOSPICE AGENCIES**

D. Liu, J. Ochoa, C. Cochran, *University of Nevada, Las Vegas, Las Vegas, Nevada*

Previous studies have raised concerns in delivering the best quality care to residents in long term-care facilities because providers failed to meet a range of language, cultural, and religious needs of such population (Mold, Fitzpatrick, & Roberts, 2005). Cultural issues are particularly relevant for hospice programs because they deal with the context-specific needs of individuals at the end of their lives, as well as the needs of their families and communities (Doorenbos & Schim, 2004). However, little attention has been paid to the home health and hospice sectors. This study used the 2007 National Home and Hospice Care Survey (NHHCS) to assess the association between the cultural competence strategies and agencies characteristics in home health and hospice agencies. Descriptive statistics and Chi square tests were computed using SAS PROC SURVEYFREQ (version 9.1; SAS Institute, Inc., Cary, NC). Having referrals from ALFs ( $p=0.0779$ ) and physicians' offices ( $p=0.0301$ ), having formal contracts with managed care/private insurance providers ( $p=0.0477$ ) and JCAHO ( $p=0.0381$ ) were significantly associated with availability of interpreter services. Availability of translated materials among Home Health/Hospice agencies was significantly associated with having SNFs ( $p=0.0322$ ) as referral source, and having formal contracts with hospitals ( $p=0.0280$ ). Availability of multilingual staff was associated with having hospitals (0.0052), rehabilitation facilities ( $p=0.0035$ ), having formal contracts with hospitals ( $p=0.0056$ ), and JCHAO ( $p=0.0209$ ). Our findings suggest that a variety of cultural competence initiatives were available, which were associated with the agencies' characteristics. This work highlights the importance and increases the understanding of cultural competence in home health and hospice care.

### **AGING BODIES, AGING SELVES: A SOCIOLOGY OF EXPERIENCES AT MIDLIFE**

U.M. Salim, *University of California, San Francisco, San Francisco, California*

Through the lens of the Midlife in the U.S. Study (MIDUS), this paper explores concepts and constructs of middle age, theorizing how self-perceptions of aging, the experience of disability, and the presence or absence of supportive relationships at midlife might elucidate mechanisms of aging in later life. While the literature suggests that older individuals with positive self-perceptions of aging may live longer than those with less positive self-perceptions, few studies have investigated midlife as a sensitive period for the development of an aging self-consciousness. This paper proposes that middle age is an important period of development, one where adverse life experiences can lead to premature morbidity and mortality in later life. I argue that cumulative advantage or disadvantage begins to manifest in very measurable physiological and psychological ways during middle age. The ubiquitous "mid-life crisis," therefore, represents a turning point in the life course, the point where life experiences accumulate and lay the foundation for future health or illness. Within the broader framework of the MIDUS study and an investigation of midlife as a sensitive period in the development of self-conceptions of aging, this paper also addresses social disparities in health as they affect women, ethnic minorities, and people with a low socioeconomic position during middle age. Finally, this paper concludes with a discussion of why midlife matters to the study of gerontology, recognizing that the unique social, physical and psychological changes during middle age can elucidate mechanisms of healthy aging, conceptions of aging in general, and perhaps longevity.

### **LIFE EXTENSION IN OLDER ADULTS IN JAPAN - LIFE TABLE ANALYSIS 2010**

Y. Ooe<sup>1</sup>, T. Furukawa<sup>2</sup>, 1. *Internal Medicine, Yao Municipal Hospital, Yao, Osaka, Japan*, 2. *Osaka National Hospital, Osaka, Japan*

According to the Japanese abridged life table (2010), the average life expectancy is 79.64 (+1.08) years in men, and 86.39 (+0.87) years

in women. It is clear that the death rate in older adults has decreased over the last 50 years. We categorized the whole death curve of the life table into three components: (1) infantile death, (2) contingent death and (3) aged death by Mixed Weibull Analysis. Based on these categories, we then focus on the change of the aged-death-component. Our former examination of the Japanese life tables (1965-2000) showed that the aged-death-curve of men shifted right by 0.120 years/year, and that of women by 0.222 years/year. However, based on this calculation using the abridged in 2010, the aged-death-curve of men shifts right by 0.110 years/year, and that of women by 0.158 years/year. As a consequence of this analysis, the life extension in older adults in Japan might show signs of a slowdown towards its maximum level. 1965-2000 1965-2010

		Shift amount of the aged-death-curve of men	0.120	0.110 (years/year)	Shift amount of the aged-death-curve of women	0.222	0.158
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## SESSION 430 (SYMPOSIUM)

### FRAILTY FROM THE CELL TO SOCIETY

Chair: *A.B. Mitnitski, Department of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada*

Although the mortality risk increases with age, not everyone of the same age has the same risk of dying. This variable vulnerability to death and other adverse outcomes amongst people of the same age is known as frailty. Frailty can be operationalized using a deficit accumulation approach. Deficits exist at a cellular level, as result of unrepaired damages caused by external and internal factors. Ultimately, they affect various bodily systems, thereby increasing the risk of dying. Complex networks of genes regulate health and define aging phenotypes, but genes alones do not fully explain the considerable variability in health status and life span seen even in genetically identical twins. Amongst many external (environmental) factors, social and economic conditions play an important role in defining the health of individuals and societies. Multidisciplinary cross-national databases of micro data have become available. These allow health related data (including biomarkers) to be linked to polygenic data and social-economic characteristics. Using such data, this symposium will address the following questions: What is the role of genetic networks in maintaining health? What are the relationships between genetic networks and the patterns of morbidities and mortality? To what extent do environmental conditions influence health? How do such conditions interact with genetic networks? The symposium is planned as an interdisciplinary event to bridge Biological, Health and Social Science Sections of the GSA.

### GENES, HEALTH, AGING, AND ENVIRONMENT: HOW ARE THEY RELATED?

*A. Kulminski, I. Culminskaya, K.G. Arbeev, S.V. Ukraintseva, L. Arbeeveva, A.I. Yashin, Center for Population Health and Aging, Duke University, Durham, North Carolina*

Aging of populations raises fear about expansion of morbidity and frailty in developed societies. Revealing genes predisposing to healthspan could be a breakthrough in addressing this problem. Despite progress of genome-wide association studies (GWAS), the optimism in the field is tempered. Candidate-gene and genome-wide genotyping data on two successive generations of humans examined in the Framingham Heart Study during 60+ years are used to characterize the role of lipid-related genes in total cholesterol and cardiovascular disease (CVD) across ages and human generations. We show that the same alleles can be detrimental and protective against CVD in different ages and generations. These alleles can change their role in cholesterol in the same individuals as they age. The results suggest that aging in changing environment can be a key player in genetic predisposition to health.

More detail analyses beyond those offered in standard GWAS can substantially advance the progress in the field.

### GENETIC AND NON-GENETIC FACTORS IN AGING, HEALTH, AND LIFESPAN: INSIGHTS FROM BIODEMOGRAPHIC ANALYSES

*A.I. Yashin, D. Wu, K.G. Arbeev, I. Akushevich, A. Kulminski, P. Stallard, L. Arbeeveva, S.V. Ukraintseva, Sociology, Duke University, Durham, North Carolina*

The results of recent genome wide association studies (GWAS) of human aging and longevity have two common features. The first one is that the SNP alleles selected for their association with longevity traits in one study is difficult to replicate using data on independent populations. The second feature is that most of detected genetic variants do not reach genome wide statistical significance. In this paper we discuss reasons that might cause these effects including interaction among genetic and non-genetic factors, polygenic influence of many small-effect genetic variants on health and longevity traits, as well as underestimating the importance of biodemographic aspects of the problem in the genetic analyses of data. We illustrate our arguments by the results of genetic analyses of simulated data, as well as longitudinal data collected in the Framingham Heart Study. In particular, we show how polygenic score indices affects biodemographic characteristics of aging.

### FAMILIAL FACTORS IN LONGEVITY: EXPLORING COMPLEX ENVIRONMENTAL AND GENETIC EFFECTS

*L.A. Gavrilov, N.S. Gavrilova, NORC and the University of Chicago, Chicago, Illinois*

This study explores the effects of centenarian gender on survival of biological and non-biological relatives of 1,945 validated U.S. centenarians born in 1880-1895. Male gender of centenarian has significant positive effect on survival of adult male relatives (brothers and fathers) but not female blood relatives. However this male advantage disappeared when lifespan of siblings of male centenarians was compared to lifespan of siblings of 103-year old females having similar survival percentile. In this case, sisters of long-lived females lived longer. This study suggests longevity inheritance through sex-specific mechanisms. Lifespan of centenarian siblings in law was lower compared to lifespan of centenarian siblings and did not depend on centenarian gender. Wives of male centenarians who share lifestyle and living conditions had a significantly better survival compared to wives of centenarian brothers. This demonstrates an important role of shared familial environment and lifestyle in human longevity. Supported by NIH grant R01 AG028620.

### FRAILTY AND BIOMARKERS OF INFLAMMATION, IMMUNOSENESCENCE AND CELLULAR AGEING IN THE NEWCASTLE 85+ STUDY

*J. Collerton, C. Martin-Ruiz, K. Davies, M. Catt, C. Jagger, T. von Zglinicki, T. Kirkwood, Institute for Ageing and Health, Newcastle University, Newcastle upon Tyne, United Kingdom*

We report findings from the first comprehensive study of frailty and biomarkers of inflammation, immunosenescence, and cellular ageing in a very old population. Using data from the Newcastle 85+ Study, we confirmed the importance of inflammatory markers in frailty established in the younger old, in the very old. Limited evidence was found to support the role of immunosenescence; although lymphocyte count was inversely related to frailty, no relationships were found for the immune risk profile and those for memory/naïve CD8 T and B cell ratios were in the opposite direction to expected. No associations with frailty were found for CMV sero-positivity, telomere length or markers of oxidative stress or DNA damage and repair. Fried and Rockwood frailty models measured different but overlapping concepts yet biomarker associations were generally consistent between models. Difficulties in operationalizing the Fried model, due to high levels of comorbidity, limit its utility in the very old.

## PREVALENCE OF FRAILTY ACROSS COUNTRIES: IS IT RELATED TO NATIONAL ECONOMIC STATUS?

O. Theou, A.B. Mitnitski, K. Rockwood, *Geriatric Medicine, Dalhousie University, Halifax, Nova Scotia, Canada*

The prevalence of frailty is different across countries and races, which may be due to social and economic factors. Fifteen countries participated in the Survey of Health, Ageing and Retirement in Europe (Austria, Belgium, Czech Republic, Denmark, France, Germany, Greece, Ireland, Israel, Italy, Netherlands, Poland, Spain, Sweden, Switzerland). A Frailty Index (FI) was constructed from 71 measures which were age-related and associated with adverse outcomes. Countries were grouped according to their gross domestic product. The wealthiest countries had a significantly lower mean FI ( $0.19 \pm 0.02$  vs  $0.26 \pm 0.03$ ), upper limit to FI ( $0.59 \pm 0.04$  vs  $0.68 \pm 0.04$ ), prevalence of frailty ( $25.7 \pm 3.9\%$  vs  $43.5 \pm 8.7\%$ ), and death rate ( $14.4 \pm 1.9\%$  vs  $16.4 \pm 1.8\%$ ) in those aged 65+ years. In the least wealthy countries the FI increased 3.5% per year, compared to 2.8% in the wealthiest countries. The ability to compare using the same method suggests socioeconomic factors are important.

## SESSION 435 (SYMPOSIUM)

### STEM CELLS AND FUNCTIONAL IMPAIRMENTS WITH AGE: WHAT ARE WE LEARNING AND WHY DOES IT MATTER

Chair: *C.A. Peterson, University of Kentucky, Lexington, Kentucky*

Co-Chair: *C.A. Peterson, University of Kentucky, Lexington, Kentucky*

The theme 'Opportunities for Interventions in Aging' is designed to present information on interventions that have the potential to reverse functional loss in older adults. This year, the session will be devoted to the potential for stem cell therapy in older adults. There are emerging data that stem cells within the heart, skeletal muscle and brain are important for the long term health and maintenance of these tissues. With age, there is a loss of stem cells and studies suggest that these changes are an important contributing factor in the functional decline with age. These results raise the possibility that intervention either through a pharmacological mechanism to increase the function of the remaining stem cells or by replacement of stem cells directly may improve function in older adults. The focus of this symposium is to discuss the merits of alteration in stem cell number or function as a mechanism for tissue decline with age and discuss the potential for stem cell therapy in reversing these deficiencies.

### OVARIAN AGING AND THE MENOPAUSE: CAN WE REWIND THE FEMALE BIOLOGICAL CLOCK THROUGH STEM CELL-BASED TECHNOLOGIES?

J.L. Tilly, *MGH Vincent Department of Obstetrics and Gynecology, Massachusetts General Hospital/Harvard Medical School, Boston, Massachusetts*

Ovarian aging is defined by a declining reserve of oocyte-containing follicles, and no interventions are known that mitigate the deleterious effects of aging on human ovaries. We have been exploring the use of female germline or oogonial stem cells (OSCs) for management of ovarian aging. Following initial studies identifying OSCs in adult mouse ovaries (Nature 2004 428:145), mouse OSCs have been isolated and shown to generate eggs that yield healthy embryos and offspring. Studies of *Drosophila* and mice indicate that failure of OSCs to support the oocyte reserve with age reflects deterioration of niches that support OSC function. We have also reported the successful isolation of OSCs from ovaries of women, and human OSCs are functionally indistinguishable from their mouse counterparts (Nat Med 2012 18:421). These findings move a large body of animal work into the realm of human biology, and open unprecedented possibilities for controlling the female biological clock.

## MAINTENANCE OF NICHE FUNCTION AND TISSUE HOMEOSTASIS DURING AGING

L. Jones, *Salk Institute for Biological Studies, La Jolla, California*

Adult stem cells support tissue homeostasis and repair throughout the life of an individual. Numerous changes occur with age that result in altered stem cell behavior and reduced tissue maintenance and regeneration. Changes can be cell autonomous including changes in cell cycle progression, increased DNA damage, and epigenetic alterations. In addition, poorly understood changes to the local and systemic environments occur that result in decreased stem cell activity or alterations in commitment or differentiation potential. We have developed *Drosophila melanogaster* as a model to uncover conserved mechanisms regulating stem cell aging and explore how cellular and tissue aging impact longevity. We will compare and contrast age-related changes to germline and intestinal stem cells and present strategies to counter age-related changes in both tissues. Understanding the mechanistic basis for intrinsic and extrinsic age-related changes will facilitate stem cell based therapies to treat age-onset and degenerative diseases in older individuals.

## SESSION 440 (SYMPOSIUM)

### AGE DIFFERENCES IN JUDGMENT AND DECISION MAKING: THE ROLE OF MOTIVATION AND EMOTION

Chair: *C.E. Loeckenhoff, Cornell University, Ithaca, New York*

Co-Chair: *J. Strough, West Virginia University, Morgantown, West Virginia*

Discussant: *M. Schumacher, University of Kentucky, Lexington, Kentucky*

Previous research has found age differences in various aspects of judgment and decision making. Importantly, such effects are not fully explained by cognitive decline. Age-related variations in motivational states and affective responses appear to play a role as well—especially in emotionally-salient scenarios. The presentations in this symposium illustrate such effects with regard to decisions involving financial gambles, sunk costs, consumer choices, and aversive physical outcomes. Mata, Pachur, and Hertwig investigated older and younger adults' preferences about risky lotteries. Following cumulative prospect theory, decision models suggested that age groups differ significantly in the relative weighting of gains and losses. Strough, Bruine de Bruin, and Parker, in turn, examined age differences in decisions about sunk costs in a large, adult, life-span sample. Compared to younger adults, older adults' choices were less likely to be swayed by irretrievable prior investments, even after controlling for a range of relevant covariates. Hess, Ennis, and Queen addressed the role of motivational factors in decision strategies for consumer choices. Higher accountability and personal relevance were associated with more systematic information search, but this effect was more pronounced with increasing age. Loeckenhoff and Rutt gathered the first evidence for age differences in choices about aversive electrodermal stimuli. Specifically, they examined the role of age differences in anticipatory affect when making temporal trade-offs among such stimuli. Finally, Schumacher will integrate these findings with the existing literature on judgment and decision making and discuss directions for future research.

### AGE DIFFERENCES IN RISKY CHOICE: FORMAL MODELING WITH PROSPECT THEORY

R. Mata, T. Pachur, R. Hertwig, *University of Basel, Basel, Switzerland*

Different motivational theories make opposing predictions regarding the impact of aging on risk taking through changes in the weighting of losses, gains, or both. The extant empirical evidence, however, is inconclusive, (see Mata, Josef, Samanez-Larkin, & Hertwig, 2011, for a meta-analysis). We contribute to clarifying potential age differences in risky choice by asking young and older adults ( $N = 120$ ) to make decisions between described risky monetary lotteries and formally modeling decision processes using cumulative prospect theory (CPT).

Behaviorally, the results show clear evidence for increased risk seeking in the gain domain and reduced loss aversion in older adults. The modeling results converge with these conclusions; whether the observed age differences are due to differences in the asymmetric weighting of gains and losses or the processing of probabilities, however, depends on particular implementations of CPT. Our results support theories assuming age-related changes in the relative weighting of gains and losses.

#### **SOCIAL AND MOTIVATIONAL INFLUENCES ON DECISIONS ABOUT SUNK COSTS ACROSS THE LIFE SPAN**

J. Strough<sup>1</sup>, W. Bruine de Bruin<sup>2</sup>, A. Parker<sup>3</sup>, 1. *West Virginia University, Morgantown, West Virginia*, 2. *Carnegie Mellon University, Pittsburgh, Pennsylvania*, 3. *RAND Corporation, Pittsburgh, Pennsylvania*

Studies of aging and decision making often focus on declines, but age-related improvement is found for decisions about sunk costs—older adults' decisions are less likely to be biased by irretrievable prior investments. Using a sample from the American Life Panel (N=335, M age=53.97yrs, range 20-89 yrs; 58.5% Women), we investigated social-contextual moderators of age differences in sunk-cost decisions and individual differences that might account for age differences. As hypothesized, older adults' decisions were less influenced by sunk costs. Irrespective of age, participants' decisions were less influenced by sunk costs when a hypothetical decision affected both oneself and a friend versus only oneself, and the sunk cost was one of time rather than money. Decisions differed systematically depending on the social context and age remained a marginally significant predictor even after accounting for income, temporal perspectives, action orientation, anxiety and avoidance in close relationships, perceived ability, and perceived health.

#### **INTRINSIC AND EXTRINSIC MOTIVATIONAL INFLUENCES ON ADULT AGE DIFFERENCES IN INFORMATION-SEARCH STRATEGIES**

T.M. Hess<sup>1</sup>, G.E. Ennis<sup>1</sup>, T.L. Queen<sup>2</sup>, 1. *NC State University, Raleigh, North Carolina*, 2. *University of Michigan, Ann Arbor, Michigan*

Research has suggested that increasing age is associated with greater reliance on simpler and noncompensatory information-search strategies in decision-making contexts. There has been little attempt, however, to link age differences in strategy use with specific aspects of the decision task. In this study, we examined the role that both intrinsic (personal relevance) and extrinsic (social accountability) motivational factors play in determining age differences in strategy use. Adults aged 21-91 years (N=160) performed two different decision tasks that varied in age relevance under either high or low social-accountability conditions. Both high accountability and personal-relevance resulted in more systematic information search involving use of elaborative, noncompensatory strategies. High arousal was also associated with engagement in simplistic satisficing. Consistent with the selective engagement framework, motivational factors had a stronger impact on performance with increasing age. The results argue for the importance of context in determining age differences in adaptive decision-making processes.

#### **THE ROLE OF AGE AND AFFECTIVE RESPONSES IN DECISIONS ABOUT AVERSIVE PHYSICAL OUTCOMES**

C.E. Loeckenhoff, J.L. Rutt, *Cornell University, Ithaca, New York*

Prior research on age differences in decision making has focused almost exclusively on hypothetical financial and consumer choices. Little is known about decisions involving aversive physical outcomes. This is a critical impediment to understanding age differences in real-life healthcare choices which often involve unpleasant and painful experiences. To address this research gap, we asked younger (<40 years) and older participants (>55 years, 56% male, n = 32) to make trade-offs among aversive electrodermal stimuli that differed in timing and intensity. Stimuli were subjectively calibrated and administered to the wrist.

Age groups did not differ significantly in perceptual thresholds, maximum bearable intensity, electrodermal responses, or decisions involving trade-offs between the timing and intensity of the stimuli. In contrast, there were significant age differences in anticipated and actual emotional responses with older adults showing lower responsiveness to variations in timing and intensity ( $p < .01$ ). Implications for realistic healthcare settings are discussed.

### **SESSION 445 (SYMPOSIUM)**

#### **CHARTING NEW FRONTIERS IN MARITAL QUALITY: CONNECTIONS ACROSS SPOUSES, SYSTEMS, AND CULTURES**

Chair: *K. Fiori, Gordon F. Derner Institute of Advanced Psychological Studies, Adelphi University, Garden City, New York*  
Discussant: *J. Bookwala, Lafayette College, Easton, Pennsylvania*

The theme of this year's conference highlights the importance of connections — e.g., within and across individuals, systems, environments, and cultures. In this symposium, we examine one of the most powerful and influential connections individuals have — that between spouses. Specifically, we investigate the ways in which marital quality can be influenced across the lifespan by connections between spouses (e.g., personality, sleep quality), across systems (e.g., work and home), and across cultures (e.g., race, nation). Fiori, Brown, Birditt, and Orbuch explore interactions between spouses' personalities predicting marital quality in a sample of Black and White couples, and show that personality traits (and interactions between traits) in the first year of marriage predict positive and negative marital quality 15 years later for White couples only. Rauer and Jensen study spousal differences in sleep quality in older married couples, and find the quality of wives' sleep is particularly sensitive to variations in both spouses' reports of positive marital quality. Wan, Birditt, and Antonucci show that both wives' and husbands' reports of job autonomy in the first year of marriage predict marital satisfaction 2, 6, and 15 years later, with moderation by race and gender. Finally, Fuller-Iglesias examines predictors of positivity and negativity in the marital relationship within the Mexican cultural context, with specific attention to gender and socioeconomic differences. Our discussant, Dr. Jamila Bookwala, an expert in the field of marriage and well-being, will discuss the implications of these studies for understanding the powerful spousal connection and why it matters.

#### **DOES PERSONALITY MATTER?: RACE DIFFERENCES IN INTERACTIONS BETWEEN SPOUSAL PERSONALITY TRAITS PREDICTING MARITAL WELL-BEING 16 YEARS LATER**

K. Fiori<sup>1</sup>, E. Brown<sup>2</sup>, K. Birditt<sup>3</sup>, T.L. Orbuch<sup>3</sup>, 1. *Gordon F. Derner Institute of Advanced Psychological Studies, Adelphi University, Garden City, New York*, 2. *University of Connecticut, Storrs, Connecticut*, 3. *University of Michigan, Ann Arbor, Michigan*

Research has shown that personality characteristics as well as discrepancies in personality traits between spouses are predictive of marital quality. However, given race differences in marital stability, it is perhaps surprising that no known research has examined race differences in the effects of personality on marital quality. Furthermore, most research has focused on mean trait levels and discrepancy scores rather than on interactions between spousal personality traits. In the present study we used Actor-Partner Interdependence Models to examine race differences in the interactions of spousal personality traits among long-term married White (n = 95) and Black (n = 65) couples predicting positive and negative marital quality 16 years later (2003-4). Findings indicate that among Black couples, personality characteristics were not associated with marital quality. In contrast, among White couples, personality traits and/or interactions predicted positive and negative marital quality 16 years later. Implications are discussed.

## TWO IN A MARRIAGE, TWO IN A BED: MARRIAGE AND SLEEP IN OLDER ADULTHOOD

A. Rauer, J. Jensen, *Auburn University, Auburn, Alabama*

Being unmarried is associated with poorer health throughout the lifespan, but the effects are felt disproportionately in older adulthood. However, marriage may not be universally beneficial across all health domains. There is growing evidence to suggest that having a partner can be detrimental to an individual's sleep. Using data from a sample of 35 older married couples, we find that these effects are exacerbated for spouses in unhappier relationships, as less happily married spouses reported significantly more sleep disturbances. The quality of wives' sleep was particularly sensitive to variations in both spouses' reports of positive marital quality, as wives whose marriages were more passionate and supportive reported sleeping better at night. Given the deleterious effects of sleep disturbances on a wide range of mental and physical health outcomes, understanding how the marital relationship influences well-being not only during the day, but the night as well is of the utmost importance.

## MARITAL QUALITY ACROSS TIME: THE CONTEXTS OF WORK, GENDER, AND RACE

W.H. Wan<sup>1</sup>, K. Birditt<sup>1,2</sup>, T. Antonucci<sup>1,2</sup>, *1. University of Michigan - Ann Arbor, Ann Arbor, Michigan, 2. Institute for Social Research, Ann Arbor, Michigan*

Much knowledge about work-family conflict is derived from cross-sectional research of men and women not married to each other. The goal of this study is to examine the long-term effects of work on marital quality among White (N = 174) and Black American (N = 199) couples in their first year of marriage in 1986, and in Years 3, 7, and 16. We assessed whether Year 1 work characteristics (e.g., work hours and job satisfaction) predicted marital quality over time. Additionally, because of mixed evidence regarding gender and race differences in work-family conflict, we included gender and race as moderators. Using the Actor-Partner Independence Model, multilevel analyses revealed that actor and partner's job autonomy in Year 1 predicted marital satisfaction in Years 3, 7, and 16. Gender and race moderated these effects. The findings suggest not only does one's work influence one's own marital satisfaction, so does one's partner's work.

## MARITAL QUALITY AMONG MEXICAN ADULTS: 'EL QUE SE CASA POR TODO PASA'

H. Fuller-Iglesias, *Human Development and Family Science, North Dakota State University, Fargo, North Dakota*

Marriage is an interpersonal relationship that can be both highly positive and highly negative. A wealth of research on marital quality in the U.S. has demonstrated that personal and contextual factors (such as gender or culture) may influence relationship quality and that marital quality has implications for well-being. However, there is a lack of understanding of marital quality in other cultural contexts, such as that of Mexico. Using data from the Survey of Social Relations and Well-being in Mexico (Fuller-Iglesias & Antonucci, 2009), this study explores positive and negative qualities of the spousal relationship of 789 married, Mexican adults ranging from age 20 to 90. Results suggested that men and individuals married for fewer years reported more positivity (support, trust, enjoyment, and encouragement) in their spousal relationship; whereas, age and SES were not associated with positivity. Men and individuals of lower SES reported more negativity (controlling behavior); however, age and length of marriage were not related to negativity. Regression analyses indicated that positivity and negativity were both associated with well-being. Findings highlight important distinctions between positivity and negativity within the marital relationship. Implications will be discussed in light of the Mexican cultural context

## SESSION 450 (SYMPOSIUM)

### CHARTING THE INTERDEPENDENCIES IN COGNITIVE AND MOTOR DECLINES IN AGING THROUGH COMPLEXITY

Chair: *J.J. Temprado, Institute of Movement Sciences, Aix-Marseille University, Marseille, France*

Co-Chair: *S.L. Hong, University of Indiana, Bloomington, Indiana*

The theme of this year's conference is "Charting New Frontiers in Aging" seeks to build new connections that cut across disciplines to deepen our understanding of the many facets of human aging. In this symposium, we will present a perspective on cognitive and motor declines in aging based on complexity science. While many still hold the view of mind-body separation, where cognition and action are distinct and independent phenomena, we will present the idea that cognitive-motor aging reflects a loss of complexity in the brain-body system. Effectively, as we age, declines in both cognitive and motor function at the level of the individual can be traced back to a loss of shared "inputs" needed to perform a given task. This symposium charts a course using complexity science as means of making new connections in cognitive-motor aging frontier through the following topical presentations: 1) loss of complexity in aging (Lipsitz); 2) complexity in motor function (Newell); 3) empirical data in cognitive-motor tasks (MacDonald); 4) clinical and epidemiological manifestations (Verghese); and 5) dimensional reduction and interdependency in cognitive and motor aging (Temprado). In sum, we will present a view of cognitive and motor aging as the process that occurs due to a loss of shared "inputs" that can be explained through concepts from complexity science. These presentations will seek to build new connections between cognitive and motor aging upon the foundation of the loss of complexity hypothesis. At the conclusion of the symposium, the discussant will provide a summarized synthesis of the key concepts and findings from the 5 presentations.

### DIMENSIONAL REDUCTION ACROSS COGNITIVE AND MOTOR FUNCTION IN AGING: RE-INTEPRETING COMPLEXITY CHANGES IN BRAIN AND BEHAVIOR

J.J. Temprado<sup>1</sup>, S.L. Hong<sup>2</sup>, *1. Institute of Movement Sciences, Aix-Marseille University, Marseille, France, 2. Indiana University, Bloomington, Indiana*

A prevailing view of cognitive and motor function is that they are separate and distinct processes. However, recent evidence suggests that altered interactions between these functional domains are also prominent aging-induced phenomena. We will present the idea that cognitive and motor domains share a common set of resources or inputs. This approach emphasizes age-related reduces the number of available "degrees of freedom" within the neural and motor system, restricting the number of activities that the system can engage in at any given time. Findings from the extant literature across cognition and action as evidenced by behavioral and brain imaging studies will be discussed through the lens of dimensional reduction. Our presentation will highlight the potential utility of this approach for the discovery of more fundamental and generalizable principles of aging in brain and behavior.

### COGNITIVE AND MOTOR FUNCTION: EVIDENCE FOR COMBINED ROLE IN COGNITIVE DECLINE

J. Verghese, *Albert Einstein College of Medicine, Bronx, New York*

Stemming from the Cartesian argument for mind-body separation, researchers have long considered cognitive and motor aging as distinct and independent phenomena, and a view that cognition has hierarchical priority over action. However, recent evidence suggests that in addition to the losses of the functional integrity in each domain, altered interactions between these functional domains are prominent aging-induced phenomena. Thus, investigations of the interdependency between cognitive and sensorimotor processes are now currently considered as a

crucial step in the direction of cross-level and cross-domain approaches of normal and pathological aging. The goal of this presentation is to review the growing epidemiological evidence that links cognitive and motor function in aging building on recent findings from cross-sectional investigations, prospective cohort studies, and clinical trials. The potential utility of a combined cognitive-motor approach in clinical and research settings for studying and investigating older adults with cognitive decline will also be discussed.

### WHAT INDICATORS OF GAIT CAN TELL US ABOUT COGNITIVE AGING

S.W. MacDonald<sup>1,3</sup>, J. Love<sup>1,3</sup>, T. Quade<sup>1</sup>, C. DeCarlo<sup>1,3</sup>, P. Brewster<sup>1,3</sup>, T. Mack<sup>1</sup>, R.A. Dixon<sup>2</sup>, 1. *Psychology, University of Victoria, Victoria, British Columbia, Canada*, 2. *University of Alberta, Edmonton, Alberta, Canada*, 3. *Centre on Aging, Victoria, British Columbia, Canada*

Gait function has been linked to age-related change in neural and cognitive function, morbidity, and mortality. Using data from several cognitive aging studies, including S1W8 of the Victoria Longitudinal Study, we explored (1) various gait indices as correlates of age differences and up to 25-year change in cognitive function; and (2) the influence of select moderators (increasing cognitive load, health) on gait function and gait-cognition associations. Preliminary results link decreasing cognitive and gait function with increasing age, and document the negative impact of increasing cognitive load on gait and gait-cognition coupling. These patterns will be discussed vis-a-vis the potential utility of individual differences in gait for indexing cognitive aging, perhaps as a proxy for biological vitality due to the demands that mere walking places upon multiple systems (circulatory, musculoskeletal, respiratory). Potential mechanisms underlying age-related linkages in sensorimotor and cognitive function will also be discussed, including cross-domain resource competition.

### SESSION 455 (SYMPOSIUM)

#### CLOSING THE MENTAL HEALTH DISPARITY GAP FOR OLDER AFRICAN AMERICANS: THE BEAT THE BLUES TRIAL

Chair: L.N. Gitlin, *School of Nursing, Johns Hopkins University, Baltimore, Maryland*

Depression in older African Americans remains undertreated and under-detected. As depression is one of the most common and pernicious conditions in late life associated with negative health and quality of life outcomes, new models of care are a public health priority. This symposium presents results from a randomized trial, Beat the Blues (BTB). The BTB involves a partnership between a research institute and a senior center to enhance staff capacity to detect older adults with depression and provide an innovative home based intervention to reduce symptomatology. The symposium papers will present the collaborative partnership which was based on community participatory principles, its challenges and benefits, screening and enrollment results, intervention protocol and treatment processes, main treatment outcomes and its economic evaluation. The practical trial design highlights the benefits of involving community partners as full members of the research team. Screening and enrollment numbers demonstrate that older African Americans self identify depressive symptoms to trusted community advocates and are willing to enroll in a nonpharmacological treatment approach. The home intervention involved five components (case management, referral and linkage, stress reduction, education and behavioral activation) with treatment data demonstrating adherence to the stated protocol. Main treatment outcomes show large treatment effects that were statistically significant and clinically meaningful reductions in depressive symptoms and improvements in quality of life indicators. Costs were lower than pharmacological management. A discussant will provide critical commentary on study findings, the contributions of

this approach for closing the mental health disparity gap, and the translational potential of BTB.

#### ACADEMIC/COMMUNITY-BASED COLLABORATION: BENEFITS ACADEMIC INSTITUTIONS, SENIOR CENTERS AND ELDERS

L.M. Harris, *Center in the Park, Philadelphia, Pennsylvania*

Beat the Blues (BTB) represents a partnership between an academic research institution and an urban senior community center serving primarily African American elders. Using a collaborative model, based in community participatory research principles, we developed the BTB intervention and tested it in a randomized design. This paper will describe key steps in the collaborative process which included direct involvement of senior center staff and end users (the target group) in naming, framing and evaluating BTB. Key challenges and their solutions will be discussed including developing a shared project structure, training staff, adhering to trial design, establishing effective communication channels and procedures across the two sites, recruiting and enrolling participants. This collaborative effort resulted in screening 703 older African Americans over a 2 ½ year period of whom, 208 enrolled in the trial. Also discussed are the value and benefit of partnering for each site and the target population.

#### BEAT THE BLUES INTERVENTION PROTOCOL AND PROCESSES: COMPONENTS, INTENSITY, AND IMPLICATIONS

M.C. McCoy, *Center in the Park, Philadelphia, Pennsylvania*

This paper describes the Beat the Blues (BTB) intervention using case study and treatment data. BTB involved five components: case management, referral/linkage, stress reduction, education and behavioral activation. Licensed senior center social workers trained in BTB met with participants at home for up to 10 one hour sessions over 4 months to assess care needs, make referrals/linkages, provide depression education, instruct in stress reduction techniques, and use behavioral activation to identify goals and steps to achieve them. While all participants received all 5 components, the content of each was tailored to specific care needs, understanding of depression and self-actualization goals. Documentation of treatment sessions revealed adherence to the protocol with an average of 7 sessions involving behavioral activation, and care management, 5 sessions involving stress reduction, 4 sessions involving depression education and referral and linkage. The waitlist control group upon treatment receipt of BTB, similarly received the visit pattern.

L.N. Gitlin, L. Fields Harris, M.C. McCoy, N.L. Chernett, L. Pizzi, E. Jutkowitz, E. Hess, W.W. Hauck, *School of Nursing, Johns Hopkins University, Baltimore, Maryland*

This paper reports main outcomes for Beat the Blues (BTB), a prospective two-group randomized trial involving 208 older African Americans with depressive symptoms. At 4 months, compared to controls, BTB participants had reduced symptomatology (PHQ-9 adjusted mean difference, -2.6; 95% CI, -4.1, -1.0; p=.001; Cohen's d=0.47; CES-D adjusted mean difference, -3.6; 95% CI, -5.1, -2.1; p=.000; Cohen's d=0.61); greater depression knowledge using a 10-item index (adjusted mean difference, 0.3; 95% CI, 0.2, 0.4; p=.000; Cohen's d=0.69); improvements in a 14-item well-being index (adjusted mean difference, 0.6; 95% CI, 0.4, 0.8; p=.000; Cohen's d=.89), life quality 12-item index (adjusted mean difference, 2.9; 95% CI, 1.7, 4.2; p=.000; Cohen's d=.54), 17-item behavioral activation scale (adjusted mean difference, 0.8; 95% CI, 0.5, 1.1; p=.000; Cohen's d=.84); and less anxiety using a 10-item scale (adjusted mean difference, -0.4; 95% CI, -0.6, -0.2; p=.000; Cohen's d=.59) and functional difficulties using an 18-item scale (adjusted mean difference, -0.2; 95% CI, -0.3, 0.0; p=.019; Cohen's d=.25). By 4-months, 43.8% in BTB had no depressive symptoms (PHQ-9<5) compared to

26.9% controls. Older African Americans with mild-to-severe depressive symptoms similarly benefited from BTB with benefits extending to 8 months.

### **COSTS OF A HOME SUPPORT PROGRAM FOR DEPRESSED OLDER AFRICAN AMERICANS: RESULTS FROM THE BEAT THE BLUES TRIAL**

L. Pizzi<sup>1</sup>, E. Jutkowitz<sup>2</sup>, 1. *Health Policy, Jefferson Medical College, Philadelphia, Pennsylvania*, 2. *University of Minnesota, Minneapolis, Minnesota*

The reality of limited societal resources necessitates communicating the cost-effectiveness of aging programs to decision makers. There is a particular need for economic analyses of home support programs for depressed older minorities. Beat the Blues (BTB), a home support program for depressed African Americans  $\geq 55$  years, was tested in a randomized trial, with a formal societal cost effectiveness analysis in progress. In this session, we will present findings on the cost of BTB. Cost components comprise: 1) Screening; 2) Intervention Delivery; 3) Supervision. The cost of conducting BTB was calculated as (time spent performing each task)  $\times$  (the wage rate of the individual who performed the task + fringe benefits). Non-time costs (material and mileage) were also recorded. The average screening cost is was \$2.63 per participant; total cost (screening plus home intervention) was \$146.16 per participant per month. Findings inform the scalability and sustainability of the program.

## **SESSION 460 (SYMPOSIUM)**

### **COGNITIVE/BEHAVIORAL THERAPY FOR LATE LIFE DEPRESSION: PREDICTORS OF TREATMENT RESPONSE**

Chair: D. Gallagher-Thompson, *Stanford University, Stanford, California*

Co-Chair: R. O'Hara, *Stanford University, Stanford, California*

Discussant: B. Lebowitz, *University of California San Diego, San Diego, California*

In this NIMH funded R21 grant, 60 older adults with a diagnosis of depression (based on a structured clinical interview) and self-reported moderate levels of depressive symptoms were recruited from the SF Bay Area to participate in a 12 week open trial of individual Cognitive Behavioral therapy (CBT) for late life depression. There were 38% men and 62% women enrolled. Their mean age was 69.70 years (range: 60–88) and ethnic breakdown included: 70% Caucasian, 5% African American, 10% Asian, 5% Native American and 10% Hispanic. The primary hypothesis was to evaluate whether impairment of skills comprising “executive function” (e.g., decision making, organizational ability) would predict poorer outcome in CBT. Cognitive processing skills were evaluated both by fMRI and extensive neuropsychological testing, including Wisconsin Card Sort (given both in and out of the scanner). Outcome was defined as improvement both on the diagnostic and self-report levels of depression at post evaluation 4 months later. We also collected salivary cortisol at baseline to serve as a secondary predictor. All post evaluations were conducted by independent raters. Our findings suggest that left middle frontal gyrus ( $p=.023$ ), Wisconsin Card Sorting PE ( $p=.027$ ), Wisconsin Card Sorting CLR ( $p=.049$ ), and the Wechsler Memory Scale ( $p=.056$ ), Immediate Memory were significant neurobiological and neuropsychological predictors of CBT outcome. These finding will be explored in more depth during the symposium presentations. Additional research with a larger sample, in a randomized clinical trial, is needed to confirm these findings.

### **COGNITIVE/BEHAVIORAL THERAPY FOR LATE LIFE DEPRESSION: TREATMENT RESPONSE**

R. Marquett<sup>1</sup>, R. O'Hara<sup>1</sup>, S. Kesler<sup>1</sup>, J.M. Holland<sup>2,1</sup>, D. Gallagher-Thompson<sup>1</sup>, 1. *Psychiatry, Stanford University School of Medicine, Stanford, California*, 2. *University of Nevada Las Vegas, Las Vegas, Nevada*

The Positive Experience Project (PEP) was designed to help identify neuropsychological and neurobiological predictors of treatment outcome for older adults with depression. 60 older adults, 60 years and up, participated in 12 weekly session of Cognitive Behavioral Therapy (CBT). This presentation will discuss the overall depression outcomes for this study. We used three different measures to assess for CBT treatment response. Results indicate that 67% of the sample responded to the PEP program when evaluating significant change in depression diagnosis using the MINI. When evaluating the post evaluation Beck Depression Inventory-II cut off score of 13 or less, we noted a 58% response rate; and a 28% response rate when evaluating the post evaluation HAM-D cut off score of 7 or less. This presentation will explore these findings and attempt to explain some of the differences we see when using different depression outcome criteria.

### **COGNITIVE/BEHAVIORAL THERAPY FOR LATE LIFE DEPRESSION: SALIVARY CORTISOL AS A PREDICTOR OF POSTTREATMENT OUTCOMES**

J.M. Holland<sup>2,1</sup>, A.F. Schatzberg<sup>1</sup>, R. Marquett<sup>1</sup>, S. Kesler<sup>1</sup>, R. O'Hara<sup>1</sup>, D. Gallagher-Thompson<sup>1</sup>, 1. *Psychiatry, Stanford University School of Medicine, Stanford, California*, 2. *University of Nevada Las Vegas, Las Vegas, California*

60 Older adults with the diagnosis of depression and elevated levels of self-reported depression were recruited into the study from the SF Bay Area to participate in a 12 week course of Cognitive Behavioral therapy (CBT) for late life depression. There were 38% men and 62% women enrolled, with a mean age of 69.70. The ethnicity of the sample was 70% Caucasian, 5% African American, 10% Asian, 5% Native American and 10% Hispanic. At baseline participants provided saliva samples for cortisol analysis at three time points across two days. Consistent with previous findings, preliminary analyses suggest that flatter diurnal cortisol slopes (which are generally regarded as more dysregulated) were associated with poorer response to treatment on the Center for Epidemiological Studies-Depression measure ( $r = .35$ ,  $p = .01$ ) and the Beck Depression Inventory II ( $r = .28$ ,  $p = .04$ ). Implications for clinical practice and future research will be discussed.

### **COGNITIVE/BEHAVIORAL THERAPY FOR LATE LIFE DEPRESSION: NEUROPSYCHOLOGICAL PREDICTORS OF TREATMENT RESPONSE**

R. O'Hara<sup>1</sup>, L. Thompson<sup>1</sup>, J.M. Holland<sup>2</sup>, S. Kesler<sup>1</sup>, R. Marquett<sup>1</sup>, D. Gallagher-Thompson<sup>1</sup>, 1. *Psychiatry, Stanford University School of Medicine, Stanford, California*, 2. *University of Nevada Las Vegas, Las Vegas, California*

60 older adults with the diagnosis of depression participated in a 12 week course of Cognitive Behavioral therapy (CBT) for late life depression. The primary hypothesis was to evaluate if impairment of executive function was associated with poorer outcomes in CBT. The hypothesis was supported by the neurocognitive measures used: When using the post evaluation MINI as the dependent variable, the significant predictors of improved diagnostic category were the Wisconsin Card Sorting (PE  $p=.027$ ; CLR  $p=.049$ ), and the Wechsler Memory Scale ( $p=.056$ ), Immediate Memory. Other significant predictors of improved diagnostic category were the Wisconsin Card Sorting CLR ( $p=.014$ ), and Verbal Fluency ( $p=.04$ ). A similar pattern with slightly higher accuracy of classification was obtained when using the Beck Depression Inventory-II to define the categories of responders vs non-responders.



## COGNITIVE/BEHAVIORAL THERAPY FOR LATE LIFE DEPRESSION: FMRI PREDICTORS OF TREATMENT RESPONSE

D. Gallagher-Thompson<sup>1</sup>, R. O'Hara<sup>1</sup>, J.M. Holland<sup>2,1</sup>, R. Marquett<sup>1</sup>, S. Kesler<sup>1</sup>, 1. *Psychiatry, Stanford University School of Medicine, Stanford, California*, 2. *University of Nevada Las Vegas, Las Vegas, Nevada*

In this NIMH funding R21 Grant, 60 older adults with the diagnosis of depression and self reported levels of depression were recruited into the study from the SF Bay Area to participate in a 12 week course of Cognitive Behavioral therapy (CBT) for late life depression. The primary hypothesis was to evaluate if impairment of executive function was associated with poorer outcomes in CBT. The hypothesis was supported by the fMRI measures, specially the frontal gyri area of the brain. The fMRI results indicated that the significant predictors of intervention response in regards to the post evaluation Beck Depression inventory-II were left middle frontal gyrus (LMFG) and left superior frontal gyrus (LSFG) activation with 77.3% accuracy, 66.7% specificity and 84.6% sensitivity (Chi Sq. = 9.5, p = 0.023, Hosmer & Lemshow goodness of fit Chi Sq. = 9.5, df = 8, p = 0.31).

## COGNITIVE/BEHAVIORAL THERAPY FOR LATE LIFE DEPRESSION: FMRI PREDICTORS OF TREATMENT RESPONSE

D. Gallagher-Thompson<sup>1</sup>, R. O'Hara<sup>1</sup>, J.M. Holland<sup>2,1</sup>, R. Marquett<sup>1</sup>, S. Kesler<sup>1</sup>, 1. *Psychiatry, Stanford University School of Medicine, Stanford, California*, 2. *University of Nevada Las Vegas, Las Vegas, Nevada*

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## SESSION 465 (SYMPOSIUM)

### LOVE IN CYBERSPACE: DATING AND SEXUALITY

Chair: C. Stelle, *Bowling Green State University, Bowling Green, Ohio*

Discussant: E.H. Thompson, *Holy Cross College, Worcester, Massachusetts*

There is a scarcity of research on dating and sexuality in later life. Recently, however, we have not only begun to recognize that new relationships for older adults is an important topic of inquiry, but we have also acknowledged that as with younger cohorts, some older adults are utilizing online dating sites to locate a potential partner. However, as with traditional dating, most of the research on online dating focuses on the experiences of younger adults. Each of the papers focuses on the use of online dating and the potential costs and rewards of both the process of online dating and the relationships developed from this process. Dr.'s Watson and Stelle present results from a content analysis of older men's and women's advertisements with an emphasis on self-presentation and partner preference. Dr. Brennan-Ing examines gay and bisexual men's sexuality using data collected via an online dating site to explore relationships and sexual risk taking. Dr. Levaro uses older men's use of online dating to explore issues of sexuality and the "intercourse imperative" in older men's romantic relationships. Lastly, Dr.

Vandeweerd presents research on the sharing of information on online forums and the potential risk associated with women's use of online dating sites to find a potential partner. Implications for the costs and rewards associated with online dating among older adults are discussed, and areas for education and intervention are explored.

## ONLINE DATING IN LATER LIFE: SELF PRESENTATION AND PARTNER SEEKING

W. Watson, C. Stelle, *Bowling Green State University, Bowling Green, Ohio*

A content analysis examined online personal ads from adults ages 60+ seeking heterosexual relationships. Ads were systematically sampled from two different sources – an online dating site that markets to adults of all ages (match.com) and a dating site specifically geared to older adults (ourtime.com). Analysis focused on presentation of self and characteristics sought described in the narrative portion of online dating profiles. Findings indicate that while some characteristics transcend age, others were characteristics not seen in studies with younger adults. Additions included companion characteristics (intelligence, independence, affectionate), beliefs (spiritual and political) and discussions of health and aging. Additionally, advertisements are examined for differences according to source of advertising. As more adults are expected to enter later life single, we discuss how this approach to finding an intimate partner might be an increasingly relevant tool for older adults and for people who work with them.

## LOOKING FOR LOVE IN CYBER SPACE: ONLINE PROFILES AND RISKS FOR WOMEN 50+ SEEKING RELATIONSHIPS ON MYSPACE

C. Vandeweerd, M. Coulter, J. Corvin, J. Myers, E.A. Perkins, A. Yalcin, B. Yegeedis, *University of South Florida, Tampa, Florida*

Little is known about how older women harness the internet to seek relationships online or the risks associated with online relationship seeking. To delineate a profile of older women who use Myspace to seek relationships and explore ways in which the information shared impacts online vulnerability, systematic case abstractions from online profiles of women 50+ (stratified by age & race), who self-identified as seeking relationships through MySpace were collected (N=163). Data were abstracted across the following domains: demographics, sexual orientation, family constellation, physical and mental health status, health behaviors, abuse history, privacy settings, and contact information shared publicly. Analysis revealed women who use Myspace to seek relationships share a variety of life experiences and information publicly; some of which may place them at increased risk for abuse and exploitation. Implications for the risks associated with E-dating among older adults are discussed and areas for education and intervention are explored.

## SEXUAL HEALTH AMONG OLDER GAY AND BISEXUAL MEN IN THE POST-HAART ERA: DOES HIV STATUS MAKE A DIFFERENCE?

M. Brennan-Ing<sup>1,2</sup>, L. Seidel<sup>1</sup>, B. Larson<sup>3</sup>, S.E. Karpiak<sup>1,2</sup>, 1. *Center on HIV and Aging, AIDS Community Research Initiative of America, New York, New York*, 2. *New York University College of Nursing, New York, New York*, 3. *Center on Halsted, Chicago, Illinois*

Men who have sex with men (MSM) account for half of the HIV cases in the U.S., and half of those with HIV will be over 50 by 2015. Since sexual activity continues until late in life, we examined how HIV-status was related to sexual health among MSM 50 and older (N=149). The average age was 59.8 years, and 46% reported being HIV-positive. HIV+ MSM reported twice as many sex partners on average during the last 5 years than their peers (28.0 and 14.9, respectively), but did not differ significantly regarding the frequency of sex. There were no differences based on HIV-status in the frequency of anal or receptive oral sex, or use of sex toys. While HIV+ older MSM were more likely to

use precautions during oral sex, the groups did not differ in terms of unprotected anal intercourse. Implications for clinical work with older MSM will be discussed.

### THE INTERCOURSE IMPERATIVE AND SINGLE OLDER MEN'S SEXUAL DESIRES, EXPECTATIONS, AND EXPERIENCES

E.B. Levaro<sup>1</sup>, K. Hooker<sup>2</sup>, A.J. Walker<sup>2</sup>, 1. *University of Wisconsin-Stout, Menomonie, Wisconsin*, 2. *Oregon State University, Corvallis, Oregon*

Analysis of transcribed data from in-depth semistructured interviews with 24 heterosexual individuals actively pursuing romantic relationships via Internet ads and dating sites revealed a preference for younger partners, with the women's mean lower age 10 years younger and the men's, 21 years younger. Both also expressed desire for a sexual relationship, defining such a relationship in terms of sexual intercourse. We report findings and discuss the impact of this "intercourse imperative" specifically on the sexual desires, preferences, expectations, and experiences of the 13 men participating in this qualitative study. Between the ages of 70 and 92, nearly all of the men expressed distaste for "old" women and sought and were sexually active with younger partners. We explore the men's perceptions of women's presumption of sexual functionality and performance; the prospect of sexual liaisons made possible by virility-via-Viagra; and the emotionally painful realities of old men's disadvantage relative to younger men.

## SESSION 470 (SYMPOSIUM)

### OVERCOMING CHALLENGES TO HEALTH PROMOTION IN OLDER ADULTS WITH COMPLEX NEEDS

Chair: C.J. Camp, *Center for Applied Research in Dementia, Solon, Ohio*

Interventions with older adults must address the complexity of needs in this population. These include combinations of physical disabilities such as limited mobility, cognitive deficits, serious mental illness (SMI), and chronic illnesses such as Diabetes Mellitus (DM). Specific conditions provide challenges in their own right, as well as in combination with other conditions. While technological advances provide avenues of treatment delivery to such populations, interventions and technologies must be adapted before psychosocial interventions can be made effective. In this symposium, we will overview and discuss the challenges facing effective delivery of psychosocial interventions to older adults with complex needs. Specific examples from ongoing research will be used to highlight novel interventions for such older adults that involve self-management – a critical element in any effective intervention with these populations. Unique delivery systems including the use of tablets, mobile phones, and peer educators are described, along with specific adaptations that must be made to insure effective delivery of treatment for these populations. Implementation of psychosocial interventions in primary care and home settings – necessary components for effective treatment – are highlighted. Attendees will be able to: describe at least three specific DM – SMI comorbidities that frequently occur; describe at least four challenges to the use of technology and teletherapy unique to these populations, along with means of overcoming them; describe at least three evidence-based psychosocial interventions that can be effectively used with these populations; and describe at least four uses of teletherapy technology to improve compliance with and assess outcomes of psychosocial interventions.

### CREATING EFFECTIVE SELF-MANAGEMENT FOR OLDER ADULTS WITH TYPE 2 DIABETES AND MEMORY IMPAIRMENT

C.J. Camp<sup>1</sup>, M.J. Skrajner<sup>2</sup>, V. Antenucci<sup>1</sup>, C. Frentiu<sup>1</sup>, J. Haberman<sup>1</sup>, 1. *Center for Applied Research in Dementia, Solon, Ohio*, 2. *Hearthstone Alzheimer Care, Woburn, Massachusetts*

Older adults with Type 2 diabetes (Diabetes Mellitus – DM) who also have memory impairment are both challenged and at risk when attempting to live independently. The ability to effectively monitor blood glucose levels, exercise regimens, diet and medication regimens often is severely constrained by the combination of DM and the presence of mild cognitive impairment (MCI) or early stage dementia. We describe an exploratory study in which Certified Diabetic Educators (CDEs) are linked with older adults with DM and memory impairment using iPads and the internet. CDEs present personalized education sessions to participants, and half of the participants also receive a cognitive intervention (spaced retrieval) designed to train the effective use of strategies to enhance medication compliance and reach other goals. Challenges to the use of technology and teletherapy with this population are described in detail, as well as methods for meeting these challenges.

### IMPROVING THE REACH AND IMPACT OF PSYCHOSOCIAL INTERVENTIONS FOR OLDER ADULTS WITH SEVERE MENTAL ILLNESSES THROUGH EMERGING TECHNOLOGIES

C. Depp<sup>1,2</sup>, B. Mausbach<sup>1</sup>, L. Vergel de Dios<sup>1</sup>, J. Ceglowski<sup>1</sup>, E. Granholm<sup>1,2</sup>, 1. *Psychiatry, ucsc, La Jolla, California*, 2. *San Diego VA, La Jolla, California*

Despite their effectiveness, few individuals with severe mental illnesses (SMI) have access to evidence-based psychosocial interventions in people with chronic mental health problems. Older adults with SMI have additional barriers to accessing psychosocial care, including mobility. Moreover, the impact of structured self-management interventions often hinges upon transfer of training and "homework", yet cognitive deficits may limit the extent to which skills are recalled and implemented in ecological settings. In this presentation, we describe several ongoing and completed projects at UCSD in which mobile devices have been used to deliver aspects of evidence-based cognitive behavioral treatments for people with SMI. In particular, we demonstrate how mobile phones can be used to facilitate self-monitoring, deliver behavior change strategies, and increase homework compliance in skills training interventions. Finally, we provide an overview of ethical, technical, and clinical challenges facing the field of mobile interventions, along with future directions in technology development.

### TARGETED TRAINING IN ILLNESS MANAGEMENT FOR INDIVIDUALS WITH SERIOUS MENTAL ILLNESS AND DIABETES

M. Sajatovic<sup>1</sup>, N. Dawson<sup>1</sup>, A.T. Perzynski<sup>1</sup>, C. Blixen<sup>1</sup>, E. Seeholzer<sup>1</sup>, D. Kaiser<sup>2</sup>, M. Lawless<sup>2</sup>, C. Falck-Ytter<sup>1</sup>, 1. *Case Western Reserve University, Cleveland, Ohio*, 2. *MetroHealth Medical Center, Cleveland, Ohio*

Diabetes mellitus (DM) is common among individuals with serious mental illness (SMI), complicates health outcomes, reduces quality of life, and leads to premature mortality. SMI and DM outcomes are bidirectional. A majority (82%) of individuals with DM believe that the status of their overall health is related to their recovery from SMI. Therefore, it is essential that interventions address the issue of mental and physical health from the perspective of the individual with the disorder, engage individuals to actively participate in illness self-management, and include consideration of barriers to care. Treatments that blend psychoeducation, problem identification, goal-setting, and behavioral modeling/reinforcement and which have been adapted to the primary care setting may be both acceptable and helpful for people with SMI-DM. One such approach, Targeted Training in Illness Management

(TTIM), uses Peer Educators with SMI-DM to teach and model self-management for these concurrent conditions. TTIM and effects it produced are described.

## SESSION 475 (PAPER)

### AGING IN PLACE

#### CHANGES IN CONTINUING CARE RETIREMENT COMMUNITY (CCRC) RESIDENTS' LIFE EVENTS, STRESS, AND SUPPORT

H. Lee, H. Ewen, *Miami University, Oxford, Ohio*

Relocation of older adults has become an important issue due to the increased life span, older adults' issues related to remaining independent at advanced age (e.g., disabilities, finance), and the advent of many senior housing options. One housing option designed to maximize independent living is the Continuing Care Retirement Community (CCRC), which provides residents continuum of care from independent living to skilled nursing. This study investigated (1) the relationships among life events, stress, and social support networks among new residents of a CCRC and (2) how social support changes over time among residents of a CCRC during their first few years in residence. Our findings indicate that within the first year of the move, new residents relied on their children, spouses, and friends in this order. This pattern changes by year three to friends first, then children, and spouses, indicating development of community support networks. The reliance on "other" support people also increases over time, implying more support from others within the community, such as new residents and staff. Major life events reported include illness of a family member, death of family members/friends, major anniversaries/celebrations, and moving within levels of care. Life events were negatively related to self-reported health consistently through the first three years in residence. However, in the third year interactions between the number of social supports and number of life events were predictive of better self-reported health ( $p < .01$ ) indicating that social support serves as a buffer against health declines associated with life stress.

#### MEDICAID LONG TERM CARE HOME AND COMMUNITY BASED SERVICES FOR THE ELDERLY: TRENDS IN PROGRAMS AND POLICIES, 1999-2009

C. Harrington, T. Ng, *University of California, San Francisco, California*

In response to consumer demand, the Supreme Court decision in the Olmstead case and the New Freedom Initiative, states have unevenly expanded combinations of three Medicaid home and community based services (HCBS): home health, state plan personal care services (PCS), and 1915(c) waivers. By 2009, the federal-state Medicaid program paid for 34 percent of the nation's estimated \$205 billion total long-term care (LTC) expenditures while institutional care (e.g., nursing homes) consumed 55 percent of those expenditures. As states struggle with budget deficits and the loss of stimulus money from ARRA, the Patient Protection and Affordability Care Act of 2010 and its provisions for continued HCBS growth reflects growing concerns about the need to preserve and expand Medicaid HCBS and the need for information on program and policy trends. This paper draws from a unique national dataset to present the latest trends in participants, expenditures and policies for the three Medicaid HCBS programs serving the elderly. While data for 2009 show a steady increase in participants and expenditures, these growth rates have slowed since 2001. Inequities in access to services and limited funds have also resulted in unmet needs for HCBS among the elderly. Findings from the survey of policies such on the programs in 2011 show that states are increasing the number of waiting lists for elderly waiver services even as the number of available "slots" increases. Cost caps such as service and cost limits are also used in

almost half the state plan personal care programs and almost a third of home health programs.

#### CAN NURSING HOME TRANSFER BE DELAYED IF HOME AND COMMUNITY-BASED WAIVER PERSONAL CARE SERVICES ARE INCREASED?

S. Spoelstra, C.W. Given, M. You, *College of Nursing, Michigan State University, East Lansing, Michigan*

There is a pressing need to retain the dually eligible elderly in the community. This research compared the use and cost of personal care services (PCS) and nursing home placement (NHP) among 7302 older adults aged 65 and older in a statewide home and community-based waiver program. A model was developed to estimate costs of increased PCS to compare savings associated with remaining the community versus NHP. The second to last and last Minimum Data Set-Home Care assessments and Medicaid claims files were examined. Median hours of PCS and savings based on average cost were calculated. Median hours of PCS were 34. The rate of NHP for clients above the median hours of PC was 25%. Adding PC hours for those with <34 hours, could possibly reduce NHP to 25%. For example, a total of 3777 hours of PCS need to be added for those below the median, to sustain a 25% rate of NHP. This would keep 33 clients in the waiver. Cost of adding these PCS is \$59,186 ( $3777 * \$15.67$ ). Monthly cost of NHP is \$115,500 ( $33 * \$3,500$ ), compared to \$30,822 ( $33 * 934$ ) in the waiver. Total savings of \$25,492 per month could be realized by retaining 33 clients in the waiver program. Adding PCS hours to waiver clients whom are below the median number of hours of PCS could help retain clients in the home setting, where they most want to be, and allow for tremendous cost savings.

#### ETHICAL USE OF TECHNOLOGIES TO SUPPORT AGEING-IN-PLACE: OLDER PEOPLE AS PARTNERS

A. O'Hanlon<sup>1,2</sup>, S. McGee<sup>1</sup>, A. Sidera<sup>1</sup>, L. Una<sup>1</sup>, J. Finnegan<sup>1</sup>, R. Bond<sup>1,2</sup>, B. O'Mullane<sup>2,1</sup>, *1. Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland, 2. Centre for Affective Solutions for Ambient Living Awareness (CASALA), Dundalk, Ireland*

Technology offers much potential for supporting ageing-in-place, yet little is known about users' experiences. Studies are reported examining user views around key ethical challenges including confidentiality, informed consent, privacy, and autonomy. Multiple methods were used to collect data across four studies. Study 1 is a large survey examining use and barriers towards technology. Study 2 is the Home Sweet Home EU multi-country trial in which participants are randomly allocated to usual care only, or usual care plus technology. Study 3 is a physical home-environment in a lab setting where a home environment is simulated through CAVE technology. Study 4 is a Lab-in-the-Home study ( $n = 18$ ) which uses data from 16 smart apartments which are the permanent homes of older adults. Open and regular communication with older adults is crucial in achieving informed consent. Older people are willing to sacrifice some privacy in order to receive technology benefits. Older adults as expert users should be full partners in discussions about privacy. Support technology ideally is unobtrusive and converges with users' lifestyles and home décor to empower rather than undermine. Common worries about confidentiality include understanding who has access to information, and the loss of information through error. Technology offers professionals and others ethical dilemmas around issues of informed consent, autonomy and doing no harm. As expert users and problem solvers, older people should be active and full partners in these discussions and debates. Underpinning such discussions is regard for the dignity of the person and their freedom of choice.

#### AN INTERVENTION TO HELP OLDER ADULTS MAINTAIN INDEPENDENCE SAFELY

L. Ganong, M. Coleman, J. Benson, L.A. Snyder-Rivas, J.D. Stowe, *HDFS, University of Missouri, Columbia, Missouri*

Older adults prefer to live in their own homes, but those who are alone are at risk for problems (e.g., falling, sudden illness). They can

benefit from planning ahead to prevent the likelihood of such problems, to maintain themselves safely in their homes, and to get help in emergencies. The purpose of this study was to evaluate the success of an intervention designed to train family members or close friends how to help rural older adults who were living alone make plans to maintain independence safely (MIS) in their homes. In addition, behavioral and household changes made by the older adult to enhance safe independent living were assessed by the research team. In an experimental design, family members and friends of 19 randomly assigned older adults were taught to assist the older adults to create plans for maintaining themselves safely in their homes using multiple segment vignettes as a discussion tool. Control group dyads ( $n = 21$ ) were asked to make plans for MIS after a discussion about home safety. Multiple segment vignettes are effective in helping older adults to develop plans to maintain themselves safely in their homes and to make behavioral and household changes to enhance their safety. Family and friends can be trained to efficiently and effectively assist older adults to maintain themselves safely in their homes.

## SESSION 480 (PAPER)

### CAREGIVING: CHALLENGES AND RESOURCES

#### HASSLES OF CAREGIVING AND PERCEIVED STRESS OF FAMILY CAREGIVERS FOR NURSING HOME RESIDENTS

R.G. Judd, *Social Work, Texas A&M-Commerce, Commerce, Texas*

Entry of a care recipient into a nursing home does not end, and often time ignites the caregiving role of family members (Gaugler, 2005; Hertzberg, Ekman, & Axelsson, 2001; Kolb, 2003). The breadth of research focuses on informal caregivers for community dwellers, while emerging research is demonstrating the impact nursing home entry for a loved one has on outcomes related to stress, adjustment and role transition. The aim of this study was to identify activities of caring carried out by family caregivers for recipients in a nursing home setting, activities they perceived as a hassle and to assess the correlation of these activities with perceived stress, feelings of role captivity, restriction in leisure time and work conflict. A three part self-administered questionnaire was developed specifically for this study and included demographic information; contextual factors related to caregiving and stressors and The Activities of Caring Scale (created specifically for this study) and The Perceived Stress Scale (Cohen, 1988) was used to capture caregiver's perceptions of stress. A non-probability sample of 129 informal caregivers of care recipients in sixteen different nursing homes in North Central Texas and Southern Oklahoma participated in the study. Making financial arrangements and completing paperwork were most likely to be perceived as a hassle. Significant relationships between caregiver perceived stress scores and the act of discussing medical concerns, acting as a primary contact, providing clothing, acting as an advocate, and making financial arrangements were found.

#### PREDICTING COMPASSION FATIGUE FROM PERCEIVED CARE RECIPIENT SUFFERING, EMPATHY, ATTACHMENT, POSITIVE ASPECTS OF CAREGIVING, AND BURDEN AMONG CAREGIVERS OF PERSONS WITH DEMENTIA

J. Day<sup>1</sup>, R.A. Anderson<sup>1</sup>, R. Schulz<sup>2</sup>, 1. *School of Nursing, Duke University, Durham, North Carolina*, 2. *University of Pittsburgh, Pittsburgh, Pennsylvania*

Objectives: To explore predictors of compassion fatigue among caregivers of persons with dementia. Background: Compassion fatigue theory asserts that compassion fatigue may develop when a caregiver has an empathic response for a person who they perceive is suffering, but the suffering cannot be alleviated, the caregiver is unable to detach, finds no positive aspects in caregiving (satisfaction), and has overwhelming life demands. This study hypothesizes, therefore, that higher levels perceived suffering, empathy, attachment, decreased levels of positive

aspects of caregiving, and greater burden will predict lower levels of compassion. Methods: This secondary analysis of baseline data from 109 caregivers in the Characterizing the Experience of Alzheimer's Disease (CEAD) Study used a stepwise multiple regression to assess the relationship between perceived care recipient suffering, empathy, attachment, positive aspects of caregiving, and burden with the outcome variable of compassion. Findings: Greater levels of compassion were associated with higher levels of perceived suffering, greater positive aspects of caregiving, and lower burden. Empathy and attachment did not enter the model at the  $p < .05$  level. Conclusions: The hypothesis was not supported. A limitation of this study is that we did not have a measure of compassion fatigue and instead used a measure of compassion. It is possible that compassion is not a good proxy for compassion fatigue. It is surprising that empathy and attachment do not predict caregiver compassion. Future research might explore the relationship of empathy and attachment to compassion fatigue, particularly in caregivers for persons with dementia.

#### OPTIMISM MEDIATES THE RELATIONSHIP BETWEEN ANGER AND HEALTH IN DEMENTIA CAREGIVERS

J. Lopez<sup>1</sup>, A. Losada<sup>2</sup>, M. Marquez Gonzalez<sup>3</sup>, R. Romero-Moreno<sup>2</sup>, V. Fernández-Fernández<sup>2</sup>, C. Nogales-González<sup>2</sup>, 1. *University San Pablo CEU, Boadilla del Monte, Madrid, Spain*, 2. *University Rey Juan Carlos, Alcorcón, Madrid, Spain*, 3. *University Autonoma de Madrid, Madrid, Spain*

Caring for a loved one with Dementia is a highly stressful experience that is associated with physical health limitations. Previous studies indicate a negative association between caregivers' anger and physical well-being. Moreover, the literature indicates a positive relationship between optimism and physical well-being. The purpose of this study was to test a mediational model of the associations between anger, optimism, and physical health in Dementia caregivers. One hundred and eight caregivers (mean age: 59 years,  $SD = 12.25$ ), primarily female (80.6%), completed measures assessing their anger (temperament and reaction), optimism, and health (vitality). A mediational model was tested to determine if optimism partially mediated the relationship between anger and vitality. Regression analyses indicated that angry temperament was negatively associated with optimism ( $\beta = -0.249$ ,  $SE = 0.125$ ,  $p = 0.049$ ) and vitality ( $\beta = -0.266$ ,  $SE = 0.113$ ,  $p = 0.021$ ). Optimism was positively associated with vitality ( $\beta = 0.421$ ,  $SE = 0.079$ ,  $p = 0.001$ ). Finally, the relationship between angry temperament and vitality diminished upon simultaneous entry of optimism ( $\beta = -0.157$ ,  $SE = 0.104$ ,  $p = 0.132$ ). Regression analyses also indicated that angry reaction was negatively associated with optimism ( $\beta = -0.418$ ,  $SE = 0.116$ ,  $p = 0.001$ ) and vitality ( $\beta = -0.331$ ,  $SE = 0.107$ ,  $p = 0.002$ ). Optimism was positively associated with vitality ( $\beta = 0.399$ ,  $SE = 0.082$ ,  $p = 0.001$ ). Finally, the relationship between angry reaction and vitality diminished upon simultaneous entry of optimism ( $\beta = -0.169$ ,  $SE = 0.102$ ,  $p = 0.100$ ). Sobel tests confirmed that optimism significantly mediated some of the relationship between vitality and angry temperament ( $z = -1.86$ ,  $p = 0.031$ ) and angry reaction ( $z = -2.89$ ,  $p = 0.002$ ). These findings suggest that a reduced optimism may help explain the association between caregivers' anger and a reduced sense of vitality.

#### SUPPORTING FAMILY CAREGIVERS TO NURSING HOME RESIDENTS: SOCIAL SUPPORT AS A KEY PREDICTOR OF LOWER BURDEN AND DEPRESSION

D. Majerovitz, *Behavioral Sciences, York College, CUNY, Jamaica, New York*

This study examines predictors of burden and depression among 103 primary caregivers to nursing home residents. Research shows that families remain actively involved in the resident's care following placement, resulting in continued caregiver stress. Caregivers reported visiting the nursing home an average of 3 times per week and spending an average of 46 hours per month with the resident, indicating a high level

of involvement in the resident's care. Participants completed a structured survey assessing level of involvement in the resident's care, severity of resident's memory and behavior problems, availability of social support to the caregiver, satisfaction with nursing home care, caregiver burden, and depression. The mean score on the CESD depression scale was 16.8, just above the cutoff of 16 indicating likely clinical depression (52% fell below this cutoff). The mean burden score was 25.8 (of 66), indicating moderate burden. Multiple regression identified five predictors of caregiver burden: younger caregiver age, resident memory and behavior problems, frequency of caregiving tasks, dissatisfaction with nursing home care, and less social support. Only lack of social support significantly predicted depression. This is consistent with previous research finding that burden reflects stressors specific to caregiving, while depression is associated with more global predictors of mental health. These findings suggest that interventions to lessen the stress of caregiving are more likely to decrease burden than to alleviate depression. Interventions designed to enhance social and emotional support are more likely to address burden and depression.

### **LONG-TERM FOLLOW-UP OF AN ONLINE INTERVENTION FOR REDUCING DEPRESSIVE SYMPTOMS IN SPOUSAL CAREGIVERS OF MALE STROKE SURVIVORS**

G.C. Smith, J. Chaya, *Kent State University, Kent, Ohio*

We conducted a long-term follow-up investigation of an online psycho-educational program for reducing depressive symptoms in spousal caregivers (CG; n = 32) of male stroke survivors (SS) at 24 months post treatment within a randomized clinical trial. The CG in the intervention condition received an online group intervention involving a blend of peer and professional support, whereas CG in a control condition received minimal support with individualized access to relevant online information. At posttest (T2) and one month later (T3), CG in the intervention condition reported significantly lower depression (assessed by the Center for Epidemiological Studies Depression Scale) than did CG in the control condition with baseline depression (T1) controlled. At 24 months post intervention (T4), however, the prior significant difference in depressive symptoms no longer existed between the two conditions. An analysis of qualitative data revealed that substantial changes had occurred from T3 to T4 that most likely affected the T4 findings. These included entering another CG support program (30%); altering the level of care provided (56%); experiencing major life events (58%); and reporting changes in the physical or mental health of the SS (66%). The challenges of conducting long term follow ups with CG populations are discussed in light of our T4 observations. [Funded by NINR R21 NR010189-02]

## **SESSION 485 (PAPER)**

### **CARING FOR PERSONS WITH DEMENTIA**

#### **DEPRESSION IN DEMENTIA CAREGIVERS: AN ANALYSIS OF ITEM RESPONSE, MEANING, AND SYMPTOM SEVERITY**

L. Noel<sup>1</sup>, J.M. Clem<sup>1</sup>, R. Glueckauf<sup>1</sup>, D. Gustafson<sup>2</sup>, *1. College of Social Work, Florida State University, Tallahassee, Florida, 2. Apalachee Center, Tallahassee, Florida*

**BACKGROUND:** Caring for a loved one with progressive dementia can cause substantial burden for family caregivers. Previous research has shown that dementia caregivers are at high risk for clinical depression. Differences among ethnicities on caregiving stressors, appraisals of caregiving role, overall physical health, and types of depressive symptoms have been documented, but have not been explored adequately from a phenomenological perspective. **PURPOSE:** (1) To examine differences in depressive symptom interpretations on the Patient Health Questionnaire-9 (PHQ-9) between two samples of family dementia care-

givers – an African American and a non-Hispanic White comparison group; (2) to perform item response analysis examining differential symptom endorsement on the PHQ-9; and (3) to assess the impact of item complexity on caregiver severity ratings. **METHODS:** Semi-structured interviews (N = 13) were performed to explore patterns of endorsement of depressive symptoms and symptom interpretation of the PHQ-9 across groups using item response analysis and content analytic procedures (constant comparative method and open coding). **RESULTS:** Item Response Analysis revealed statistically significant differences across groups in item response on three of nine PHQ-9 items. Qualitative analysis revealed differences across groups in meaning associated with items and item complexity was associated with deflated severity ratings. **CONCLUSIONS:** Exploratory results provide some indication that African American and Non-Hispanic White caregivers of family members with dementia express depressive symptomatology in different ways. Also, these findings reveal that when assessing depression symptoms in dementia caregiving groups, severity ratings among African Americans may be deflated as a product of item complexity.

### **PRN ADMINISTRATION IN A GERIATRIC PSYCHIATRIC HOSPITAL; PRELIMINARY FINDINGS FROM A NURSING PERSPECTIVE**

L. Harper<sup>1</sup>, C. North<sup>1</sup>, B. Bachewich<sup>1</sup>, J.R. Reddon<sup>2</sup>, H. Williams<sup>1</sup>, *1. Psychology, Villa Caritas Hospital, Edmonton, Alberta, Canada, 2. University of Alberta, Edmonton, Alberta, Canada*

Pro re nata (PRN) or "as required" medication is often a frequently used adjunct to routinely prescribed medication and is commonly used to manage the behavioral and psychological (BPSD) symptoms of dementia (Baker, Lovell, Harris & Campbell, 2007; Haw, Stubbs & Yarson, 2008). The administration of PRN medication is largely an autonomous nursing responsibility yet the role of clinical decision making by nurses in the administration of PRN medication remains a very much under-researched area, particularly within geriatric psychiatric populations. A nursing questionnaire was developed to explore this important area of nursing practice. Findings obtained from the responses of 12 out of 15 nurses working with dementia patients in a geriatric psychiatric hospital indicate that there are differences in opinion with regard to the use of PRN medication and peer pressure may influence the administration of same. Patient and staff safety was a major factor in decision making for PRN administration for aggression and agitation as was patient familiarity. Although the majority of responses indicated that non-chemical interventions were tried first, most of the nursing staff identified that the primary non-chemical intervention used was restraint rather than a behavioral intervention. The role of alternative non-chemical interventions will also be discussed as well as some of the challenges associated with their implementation.

### **HOPE AMIDST UNCERTAINTY: THE EXPERIENCES OF PHYSICIANS WITH PRESCRIBING CHOLINESTERASE INHIBITORS**

A. Smith<sup>1,2</sup>, K. Kobayashi<sup>1,2</sup>, N.L. Chappell<sup>1,2</sup>, C. Dujela<sup>2</sup>, *1. Department of Sociology, University of Victoria, Victoria, British Columbia, Canada, 2. Centre on Aging, University of Victoria, Victoria, British Columbia, Canada*

Cholinesterase inhibitors (ChEIs) are widely prescribed first-line drugs in the treatment of mild to moderate Alzheimer's disease and related dementias (ADRD) and long-term prescribing of ChEIs into late stage ADRD is increasingly common. The clinical usefulness of ChEIs remains controversial. Several studies of these drugs, including reviews of clinical trials, have concluded that the statistical significance of their effects is modest. A lack of clear guidelines for determining the long term benefits of these drugs makes the issue of how long to continue ChEI therapy highly debatable. Against this backdrop, little is known about how physicians evaluate these drugs in their practice and what

factors motivate them to continue prescribing ChEIs for extended periods of time. This study analyzes data from 19 physicians who participated in four focus groups and 26 in-depth interviews with caregivers to persons with ADRD who were withdrawn from ChEI therapy. The findings reveal that the persistence of ChEI therapy is associated with physicians' efforts to reconcile ambivalent assessment results, which suggest limited or no benefits, with a sensitive appraisal of the hopes and desires of family caregivers and patients to continue treatment. Specifically, physicians stated an unwillingness to initiate conversations about stopping ChEIs unless families and patients brought up the idea themselves or until an adverse reaction precipitated the decision. Physicians also identified the transition to institutionalization as an opportunity to negotiate ending therapy. The findings suggest a need to assist physicians in supporting caregivers and care recipients to discontinue ChEI in a timely manner.

#### **PERSON-CENTERED CARE IN A DEMENTIA CARE ENVIRONMENT: RESIDENTS' VOICES**

P.J. Doyle, *Center for Aging Studies, Sociology/Anthropology Department, University of Maryland Baltimore County, Baltimore, MD*

Person-centered care is considered to be among the best practices in providing formal dementia care. However, there are limitations in the application of person-centered care and information regarding the limitations is lacking in the literature. The dissertation, from which this presentation draws, sought to examine the complexities of this approach to care in one dementia care setting that had an organizational commitment to a person-centered model of care. The ethnographic interviews with residents (N=20) and participant observations (over 400 hours) will be used to discuss one group of the challenges faced when applying person-centered care principles: the underutilization of residents' narratives to meaningfully tailor care. This paper used the residents' words to examine how the lived experiences of people with dementia are accessible through communication and how they could be used to better inform the provision of person-centered care. Through a coding-based qualitative analysis, 'robust' themes related to this topic were identified. The residents' narratives demonstrated that: 1) multiple, sometimes veiled, identities of the person with dementia exist; 2) there were differences in their past and current identities; and 3) residents' narratives were dynamic (changing over short periods of time) and adaptive based on their interactions with the changing environment. These findings demonstrated the need to incorporate the residents' views in care interactions. However, a limitation often cited by direct-care workers was that listening to the residents' narratives and decoding the sometime nebulous meanings are difficult and time consuming. This paper concludes with a translational piece to address these concerns.

#### **THE BURDEN OF CARE AMONG DEMENTIA CAREGIVERS IN HANOI, VIETNAM**

T.Q. Truong, E. Beattie, *Queensland University of Technology, Brisbane, Queensland, Australia*

Extensive researches conducted in many countries have confirmed that caring for a family member with dementia confers considerable burden. In Vietnam few studies have examined the prevalence of dementia or the impact of disease on carers, specifically carer burden Objectives: This study aims were to (1) describe carer's caregiving burden, and (2) explore the associations between family carer's characteristics and perceived burden of care Method: A cross-sectional correlation study was conducted in Hanoi, Vietnam in 2011. 153 current family dementia caregivers completed questionnaire including Barthel Index, Kingston Standardised Behavioural Assessment of people with dementia, Sense of Coherence questionnaire, and Zarit Burden Interview. Result: Moderate to severe burden was found on 25.5% participants while 33.3% showed little or no burden. Perceive burden differed by gender with female daughter carers experiencing higher burden. The higher level

of burden, the lower level of sense of coherence dementia caregiver appeared to have. Multiple linear regression shows that duration of disease, behavioural profile of people with dementia, and caregiver's age contributed to predict the perceived burden of care among those caregiver of people with dement Conclusion: Dementia carers experienced higher perceived burden compared with previous studies in Western countries. The findings relating to female carers are consistent with that found in other studies in many countries. Further research is needed to explore the experience of Vietnamese daughter carers using filial piety perspective and meaning of caregiving. Keyword: Dementia caregiver, Perceived burden of care, Caregiving burden, Vietnam

### **SESSION 490 (SYMPOSIUM)**

#### **ADVOCATING FOR HIDDEN VOICES: SOCIAL JUSTICE AMONG VULNERABLE ADULTS**

Chair: *L.R. Phillips, Nursing, UCLA, Los Angeles, California*

Discussant: *K. May, University of Arizona, Tucson, Arizona*

Social justice, an ethical belief system, is concerned with equal access to goods, services and opportunities. However, while for many vulnerable older adults inequality is predominant, their voices remain hidden. Nurses who conduct gerontological research often find themselves confronted with stories which illustrate inequality, challenge the meaning of social justice, test the boundaries of ethical decision-making and bring into focus unresolved social policy issues. This symposium will explore the concept of social justice and provide examples of the concept as it has arisen in developing and implementing gerontological nursing research studies. The first paper will examine policy issues raised in studying institutional elder abuse. The second paper will discuss issues raised in designing research to study African American men with prostate cancer. The third paper will consider social justice issues encountered in studying the aging among older homeless women. The last paper will explore the concept as it relates to directions in NIH funding over the past five years. The discussant will focus on analyzing these examples to identify the role of nurse researchers in giving voice to the stories they discover in their data.

#### **SEXUAL ABUSE IN CALIFORNIA'S SKILLED NURSING FACILITIES AND THE UNFULFILLED RESPONSIBILITIES OF STATE AGING POLICY**

C.E. Ziminski, L.R. Phillips, *School of Nursing, University of California Los Angeles, Los Angeles, California*

The prevalence of elder sexual abuse in long-term care is approximately 3%. In California, 12% of citations are for sexual abuse. The majority of these citations are for \$1K, the lowest fine category. These small fines issued to financially stable skilled nursing facilities (SNFs) provide little incentive to initiate change in practice. Furthermore these fines don't properly acknowledge the seriousness of the crimes that are taking place. For instance, residents are placed in danger through the hiring of known felons and sexual offenders. Despite the California Senate commissioning a report detailing the tragic state of elder abuse in SNFs, policies continue to marginalize this population. The last five years SNF abuse complaints and citations have dropped, directly related to budget cuts. This policy analysis will provide an examination of sexual abuse citations in California's SNFs in 2007 contrasted against the unfulfilled roles and responsibilities of the state policy on aging.

#### **ISSUES IN EQUITABLE TREATMENT ACCESS FOR VULNERABLE GROUPS**

I.H. Gabbidon, L.R. Phillips, *Nursing, UCLA School of Nursing, Los Angeles, California*

The role of gerontological nurse researchers in addressing treatment inequities is rarely discussed in the literature. Prostate cancer has the highest incidence and mortality rate amongst older African American men. Inadequate healthcare access, low socio-economic status, and race

and ethnicity are key factors that contribute to this problem. Studies show African Americans are less likely to have adequate health insurance to cover detrimental illnesses like cancer, which may contribute to their having lower screening rates, higher incidences of co-morbidities, and late-stage diagnoses for diseases such as prostate cancer. This presentation will focus on the powerful role gerontological nurse researchers can play in addressing problems like this. Men who participate in our studies often share personal stories about the outcomes associated with financially-based treatment inequities. Strategies nurse researchers can use to interpret these stories to policy makers and legislators will be explored.

#### **AGING ON THE STREETS: UNMET NEEDS AND ISSUES OF SOCIAL JUSTICE**

B.E. Salem, L.R. Phillips, *UCLA School of Nursing, Los Angeles, California*

The golden years are often defined by older adults as a period for reflection and enjoyment, but many older adults find themselves destitute and homeless. Approximately 33% of chronically homeless adults are over 50 and are at high risk for chronic illness, social isolation and victimization. Moreover, they lack housing and access to healthcare. This paper will explore factors which influence the substantial unmet needs among this subpopulation, specifically focusing on the sociodemographic characteristics of the population, shelter, and the need for a research agenda to explore and implement programs that can meet the needs of this vulnerable population.

#### **FUNDING FOR HEALTH DISPARITIES RESEARCH WITH OLDER ADULTS: HOW ARE WE DOING?**

K. Skrine Jeffers, L.R. Phillips, *UCLA, Los Angeles, California*

Despite strong and continuing evidence of health disparities and expansive differences in health outcomes, an analysis of the NINR portfolio represented in the CRISP database in 2008, showed that only 8% of studies on primary prevention of chronic conditions and 12% of condition specific studies (e.g., heart failure, diabetes) included a focus on unique racial/ethnic groups. Further, a literature search conducted at the same time combining the search terms “cultural competence” and “chronic illness care” showed only 52 published studies in CINAHL. Most were single group studies, overlooking samples from racial/ethnic groups who are most adversely affected by health conditions. At the same time, NINR was simultaneously funding 11 Partnership Centers on Health Disparities and 7 NRSA's focused on health disparities research. This paper focuses on reanalyzing the RePORTer database and CINAHL to determine our progress since 2008 with a focus on addressing health disparities among older adults.

### **SESSION 495 (SYMPOSIUM)**

#### **EMERGING BIOMARKERS OF PRESYMPTOMATIC & EARLY STAGES OF ALZHEIMER'S DISEASE**

Chair: *S. Asthana, Medicine, University of Wisconsin, Madison, Wisconsin*

Alzheimer's disease (AD) is the most common neurodegenerative disease projected to afflict more than 13 million Americans by 2030. Currently, there are no approved treatments that could either delay or stop progression of AD. There is convincing scientific evidence that AD pathology starts at least a decade before the onset of symptoms, which provides a unique opportunity to initiate potential disease-modifying therapies during presymptomatic stages of the disease. Unfortunately, there are currently no available tests to diagnose AD at presymptomatic stages; consequently, major scientific efforts are being made to discover antecedent biomarkers that could identify individuals at asymptomatic stages of the disease. The present GRECC-sponsored symposium will focus on the neurobiology and state-of-the-art biomarkers that could identify patients at presymptomatic stages of AD. The first pres-

entation by Barbara Bendlin, PhD, will summarize the field of neuroimaging biomarkers and focus on the unique effects of family history and ApoE4 genotype on neuroimaging biomarkers of asymptomatic stages of AD. The second presentation by Laura Baker, PhD, will discuss potential cognitive biomarkers of preclinical stages of AD, and present data on favorable cognitive effects of specific treatment strategies for early stages of the disease. The third presentation by Jane Driver, MD, will target cerebrospinal fluid (CSF) biomarkers of presymptomatic stages of AD. Overall, the three presentations included in this symposium will provide state-of-the-art information and novel research data on potential biomarkers of preclinical stages of AD. This information will be of pivotal clinical significance and relevance.

#### **FAMILY HISTORY OF ALZHEIMER'S AND APOE4 ARE ASSOCIATED WITH CORTICAL THICKNESS AND AMYLOID BINDING**

B. Bendlin, O. Okonkwo, B.T. Christian, J.M. Oh, C.M. Carlsson, M.A. Sager, S.C. Johnson, S. Asthana, *Department of Medicine, University of Wisconsin, Madison, Wisconsin*

Parental family history (FH) of Alzheimer's disease (AD) and APOE4 are known risk factors for AD. However, the independent effects of these risk factors on measures of brain health in middle-aged adults are only beginning to be known. In this study, cognitively-healthy participants (mean age=59 years), with (n=108) or without (n=48) FH of AD underwent 3T MRI, dynamic PiB PET, and neuropsychological testing. We assessed regional cortical thickness and amyloid binding. Twenty-eight percent of the participants showed amyloid binding. APOE4 genotype was associated with amyloid binding, whereas FH of AD was associated with cortical thinning, particularly in medial temporal and lateral parietal cortex. In sum, the data suggest that early AD-related brain changes are measurable in healthy middle-aged adults, and that FH and APOE4 may impart risk for AD through independent mechanisms. Assessing the contribution of modifiable risk factors and longitudinal follow-up are expected to further inform these early-stage findings.

#### **COGNITIVE BIOMARKERS IN PRECLINICAL DISEASE: RESPONSE TO POTENTIAL INTERVENTIONS**

L.D. Baker, *Department of Psychiatry and Behavioral Sciences, University of Washington School of Medicine, Washington, Washington*

Changes in cognition can be detected using sensitive psychometric measures at the earliest stage of preclinical Alzheimer's disease (AD) and vascular cognitive impairment. These pathognomic changes may be improved with interventions that target the somatotropic axis. Age- and disease-related changes in this axis set the stage for targeted therapeutic interventions to improve cognitive function. In three double-blind, randomized pilot studies, we demonstrated that six months of GHRH administration or of aerobic exercise had positive effects on executive function, and on delayed verbal recall for adults with MCI. Both interventions modulated blood biomarkers of aging or AD. In summary, pre-clinical decrements in executive function and delayed episodic memory can be stabilized or improved with interventions that modulate the somatotropic axis. Acknowledgements: Supported by PHS R01 AG025515 (MVV), Theratechnologies Inc., the American Diabetes Association, the Alzheimer's Association, and the Department of Veterans Affairs.

#### **TAU CONFORMATIONS: NOVEL CSF BIOMARKERS FOR ALZHEIMER'S DISEASE**

J. Driver, C. Chen, N. Kowall, K. Lu, *Harvard Medical School, Boston, Massachusetts*

pT231-tau is an established CSF biomarker that becomes elevated in the preclinical phase of Alzheimer's disease (AD) and is useful for diagnosis. We have discovered that pT231-tau exists in pathogenic (cis)

and non-pathogenic (trans) conformations. We generated the first antibodies that are able to distinguish between these conformations. Pilot results have demonstrated 1) that the cis conformation was undetectable in the CSF of patients without AD, 2) that both cis and trans pT231 tau were elevated in AD, and 3) that there was wide inter-individual variation in cis or trans levels, but the cis:trans ratios were very similar between patients. Furthermore, we found that levels of Pin1, the enzyme that promotes conversion from cis to trans pT231 tau, are substantially lower in the serum and white blood cells of outpatients with probable AD than in those with normal cognition. Thus, tau conformations may be a novel early biomarker for AD.

## SESSION 500 (SYMPOSIUM)

### THE USE OF PHYSICAL RESTRAINTS IN DIFFERENT CARE SETTINGS: DEFINITION AND INTERVENTIONS

Chair: *J. Hamers, Maastricht University/school CAPHRI/Department of Health Services Research, Maastricht, Netherlands*

Co-Chair: *E. Capezuti, New York University, College of Nursing, New York, New York*

Discussant: *G. Meyer, School of Nursing Sciences, Faculty of Health, Witten/Herdecke University, Witten, Germany*

The use of physical restraints is contradictory to the call to enhance the autonomy, freedom and right to take risks of older people. Despite the known adverse consequences of physical restraint use, their use continues to be common practice and is justified by healthcare workers in different settings as a safety measure, primarily to prevent falls and their consequences. The lack of evidence to support the physical restraint use as a safety intervention fuels the public debate regarding their persistent usage. Extensive research conducted in Europe, Asia, and the US in both nursing home and acute care settings has demonstrated successful outcomes of restraint reduction programs. However, it is difficult to compare study findings within and across nations due to the varying restraint definitions employed. During this symposium four researchers from the Netherlands, Hong Kong and South Korea present new data on the definition of physical restraints, interventions aimed at reducing the use of physical restraint in different settings. The presentations will focus on: 1) a delphi consensus study to determine an internationally accepted definition on physical restraints by an international workgroup; 2) the long-term effects of a multicomponent intervention program on belt restraint reduction in Dutch psychogeriatric nursing homes; 3) the development of an educational app and website on restraint-free care for Korean nursing home staff; and 4) the effects of a restraint reduction program on length of stay in Hong Kong hospitals. The discussant will reflect on the presentations and will facilitate a discussion on-site.

### A DELPHI CONSENSUS STUDY TO DETERMINE AN INTERNATIONALLY ACCEPTED DEFINITION ON PHYSICAL RESTRAINTS

*M. Bleijlevens<sup>1</sup>, L. Wagner<sup>2</sup>, E. Capezuti<sup>2</sup>, J. Hamers<sup>1</sup>, 1. Maastricht University/school CAPHRI/Department of Health Services Research, Maastricht, Netherlands, 2. New York University, College of Nursing, New York, New York*

Background: Interpretation of results from physical restraint research is hampered by different or varied definitions on physical restraints. In order to make sure that the outcomes of physical restraint studies reflect the interests of researchers, policy makers, and clinicians, an internationally accepted definition is necessary. Aim: To determine an internationally accepted definition on physical restraints. Method: Candidate definitions were identified through a systematic literature search and were presented to a Delphi panel of selected international experts. Results: The literature search revealed 33 definitions which were presented to a panel of 40 international experts. The first Delphi round resulted in a top 4 of definitions which was agreed upon at an expert

meeting during GSA in Boston, MA, in November 2011. Conclusion: International experts emphasize the need and possibility of a consensus definition that will contribute to a better understanding and comparability of international research in the field of physical restraints.

### EFFECTS OF AN INTERVENTION PROGRAM ON BELT RESTRAINT REDUCTION IN NURSING HOMES AFTER 24 MONTHS

*M. Gulpers<sup>1</sup>, M. Bleijlevens<sup>1</sup>, E. Capezuti<sup>2</sup>, E. van Rossum<sup>1</sup>, J. Hamers<sup>1</sup>, 1. Maastricht University/school CAPHRI/Department of Health Services Research, Maastricht, Netherlands, 2. New York University, College of Nursing, New York, New York*

Background: A tailored multi-component intervention program (EXBELT) on belt restraint reduction in Dutch psychogeriatric nursing homes has shown positive results directly after its implementation. However, the long-term effects are unknown. Aim: Evaluating the effects of EXBELT on belt restraint usage 24 months after its onset. Method: This study employed a quasi-experimental longitudinal design. A total of 714 residents were eligible for participation. The primary outcome measure was the use of belt restraints. Data were collected by a blinded observer. Results: A total of 225 residents (intervention group n=134 and control group n=91) were present at both baseline and after 24 months. At baseline, belts were used in 14% (intervention wards) and 15% (control wards) of the residents (p=0.802). After 24 months belt usage was respectively 5% and 14% (p=0.019). Conclusion: Both short-term and long-term EXBELT resulted in a significant and convincing reduction of belt restraints use in psychogeriatric nursing homes.

### DEVELOPMENT OF AN EDUCATIONAL APP AND WEBSITE ON RESTRAINT-FREE CARE FOR KOREAN NURSING HOMES

*E. Kong<sup>1</sup>, L.K. Evans<sup>2</sup>, 1. Gachon university, Sungham, Republic of Korea, 2. University of Pennsylvania, Philadelphia, Pennsylvania*

Physical restraints are used frequently in Korean nursing homes where education regarding harms of restraints is lacking. Internet and smart phone technology is in high use in Korea, and healthcare providers find multimedia education very acceptable. Purpose: To identify nursing home staff's educational needs regarding physical restraints and develop multimedia educational materials on restraint-free care. Methods: Data from qualitative interviews with 40 nursing home staff to identify educational needs were used to develop educational materials for smart phone APP, website, CD-ROM, and print brochure. Revisions were based on focus group evaluation. Results: Educational needs were identified as adverse effects of restraints, myths about restraints, individualized care, practice guidelines, alternative devices, and global success stories. The materials were evaluated as very accessible and useful. Conclusion: The multimedia materials on restraint-free care may be effective for educating gerontological care staff in Korean nursing homes.

### PHYSICAL RESTRAINT REDUCTION IN PATIENTS SHORTENED HOSPITAL STAY

*T. Kwok<sup>1,2,3</sup>, F. Ho<sup>2</sup>, M. Chui<sup>3</sup>, 1. Medicine & Therapeutics, the Chinese University of Hong Kong, Shatin, Hong Kong, 2. Jockey Club Centre for Positive Ageing, Shatin, na, Hong Kong, 3. Shatin Hospital, Shatin, na, Hong Kong*

Background: The effect of restraint reduction on length of hospital stay (LOS) has not been investigated. Aim: To compare the average LOS of patients in convalescent wards before and after a restraint reduction programme. Method: The use of physical restraint and LOS of randomly selected medical patient episodes before and after the implementation of a restraint reduction programme were compared. Subgroup analysis based on cognitive status was performed. Results: 958 and 988 patient episodes in a convalescent hospital in the year before and after implementation of a restraint reduction programme were examined. The



rate of physical restraint declined significantly from 13.3% to 4.1%. The average LOS of patient was also significantly lower (16.8 sd 13.4 days versus 19.5 sd 20.7,  $P < 0.001$ ). The reduction in LOS was significant in the confused patients, but not in the non-confused. Conclusion: Physical restraint reduction shortened average LOS in convalescent medical wards.

## SESSION 505 (SYMPOSIUM)

### VA GRECC SYMPOSIUM: IMPLICATIONS OF PATIENT PERCEPTION, KNOWLEDGE AND BELIEFS ON PATIENT-CENTERED HEALTH EDUCATION

Chair: C.E. Gould, GRECC, VA Palo Alto, Palo Alto, California

Co-Chair: E. Woodhead, GRECC, VA Palo Alto, Palo Alto, California

Discussant: T. Huh, GRECC, VA Palo Alto, Palo Alto, California

Approximately 40% of veterans are over the age of 65 and are frequent users of healthcare. In the effort to improve care for older veterans, Veterans Health Administration (VHA) has made substantial efforts toward a patient-centered model of care known as patient-aligned care teams (PACTs). As part of this model, patient care is Veteran-centric, with a focus on education that is specific to each patient's presenting concerns. Research on patient education suggests that tailored approaches incorporating patient education can lead to improvement in health outcomes. However, little is known about specific beliefs held by older adults about various physical and mental health conditions or the recognition and classification of symptoms, which could significantly advance patient education efforts. Patient-centered education that is consistent with older adults' beliefs about various illnesses may improve adherence and lead to more efficient use of appropriate services. The goal of this symposium is to present research on older adults' conceptualization of specific health and mental health conditions and on patient-centered education for older adults. To address this goal, the presentations in this symposium will present data from studies of Veterans and community-dwelling older adults. Data will be conceptualized according to frameworks that can guide communication with older patients about health behaviors and chronic disease self-care, such as Social Cognitive Theory and Normalization Process Theory. Discussion will focus on the implications for development of patient education interventions and how providers can better meet the older patients' health and mental health needs by using tailored patient education.

### FACILITATING HEALTH BEHAVIORS AND HEALTH LITERACY IN DISEASE SELF-CARE IN OLDER ADULTS

N. Oliva<sup>1,3</sup>, L. Gaskin<sup>1</sup>, P. Heidenreich<sup>1,2,4</sup>, 1. VA Palo Alto Healthcare System, Palo Alto, California, 2. Stanford University School of Medicine, Palo Alto, California, 3. University of California, SF; Institute for Health and Aging, San Francisco, California, 4. VA/HSR&D Chronic Heart Failure Quality Enhancement Research Initiative, Palo Alto, California

Selected results of a self-report survey of health status of older adult Veterans with a diagnosis of Heart Failure (HF) are presented as a context for a discussion of language access in healthcare and fostering health behaviors in older adults. Thirty-three percent (33%) of 1253 Veterans with documented HF diagnoses returned surveys reporting not being advised by a provider that they had HF diagnoses. Evidence-based research regarding individual and system-level barriers and facilitators to health communications and health literacy in older adults is reviewed. Effective self-care is a core component of quality chronic care and patients' knowledge of illness is critical to chronic care success. Social Cognitive Theory and Normalization Process Theory, among several psychosocial models of health behavior, provide a framework for understanding the steps individuals make in making sense of their disease(s) and engaging in self-care activities. These models can guide providers' communication and education techniques and promote desired outcomes of care.

### A PATIENT-CENTERED APPROACH TO UNDERSTANDING OLDER ADULTS' BELIEFS ABOUT DEPRESSION

E. Woodhead, S.R. Brunskill, J. Tenover, T. Huh, GRECC, VA Palo Alto Health Care System, Palo Alto, California

This retrospective study examined beliefs about late life depression to inform the development of patient-centered educational interventions. Older male veterans undergoing treatment for depression ( $N=20$ ;  $M=80.1$  years,  $SD=7.5$ ) completed a semi-structured interview guided by the components of the self-regulatory model (symptoms, cause, control/cure, consequences, timeline). Thematic categories were developed based on prior research. Reliability of categories was acceptable ( $\alpha > 0.70$ ). Commonly endorsed symptoms included worthlessness (65%) and anhedonia (40%). Anhedonia was associated with less post-treatment change in depression severity ( $r = -0.52$ ,  $p = 0.04$ ). Stress was a commonly cited cause of depression (60%) and was associated with fewer health limitations ( $r = -0.52$ ,  $p = 0.03$ ). Increased negativity was the most commonly reported consequence of depression (65%). Depression was viewed as curable through positive coping behaviors (e.g., exercise, socializing). Older veterans may benefit from targeted education about symptoms and causes of late life depression.

### OLDER ADULTS' EXPERIENCE OF ANXIETY AND ITS IMPACT ON PATIENT EDUCATION

C.E. Gould<sup>1</sup>, B. Edelstein<sup>2</sup>, S.A. Beaudreau<sup>3,4</sup>, L.A. Gerolimatos<sup>2</sup>, M. Shreve<sup>2</sup>, 1. GRECC, VA Palo Alto, Palo Alto, California, 2. West Virginia University, Morgantown, West Virginia, 3. VA Palo Alto & the Sierra Pacific Mental Illness, Research, Education, and Clinical Center (MIRECC), Palo Alto, California, 4. Stanford University School of Medicine, Dept. of Psychiatry and Behavioral Sciences, Palo Alto, California

We discuss data from two studies examining age differences in the presentation of anxiety symptoms. In Study 1 (experimental study of worry;  $N=108$ ), older adults reported significantly less anxiety than younger cohorts. Younger adults most frequently endorsed: worrying, fearful, nervous, agitated, irritated, and calm. Whereas, older adults endorsed fewer typical anxiety symptoms: alive, thoughtful, agitated, fine, tense. In Study 2, the frequency of specific anxiety symptoms was examined in the Health and Retirement Study ( $N=6715$ ). Analyses were adjusted for medical conditions. Fearing the worst or feeling nervous were most frequently found in 50-64 year-olds, and least frequently found in 85+ year-olds. Somatic anxiety symptoms (i.e., hands trembling, feeling faint) were most frequently found in 85+ year-olds and least frequently found in 65-74 year-olds. Patient education that takes into account such differences in symptom presentation may improve detection of anxiety in older adults and lead to better access to treatment.

## SESSION 510 (PAPER)

### ARTHRITIS AFFECTS ON FUNCTION AND ASSOCIATED TREATMENTS

### EFFECTS OF YOGA ON SYMPTOMS, SLEEP AND QUALITY OF LIFE IN OLDER WOMEN WITH KNEE OSTEOARTHRITIS

C. Cheung<sup>1</sup>, J. Wyman<sup>2</sup>, B. Resnick<sup>3</sup>, 1. St. Catherine University, St. Paul, Minnesota, 2. University of Minnesota, Minneapolis, Minnesota, 3. University of Maryland, Baltimore, Maryland

Purpose: Yoga is currently a recommended exercise intervention for arthritis but evidence documenting its effectiveness in osteoarthritis (OA) is limited. This study's aims were to assess the feasibility and effect of a group-based Hatha yoga program in reducing pain/stiffness, enhancing physical function, and improving quality of sleep/life in older

women with knee OA. Methods: This was a randomized trial with participants randomized to treatment which included an 8-week yoga intervention involving group-based and home-based exercise sessions, or delayed treatment control group. Data were collected at baseline, 4 weeks and 8 weeks. Results: Participants (N=36) were predominantly white (86%) with a mean age of 72 years (SD 5.6, range 65-86). During the active treatment period, significant improvements were seen in OA symptoms and physical function after 4 weeks (WOMAC global score:  $t = 3.13$ ,  $p = .004$  and SPPB global score:  $t = -2.34$ ,  $p = .026$ ) and after 8 weeks ( $t = 5.40$ ,  $p = .000$  and  $t = -4.379$ ,  $p = .000$ ). There was a trend of improvement in sleep quality ( $p = .065$ ) and in quality of life ( $p = .054$ ) after 8 weeks. OA symptoms were significantly different between the control and intervention groups at 8 weeks ( $p = .022$ ). The dropout rate was 5%. The majority of participants ( $n = 25$ ) attended  $\geq 75\%$  of classes, with common barriers included being too busy/illness. Sixty-nine percent of women practiced yoga at home  $\geq 4$  days/week (average 114 minutes). No adverse events were reported. Conclusions: A weekly yoga program with home practice appears to be a feasible and safe option for older women with knee OA that may lead to improvements in symptoms.

### **RHEUMATOID ARTHRITIS, FALL INCIDENCE AND CONSEQUENCES: A PROSPECTIVE, COHORT STUDY OF 559 MEN AND WOMEN**

E.K. Stanmore<sup>1</sup>, J. Oldham<sup>1</sup>, T. O'Neill<sup>1</sup>, C. Todd<sup>1</sup>, A. Campbell<sup>3</sup>, M. Pilling<sup>1</sup>, D. Skelton<sup>2</sup>, 1. *School of Nursing, Midwifery and Social Work, University of Manchester, UK., Manchester, United Kingdom*, 2. *Glasgow Caledonian University, Glasgow, United Kingdom*, 3. *University of Otago, Dunedin, New Zealand*

Objectives To determine the incidence of falls and to investigate the consequences of falls in adults with rheumatoid arthritis. Design Prospective, longitudinal cohort study. Patients were followed for 1 year after a detailed clinical assessment, using monthly falls calendars and follow up telephone calls. Setting Participants' usual place of residence in the Northwest of England. Participants 559 community dwelling adults with RA (mean age 62; 69% female). Main outcome measures Fall occurrence, reason for fall, type and severity of injuries, fractures, fall location, lie-times, use of health services and functional ability. Results 535 participants followed for 1 year had a total of 598 falls. 36.4% participants (95% CI 32% to 41%) reported falling during 1 year follow-up with an incidence rate of 1313/1000 person-years at risk or 1.11 falls per person. Age and gender were not associated with falls. Over one third of the falls were reportedly caused by hips, knees or ankle joints giving way. Over half of all the falls resulted in moderate injuries, including head injuries (27) and fractures (26). Treatment by general practitioners or other health professionals was required for 15.0% of falls and emergency services were required after 8.8% of falls. Conclusions These results indicate that adults with RA are at high risk of falls and fall-related injuries, fractures and head injuries. Strategies to prevent falls in adults with RA must be prioritised to reduce falls and fall-related injuries, and fractures.

### **COGNITIVE BEHAVIORAL TREATMENT OF SLEEP AND PAIN IN OLDER ADULTS WITH INSOMNIA AND OSTEOARTHRITIS: THE LIFESTYLES RCT**

M.V. Vitiello<sup>1</sup>, S.M. McCurry<sup>1</sup>, M. Von Korff<sup>2,1</sup>, S.M. Shortreed<sup>2</sup>, B.H. Balderson<sup>2</sup>, L.D. Baker<sup>1</sup>, F. Keefe<sup>3</sup>, B.D. Rybarczyk<sup>4</sup>, 1. *University of Washington, Seattle, Washington*, 2. *Group Health Research Institute, Seattle, Washington*, 3. *Duke University, Durham, North Carolina*, 4. *Virginia Commonwealth University, Richmond, Virginia*

Osteoarthritis (OA) affects as many as 60% of those  $> 65$ , half of whom also report significant sleep disturbance. OA pain and sleep disturbance both adversely affect function and quality of life and their likely reciprocal effects provide a compelling rationale for their integrated management. Here we report the results of LIFESTYLES, a RCT test-

ing the effects of such an integrated approach for insomnia and pain management. 367 older adults with co-morbid OA and insomnia were randomized to three groups: CBT-Pain and Insomnia (CBT-PI), CBT-Pain (CBT-P) and Education Only Control (EOC), each of six weekly 90-minute sessions. Sleep, pain, function, affect and cognition were assessed at baseline, post-intervention and 9-month follow-up. All three treatment arms were perceived as comparably credible and subject retention was very high (96.7% post-intervention and 92.9% 9-month). CBT-PI significantly ( $p < .001$ ) improved Insomnia Severity Index (ISI) scores and actigraphic sleep efficiency (SE) relative to EOC over 9-months. CBT-PI significantly ( $p < .001$ ) improved ISI relative to CBT-P, while both significantly ( $p < .001$ ) improved SE relative to EOC over 9 months. Pain was not significantly reduced by any LIFESTYLES intervention. However, a priori planned analysis of subjects with higher baseline pain revealed a CBT-PI-related trend ( $p < .06$ ) towards less pain severity over 9 months. CBT-PI, an integrated cognitive behavioral approach to sleep disturbance and pain in OA significantly improved sleep and showed a trend towards reduced pain in older adults with higher levels of baseline pain across 9-months relative to standard CBT for pain or an education only control.

### **VITAMIN D, RACE, AND KNEE OSTEOARTHRITIC PAIN**

T.L. Glover<sup>1,2</sup>, B.R. Goodin<sup>2</sup>, A. Horgas<sup>1</sup>, C.A. Peloquin<sup>3</sup>, J.L. Riley<sup>2</sup>, R. Staud<sup>4</sup>, L.A. Bradley<sup>5</sup>, R.B. Fillingim<sup>2,6</sup>, 1. *University of Florida, College of Nursing, Gainesville, Florida*, 2. *University of Florida, College of Dentistry, Gainesville, Florida*, 3. *University of Florida, College of Pharmacy/Emerging Pathogens Institute, Gainesville, Florida*, 4. *University of Florida, College of Medicine, Gainesville, Florida*, 5. *University of Alabama at Birmingham, Division of Clinical Immunology, Birmingham, Alabama*, 6. *North Florida/South Georgia Veterans Health System, Gainesville, Florida*

Objective: Low levels of serum circulating 25-hydroxyvitamin D have been correlated with many health conditions, including chronic pain. Recent clinical practice guidelines define vitamin levels  $< 20$  ng/mL as deficient and values of 21-29 ng/mL as insufficient. Vitamin D insufficiency, including the most severe levels of deficiency, is more prevalent in black Americans. Ethnic and race group differences have been reported in both clinical and experimental pain, with black Americans reporting increased pain. The purpose of this study was to examine whether variation in vitamin D levels contribute to race differences in knee osteoarthritic pain. Methods: The sample consisted of 94 participants (75% female), including 45 blacks and 49 whites with symptomatic knee osteoarthritis. Average age was 55.8 years (range 45-71 years). Participants completed a questionnaire on knee osteoarthritic symptoms and underwent quantitative sensory testing, including measures of heat and mechanical pain sensitivity. Results: Blacks had significantly lower levels of vitamin D compared to whites, demonstrated greater clinical pain, and showed greater sensitivity to mechanical and heat pain. Low levels of vitamin D predicted increased experimental pain sensitivity. Group differences in vitamin D significantly predicted group differences in heat pain and pressure pain thresholds on the index knee and ipsilateral forearm. Conclusion: These data demonstrate race differences in experimental pain are mediated by differences in vitamin D level. Vitamin D deficiency may be a risk factor for increased knee osteoarthritic pain in black Americans.

### **SYMPTOM CLUSTERS, QUALITY OF LIFE, AND FUNCTIONAL STATUS IN OLDER ADULTS WITH OSTEOARTHRITIS**

J.B. Jenkins, T.P. McCoy, *Nursing, UNC at Greensboro, Greensboro, North Carolina*

Background: One in two people may develop symptomatic knee osteoarthritis (OA) in their lifetime. Many OA sufferers have multiple concurrent symptoms, such as pain, fatigue, and depression. Examining if symptom clusters exist among older adults with OA of the knee

and their effects on patient outcomes, such as quality of life (QOL) and functional status is essential to provide evidence-based geriatric health-care. Purpose: The purposes of this secondary analysis were to explore the existence of symptoms that form a cluster in older adults with OA of the knee, and to explore the effect of symptom clusters on the QOL and functional status. Method: A cross-sectional, methodological exploration of existing data from a convenience sample (N=75) of adults ages 50 and older was used. Hierarchical and k-means cluster analysis was performed to identify symptom clusters. MANOVA was performed to test for any differences in QOL and functional status jointly. Results: Two large clusters of pain, fatigue, and depression were identified from cluster analysis. Significant mean differences between symptom clusters existed on both QOL (p=0.0082) and functional status (p<0.0001). Conclusions about QOL or functional status differences were similar for alternative clustering strategies or numbers of symptom clusters in sensitivity analyses. Implications: The findings of this study provide a foundation for evaluating symptom clusters in future research and determining whether the clusters vary over time or along disease/treatment trajectory. Linking the symptom cluster to outcomes provides a basis for targeted interventions to improve QOL and functional status of older adults with OA.

## SESSION 515 (PAPER)

### COGNITION: SCREENING, TRAJECTORY, AND INTERVENTIONS

#### LONG-TERM EFFECT OF DELIRIUM ON COGNITIVE TRAJECTORY OF PERSONS WITH DEMENTIA: THE AGING CNS

A.L. Gross, R.N. Jones, D.A. Habtemariam, T.G. Fong, D. Tommet, L. Quach, E.M. Schmitt, S.K. Inouye, *Institute for Aging Research, Harvard Medical School, Boston, Massachusetts*

Background: Delirium is characterized by acute cognitive impairment. We examined the effect of delirium on long-term cognitive trajectory in older adults with Alzheimer's disease (AD). Methods: Prospectively collected longitudinal data from hospitalized patients with AD (n=263) from the Massachusetts Alzheimer's Disease Research Center Patient Registry. Cognitive function was measured using the Information-Memory-Concentration (IMC) section of the Blessed Dementia Rating Scale. Delirium was identified using a validated chart review method. The pace of cognitive deterioration was contrasted using random effect regression models. Results: Over half of patients with AD developed delirium during hospitalization (56%). The pace of cognitive deterioration prior to hospitalization was similar between patients who developed delirium and those who did not (P=0.24). In the year following hospitalization, patients who developed delirium experienced greater cognitive deterioration (3.1 IMC points/year, 95% CI: 2.1,4.1) relative to patients who did not (1.4 IMC points/year, 95% CI: 0.2,2.6) after adjusting for dementia severity, comorbidity, and demographic characteristics. The ratio of these changes suggests that following delirium, cognitive deterioration proceeds at 2.2 times the rate in patients without delirium in the year after hospitalization. The delirium group maintained a more rapid pace of cognitive deterioration throughout the 5-year period following hospitalization. Sensitivity analyses excluding rehospitalized patients produced similar results. Conclusions. Delirium is highly prevalent among persons with AD who are hospitalized and associated with an increased pace of long-term cognitive deterioration. Strategies to prevent delirium may offer a promising avenue to explore for ameliorating cognitive deterioration in AD.

#### CAN COGNITIVE IMPAIRMENT BE A FRAILTY-DEFINING CRITERION IN THE SYNDROMIC MODEL OF FRAILTY?

C. Cigolle<sup>1,2,3</sup>, J. Liang<sup>4</sup>, J. Ha<sup>2</sup>, P. Lee<sup>2,3</sup>, T. Gure<sup>2</sup>, L. Min<sup>2,3</sup>, K. Langa<sup>2,5</sup>, C. Blaum<sup>2,3</sup>, 1. *University of Michigan Department of Family Medicine, Ann Arbor, Michigan*, 2. *University of Michigan Department of Internal Medicine, Ann Arbor, Michigan*, 3. *VA Ann Arbor Geriatric Research, Education and Clinical Center (GRECC), Ann Arbor, Michigan*, 4. *University of Michigan School of Public Health, Ann Arbor, Michigan*, 5. *VA Ann Arbor Center for Practice Management and Outcomes Research, Ann Arbor, Michigan*

Cognitive decline is theorized to play a role in the pathogenesis of frailty and perhaps be a component of the frailty phenotype. We hypothesized that including cognitive impairment as a sixth frailty-defining criterion would fit the syndromic model of frailty (i.e., cognitive impairment and the original frailty-defining criteria would aggregate as a syndrome and not in distinct subgroups). We used data from wave 2006 of the Health and Retirement Study, a nationally-representative longitudinal health survey. The sample included adults >=65 years who completed physical performance measures (n=4,453, representing 35.3 million). We operationalized the original frailty-defining criteria (weight loss/exhaustion/low energy expenditure/slowness/weakness) and used a performance-based measure to determine cognitive impairment. We employed latent class factor modeling to examine how the six criteria grouped in classes, using the Akaike and the Bayesian information criteria and the likelihood ratio test for goodness of fit to select the model best fitting the data. Using latent class factor analysis, the six frailty-defining criteria sorted best by one factor having three hierarchical levels (not by distinct subgroups). Of 894 respondents with mild cognitive impairment, 44.6% were pre-frail; 55.4%, frail. Of 231 respondents with moderate-severe cognitive impairment, 29.0% were pre-frail; 71.0%, frail. The original five-criterion model and the six-criterion model agreed in identifying cognitively unimpaired respondents as pre-frail and frail. Confirming our hypothesis, including cognitive impairment as a sixth frailty-defining criterion satisfies the syndromic model of frailty. Cognitive decline and frailty have a complex and interrelated natural history, with implications for clinical management and future research.

#### ENHANCED RISK OF MILD COGNITIVE IMPAIRMENT AND ITS PROGRESSION TO DEMENTIA AMONG ELDERLY APOE ε4 CARRIERS

W. Xu<sup>1</sup>, B. Caracciolo<sup>1</sup>, H. Wang<sup>1</sup>, G. Santoni<sup>1</sup>, B. Winblad<sup>1</sup>, L. Fratiglioni<sup>1,2</sup>, 1. *Karolinska Institutet, Stockholm, Sweden*, 2. *Stockholm Gerontology Research Center, Stockholm, Sweden*

Objective: The impact of APOE ε4 on mild cognitive impairment (MCI) and its progression to dementia remain controversial. We aimed to examine the association of APOE ε4 with MCI, and to verify the hypothesis that ε4 accelerates progression from MCI to dementia. Methods: In the Kungsholmen Project, 756 cognitively healthy participants and 212 people with MCI aged ≥75 years were identified at baseline. MCI was defined as amnesic MCI (aMCI) and other cognitive impairment no dementia (oCIND). The two cohorts were followed for 9 years to detect incident cases of MCI and dementia following international criteria. APOE genotypes were assessed at baseline. Data were analysed using Cox models. Results: During the follow-up, in the cognitively healthy cohort, 165 people developed MCI (40 aMCI and 125 oCIND), and 176 developed dementia (126 Alzheimer disease [AD]); in the MCI cohort, 118 persons progressed to dementia (100 AD). Compared with APOE ε3ε3 genotype, the hazard ratios (HRs) (95% CIs) of ε2ε4/ε3ε4 were 2.24 (1.10-4.57) for aMCI and 1.78 (1.15-2.75) for oCIND, while the ε4ε4 was related to dementia, with a HR of 4.35 (1.97-9.63) in the cognitively healthy cohort. In the MCI cohort, the ε4ε4 genotype led to a multi-adjusted HR of 2.89 (1.12-7.48) for dementia, and accelerated the progression to dementia by 3.36 years. Conclusion: The APOE ε4 heterozygotes are associated with an increased risk of aMCI and oCIND.

The  $\epsilon 4$  homozygote substantially accelerates progression from MCI to dementia, and anticipate dementia occurrence by more than 3 years in people with MCI.

#### **PARENTAL LONGEVITY AS A MARKER OF PRESERVED OFFSPRING COGNITION AND BRAIN MRI MEASURES**

J.M. Murabito<sup>1,3</sup>, A. Beiser<sup>2,5</sup>, C. DeCarli<sup>4</sup>, S. Seshadri<sup>5,3</sup>, P.A. Wolf<sup>6,3</sup>, R. Au<sup>5,3</sup>, 1. *Medicine, Section of General Internal Medicine, Boston University School of Medicine, Framingham, Massachusetts, 2. Boston University School of Public Health, Boston, Massachusetts, 3. Framingham Heart Study, Framingham, Massachusetts, 4. University of California at Davis, Sacramento, California, 5. Boston University School of Medicine, Department of Neurology, Boston, Massachusetts*

**Background:** Offspring of long-lived individuals have a lower risk for dementia. We examined the relation between parental longevity and cognition and markers of brain aging in middle-aged community-dwelling adult offspring. **Methods:** Offspring participants with both parents in the Framingham Heart Study, aged > 55 years and dementia-free underwent baseline and repeat neuropsychological (NP) testing and brain magnetic resonance imaging (MRI). Parental longevity was defined as having at least one parent survive to age >85 years. NP testing included memory, reasoning, attention, and executive function. Brain MRI included quantification of total and regional brain volumes and white matter hyperintensity. To test the association between parental longevity and measures of cognition and brain volumes, we used multivariable linear and logistic regression adjusting for age, sex, education and time to NP testing or brain MRI. **Results:** Of 728 Offspring participants (mean age 66 years, 54% women, 36% college education, 88% with brain MRI), 407 (56%) had at least 1 parent achieve longevity. In cross-sectional analysis, parental longevity was associated with better scores on tests of attention (beta  $0.21 \pm 0.08$ ,  $p < 0.006$ ) and a lower odds of extensive white matter hyperintensity (odds ratio 0.59, 95% CI: 0.38, 0.92,  $p < 0.02$ ). In longitudinal analysis (6.7  $\pm$  1.7 years later), offspring with parental longevity had slower decline in executive function (beta  $0.15 \pm 0.09$ ,  $p = 0.04$ ) and less increase in temporal horn volume (beta  $-0.24 \pm 0.09$ ,  $p = 0.007$ ). **Conclusions:** Parental longevity is associated with improved attention and executive function as well as lower odds of vascular brain aging in middle-aged adult Offspring.

#### **CNS - POOR EXECUTIVE FUNCTION AND DUAL TASKING GAIT VARIABILITY PREDICT FUTURE FALLS AMONG OLDER ADULTS: FINDINGS FROM A 5 YEAR PROSPECTIVE STUDY**

J. Hausdorff<sup>1,3,6</sup>, A. Mirelman<sup>1,2</sup>, T. Herman<sup>1</sup>, M. Brozgot<sup>1</sup>, M. Dorfman<sup>1</sup>, E. Sprecher<sup>1</sup>, A. Schweiger<sup>5</sup>, N. Giladi<sup>1,4</sup>, 1. *Movement Disorders Unit, Department of Neurology, Tel-Aviv Sourasky Medical Center, Tel Aviv, Israel, 2. School of Health Related Professions, Ben Gurion University, Beer Sheva, Israel, 3. Department of Physical Therapy, Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel, 4. Departments of Neurology, Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel, 5. Department of Behavioral Sciences, Academic College of Tel Aviv, Tel-Aviv, Israel, 6. Harvard Medical School, Boston, Massachusetts*

**Background:** Executive function (EF) plays a critical role in the regulation of gait, especially under complex and challenging conditions. The purpose of this study was to evaluate if reduced EF is a risk factor for future falls. **Methods:** 276 community-living, healthy older adults (mean age:  $76.4 \pm 4.5$  yrs; 61% women) participated in a prospective study designed to follow the subjects for at least 4 years. At baseline, subjects were cognitively intact and had good mobility. A computerized cognitive battery generated an index of EF, attention, and other cognitive domains. Gait was assessed during single and dual task conditions. Falls data were collected using monthly calendars. Negative binomial regression quantified risk ratios (RR). **Results:** The median follow-up

was 53 months. Performance-based tests of mobility and gait predicted future falls. After adjusting for age, gender and a previous history of falls, only the EF index (RR: 0.85; CI: 0.74-0.98,  $P = 0.021$ ), the attention index (RR: 0.84; CI: 0.75-0.94,  $P = 0.002$ ) and dual tasking gait variability (RR: 1.11; CI: 1.01-1.23;  $P = 0.027$ ) were significantly associated with future falls. Other cognitive function measures were not related to falls. Survival analyses indicated that subjects in the worst EF quartile were more likely to fall sooner and more likely to experience multiple falls during the 66 months of follow-up ( $P = 0.017$ ). **Conclusions:** Poorer EF and attention increase the risk for future falls, even over a time span of more than 5 years. Screening and, perhaps, treatment of EF and attention apparently has the potential to reduce the risk of falls among older adults.

#### **SESSION 520 (PAPER)**

#### **NORTH AMERICAN AND EUROPEAN ISSUES AND APPROACHES FOR OLDER ADULT CARE**

#### **IMMUNOLOGICAL INVESTIGATIONS IN THE NEW BERLIN AGING STUDY-II (BASE-II): FIRST CORRELATIONS WITH COGNITIVE FUNCTION**

G. Pawelec<sup>1</sup>, S. Li<sup>2</sup>, U. Lindenberg<sup>2</sup>, E. Steinhagen-Thiessen<sup>3</sup>, G. Papenberg<sup>2</sup>, R. Eckardt<sup>3</sup>, I. Demuth<sup>3</sup>, E. Derhovanessian<sup>1</sup>, 1. *University of Tuebingen, Tuebingen, Germany, 2. Max-Planck Institute for Human Development, Berlin, Germany, 3. Charité Medical School, Berlin, Germany*

The OCTO/NONA longitudinal studies of the very elderly in Sweden pinpointed an “immunological risk profile” together with markers of inflammation and cognitive decline which predicted incipient mortality. These parameters were closely associated with Cytomegalovirus (CMV) infection, which is linked to heightened inflammation and frailty in several other studies. To identify factors associated with “healthy”-vs-“unhealthy” aging, the new Berlin Aging Study-II (BASE-II) aims to assemble health data, immune parameters, genetics, psychology, nutrition and socioeconomics into an integrated database. Baseline recruitment included 1,600 elderly (60-75) and 600 controls (20-35); follow-up is planned. Here we present the first results surveying CMV-serostatus and immune parameters of these subjects ( $n = 723$  and 100, respectively). CMV-seropositivity in younger-vs-older women was 40-vs-64% and in men 32-vs-59% (both  $P < 0.0001$ ), consistent with results in other Western populations. We have correlated the frequency of different blood T-cell phenotypes with processing speed and variability, parameters known to predict 5-year cognitive decline in the elderly, comparing CMV-seropositive elderly with the highest or lowest performance scores ( $n = 100$ ). The two groups differed significantly in frequencies of late-stage differentiated CD8+T cell phenotypes, the accumulation of which is known to be associated with CMV responsiveness. These preliminary data document associations between immunological and psychological parameters and the likelihood that larger-scale studies with different tested factors will yield valuable information on human health and well-being. Measurable objectives for this presentation: learn about BASE-II and its contribution to defining immunological parameters pertinent to healthy cognitive aging.

#### **DETERMINANTS OF RECEIVING HELP AT HOME IN A POPULATION-BASED SURVEY OF CANADIANS WITH PARTICIPATION AND ACTIVITY LIMITATIONS**

D. Goodridge<sup>1</sup>, J. Lawson<sup>2</sup>, D. Rennie<sup>1,2</sup>, 1. *College of Nursing, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, 2. Canadian Centre for Health and Safety in Agriculture, College of Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada*

The number of adults reporting a disability is expected to rise sharply in the coming years as more persons enter the highest risk age group ( $\geq 65$  years). Receiving appropriate help at home will maintain inde-

pendence. Methods: Data from the 2006 Participation and Activity Limitation Survey (PALS), a two-phase stratified post-censal Statistics Canada survey representing 5,185,980 Canadian adults aged 15 and older with participation and activity limitations, were used to develop a profile of the self-reported help received at home. Associations between functional health status (assessed using the Health Utility Index) and socio-demographic variables and help received were assessed using multiple logistic regression. Results: For adults aged 65 and older, the most commonly reported help received was with heavy chores (41.7%), followed by appointments (32.8%), housework (30.2%), meals (17.4%) and personal care (11.8%). Significantly higher proportions of individuals aged 75 and older reported receiving help with each of the activities compared with all other age categories, although there were no significant differences between the age 65-74 year age group and younger groups. After adjustment, functional status was the primary determinant of self-reported help at home. Males had significantly lower likelihood of receiving any type of help. Age greater than 75 years was associated with a lower likelihood of receiving help with meals (OR=0.70, 95% CI 0.55-0.89), but was not associated with reporting other types of help. Income was not associated with the likelihood of receiving help. Conclusions: Functional health status and sex are the most robust determinants of receiving help at home.

### FUNCTIONAL DEPENDENCE AMONGST OLDER SWEDISH ADULTS: TEMPORAL TRENDS IN THE LAST TWO DECADES: 1990-2010

S. Angleman<sup>1,2</sup>, G. Santoni<sup>1,2</sup>, E. von Strauss<sup>1,2</sup>, L. Fratiglioni<sup>1,2</sup>, I. Karolinska Institutet, Stockholm, Sweden, 2. Aging Research Center, Stockholm, Sweden

**Objective:** To examine temporal trends in Activity of Daily Living (ADL) disability, in order to 1) determine whether declines in disability prevalence, as reported for previous decades in Western countries, have continued in the last two decades amongst older Swedish adults; 2) evaluate how incidence, mortality, and study participation rates influence temporal trends of disability prevalence. **Methods:** ADL disability prevalence (in  $\geq 1$  of: dressing, bathing, eating, transfer, or toileting) was calculated at each of seven assessments coming from two longitudinal cohorts, both based in Stockholm: the Kungsholmen Project (KP, 1990-2000) and the Swedish National study of Aging and Care in Kungsholmen (SNAC-K, 2001-2010), with 1084 participants and 381 non-participants from KP and 3363 participants and 1548 non-participants from SNAC-K. Incidence and mortality rates were calculated between consecutive assessments. Mortality rates were stratified by ADL and non-participation status. Analyses were age-stratified (66-72, 73-79, 80-84, 85-88, 89-101 years). **Results:** ADL disability prevalence was similar over time. Prevalence increased with age (1, 5, 11, 22 and 36% across age categories). Age-specific incidence of ADL disability was similar over time. Mortality in non-disabled persons decreased slightly (300-590 vs 230-515 deaths/1000 people), but in disabled persons was similar over time (720-870 deaths/1000 people). Mortality of non-participants was substantially lower in recent assessments, and more similar to non-disabled persons. **Interpretation:** This evidence suggests that prevalence levels for recent assessments overestimate the true population level of ADL disability, meaning that ADL prevalence has actually declined in the last two decades, in this urban population of older Swedish adults.

### PAIN FREQUENCY, INTENSITY, CONTROL AND THERAPY IN EUROPEAN NURSING HOMES – RESULTS FROM THE SERVICES AND HEALTH FOR ELDERLY IN LONG TERM CARE (SHELTER) STUDY

A. Lukas<sup>1</sup>, M.D. Denking<sup>1</sup>, G. Onder<sup>2</sup>, R. Bernabei<sup>2</sup>, T. Nikolaus<sup>1</sup>, I. AGAPLESION Bethesda Klinik Ulm, Ulm, Germany, 2. Centro Medicina dell'Invecchiamento, Università Cattolica Sacro Cuore, Rome, Italy

Background: Pain is common in nursing home residents and is often under-reported, under-assessed, and consequently under-treated. A pre-

requisite for improving pain management in nursing homes is knowing more about current research in the area. Up to now, comparable transcontinental assessment tools for European nursing home residents have been missing. Methods: The Services and Health for Elderly in Long Term care (SHELTER) study is a prospective cohort study that was conducted in 57 nursing homes in seven countries from the European Union and Israel. A complete dataset was available from 3926 residents, 1900 with pain. All participants were assessed using the InterRAI LTCF instrument. For the analyses, cross-sectional data at baseline were used. Treatment satisfaction, incidence of pain therapy as well as pain control (intensity of pain) were measured to evaluate outcomes. Results: 48.4% of the residents were identified as pain patients (currently in pain and/or treated with analgesics). Pain prevalence decreased with cognitive impairment (adj OR 0.78, CI 95% 0.73-0.83). Approximately 24% of people with pain did not receive any analgesic, even if they were in pain in the previous three days. Non-pharmacological treatments were offered regardless of need. Nevertheless in 88.1% of cases pain was estimated as sufficiently controlled. Discussion: For the first time, similarities and differences of approach to pain and pain control in nursing homes across Europe can be analysed and the data used to improve the overall situation.

### THE CANADIAN INTERNATIONAL COLLABORATIVE RESEARCH STRATEGY FOR ALZHEIMER'S DISEASE (ICRSAD)

Y. Joanette, IA-CIHR, Montreal, Quebec, Canada

With the aging of the population worldwide, the prevalence of individuals living with Alzheimer's Disease or related dementias (ADRD) will reach impressive numbers. The International Collaborative Research Strategy for Alzheimer's Disease (ICRSAD) is the Canadian Institute of Health Research's response to this growing Canadian and international health care crisis. ICRSAD has been designed to build upon Canadian research expertise and leadership with the aim of partnering with other countries and their initiatives in order to support collaborative and innovative research on all aspects of ADRD. There is indeed a growing consensus that large-scale international collaboration is the most effective way to respond to this global challenge, and ICRSAD is ideally placed to foster such an international research agenda. The overall goal of the ICRSAD is to reduce the personal, social and economic impact of ADRD by fostering innovative research at three stages: (a) identifying the mechanisms responsible for the neurodegenerative processes leading to ADRD, (b) delaying of the onset and the progression of disease through early intervention and diagnosis and, (c) improving the quality of life of those living with the disease and their caregivers, as well as improving access to quality care and enabling the healthcare system to deal more efficiently with the rising number of people with ADRD. ICRSAD has recently deployed its international component allowing Canadian researchers to participate in key international partnerships, and is in the active preparation process of launching its Canadian component. This presentation will allow participants to learn about ICRSAD and to discuss ways of connecting with this international research strategy.

### SESSION 525 (SYMPOSIUM)

#### EXPANDING THE POOL OF SOCIAL WORK FACULTY ENGAGED IN AGING RESEARCH

Chair: C.M. Mehrotra, Psychology, The College of St. Scholastica, Duluth, Minnesota

Co-Chair: B. Berkman, Columbia University, New York, New York  
Discussant: R.A. Barr, National Institute on Aging, Bethesda, Maryland

With support provided by NIH and the Hartford Foundation we have developed a training program to build and sustain a community of social

work faculty committed to aging research. Program design includes an initial summer institute, ongoing consultation, a mid-year meeting and a follow-up institute. A recent follow-up evaluation indicated that more than 70 percent of the participants have received institutional funds and more than 56 percent have secured external funds (from NIH, CDC, and private foundations) to conduct aging research. The proposed symposium aims to share with the convention audience examples of research conducted by participants representing diverse institutions, backgrounds, and research areas. The presenters describe the funding mechanisms they used to secure grant support, outline the activities they have undertaken, present research methods and findings, and discuss implications of their research. The presenters and their topics include: Faul presents her CDC-supported project aimed at reducing diabetes-related inequalities in rural older adults and persons of low socioeconomic status; Wal-drop compares decision making and service utilization of older cancer patients who enroll in hospice with those who decline to enroll; Rosen focuses on the adaptation, testing, and delivery of a late-life depression intervention for older adults with co-occurring substance abuse and mood disorders; and Lee presents a mobile-phone based intervention she has designed to promote Pap-test utilization among Korean American women. The participants also share their experiences with seeking external funding and outline what they learned during this process. NIH representative reviews common themes and discusses their implications.

#### **BUILDING THE FOUNDATION FOR A RESEARCH CAREER IN SOCIAL WORK AND AGING**

D. Rosen, *Social Work, University of Pittsburgh, Pittsburgh, Pennsylvania*

The Institute's training emphasized investigations that explored under-examined areas within aging research. Depressive disorders among older adult opiate abusers have detrimental effects on their well-being and ability to refrain from illegal drug use. I received a K-08 Award from the National Institute on Drug Abuse. It focuses on the adaptation, testing, and delivery of a late-life depression intervention for older adults with co-occurring substance abuse and mood disorders. The research was conducted at a methadone clinic where a third of the clients were over the age of 50. Patients were randomized to compare 30 participants receiving Problem Solving Therapy to 30 participants receiving treatment as usual. Participants in the treatment group had improved mood disorder scores compared to the control group. Next steps in this treatment include the inclusion of technology to increase the dose of the intervention to address cognitive and memory issues related to aging and substance abuse.

#### **COMMUNICATION IN LATE-STAGE CANCER: EXPLORING HOSPICE DECISIONS**

D. Waldrop, *School of Social Work, Buffalo, New York*

Thirty six percent of all hospice patients have cancer and 83% are over age 65, yet many older cancer patients utilize hospice for short periods of time or decline it altogether. The purpose of this study was to explore and describe how, when and with whom, older cancer patients communicate their concerns and needs for care in advanced cancer and to compare the decision-making and service utilization of those who enroll in hospice with those who decline. This exploratory descriptive study employed a sequential mixed methods design for the purpose of considering the overlapping perspectives of cancer patients and their caregivers. In-depth interviews were conducted with 197 families (N=276 participants; N=47 who enrolled, 29 who declined and 200 caregivers). The results suggest that the rate of functional decline, source of referral to hospice, cancer treatment, caregiving, awareness of terminality and perceptions of hospice influence whether hospice is accepted or declined.

#### **UNDERSTANDING CONTEXT AND HOW IT DETERMINES HEALTH**

A.C. Faul, *Kent School of Social Work, Univ Louisville, Louisville, Kentucky*

The author was selected to take part in the Institute on Aging and Social Work, where she received intensive training in aging research from distinguished professors. After the Institute, she was able to secure a 2.5 million grant from the CDC. The aim of the 5-year project is to reduce the diabetes-related inequalities in vulnerable populations, specifically rural older adults and persons of lower socio-economic status. The skills learned at the Institute, specifically multilevel modeling, were instrumental in the development of a focused research agenda, where the studies focused exclusively on reducing individual blame and on the injustices and inequalities that originate within the social determinants of health. Since the Institute, the presenter's students have been actively involved in her research agenda. She not only teaches them from existing databases where social determinants of health are highlighted, but also makes them an integral part of her CDC funded grant.

#### **MOBILE PHONE TEXT MESSAGING INTERVENTION FOR CERVICAL CANCER SCREENING**

H.Y. Lee, *School of Social Work, University of Minnesota, Twin Cities, St. Paul, Minnesota*

The Institute on Aging and Social Work honed my skills in narrowing broad research ideas into focused NIH grant topics; selecting appropriate research methods and teams; employing reviewers' comments; and utilizing pilot data toward larger-scale grants. After attending the Institute I was successful in securing an exploratory research grant (R21) from the National Cancer Institute (NCI). My preliminary investigation had found that Korean American women have the lowest cervical cancer screening and the highest related mortality rates across U.S. racial/ethnic groups. This alarming statistic fueled my intervention interest and concern for cancer screening disparity. With NCI support, I am developing a mobile-phone based intervention to promote Pap test utilization among Korean American women. Preliminary data are quite encouraging. It is therefore likely that my next step will be to secure an R01 grant to expand the pilot intervention into a multisite research project targeted at a broader age range.

#### **SESSION 530 (SYMPOSIUM)**

##### **GENERATIONS BETWEEN SOLIDARITY AND CONFLICT: THE SOCIAL CONTRACT IN RECESSIONARY TIMES**

Chair: *G.M. Carney, Irish Centre for Social Gerontology, National University of Ireland Galway, Galway, Ireland*

Co-Chair: *C. Phillipson, Keele University, Keele, United Kingdom*

Discussant: *A. Achenbaum, University of Houston, Houston, Texas*

Ultimately, inter-generational solidarity underpins the distribution of resources between citizens in ageing societies. Who gets what, when and how is the result of a complex interplay of political, economic and cultural factors. In the liberalised United States of America 'greedy geezer' debates have been linked to the power of American seniors as a political lobby. This contrasts with the European context, where distribution of resources is more clearly at the behest of the state. Gerontology has not linked the distribution of resources across age groups to the concept of political culture. Yet, fundamental differences in political culture underpin differences between US and European ageing research results. As life expectancy increases, a new set of needs and wants will be expressed by the citizens of ageing states. Age is expected to play an increasingly important role in dictating the re-distribution of resources at state level, directing us to re-examine foundational concepts such as social contract and intergenerational solidarity. This symposium will advance a trans-Atlantic dialogue between gerontologists seeking to understand solidarity and conflict between generations from a comparative perspective. Future research arising from this exchange

will examine how the effects of socio-economic status, generational location and lifecycle stage might be compared cross culturally; perhaps employing civic culture as a framework for understanding ageing in diverse national contexts.

#### **THE CIVIC CULTURE OF AN AGEING STATE: INFERENCES FROM A GROUNDED THEORY OF INTERGENERATIONAL SOLIDARITY IN IRELAND**

G.M. Carney<sup>1</sup>, T. Scharf<sup>1</sup>, V. Timonen<sup>2</sup>, C. Conlon<sup>2</sup>, *1. Irish Centre for Social Gerontology, National University of Ireland Galway, Galway, Ireland, 2. Social Policy and Ageing Research Centre, Trinity College Dublin, Dublin, Ireland*

This paper presents a grounded theory of intergenerational solidarity in the Republic of Ireland. Based on one hundred in-depth interviews with a diverse sample of citizens living in Ireland in 2011-12, the study probes intergenerational solidarity at individual, family and societal levels. Our study reveals much about the fundamental link between attitudes toward own and other generations, and the broader question of age-based resource allocation now and in the future. Passage of time, changing social attitudes and current life stage inform participants' views. The paper uses the concept of political culture, classically recognised as 'civic culture' by Almond and Verba in their seminal 1963 study, to frame these findings. This study of intergenerational solidarity, undertaken in Ireland at a time of national crisis and global recession, reveals much about the values fundamental to maintenance of the social contract in this peripheral, western European state.

#### **GLOBALISATION AND SOCIAL EXCLUSION: CHALLENGES FOR INTER-GENERATIONAL RELATIONS**

C. Phillipson, *Keele University, Newcastle-under-Lyme, United Kingdom*

Framed by the current economic recession, this paper assesses the extent to which processes arising from globalisation are transforming later life and inter-generational relations in particular. Despite the fact that population ageing has frequently been constructed as a global problem and issue, the paper argues that the on-going reduction of expenditure on public programmes increasingly acts to transfer risks to individual older people and their families. This process – referred to in terms of 'exclusionary risks' and 'exclusionary services' – creates new and distinctive forms of social and economic inequality. The paper examines competing trends in the inclusion/exclusion debate in light of such developments and the implications for understanding relationships between generations. The possibility of conflict or the potential for new forms of solidarity between generations, will be a key theme addressed in the paper.

#### **LEAVING A LEGACY: OUR AGING SOCIETY AND FUTURE GENERATIONS**

H. Moody, *AARP, Washington, District of Columbia*

The idea of "justice between generations" receives different responses among those with contrasting political views. For example, political conservatives stress this idea when focusing on government deficits or cuts in public welfare programs, such as Social Security and Medicare. By contrast, those on the Right are skeptical of appeals to intergenerational justice on environmental matters (e.g., global warming). Political liberals, by contrast, support environmental protection but are skeptical of appeals to "generational equity" in social programs. This divided politics of "sustainability" diverts us from an underlying point: namely, the need to engage in long-range thinking and long-range investment when contemporary culture and media reinforce what is momentary and transient. In this presentation, we survey the history of the idea of justice between generations and argue that older people need to reclaim virtues of generativity in order to safeguard the well-being of future generations.

## **SESSION 535 (SYMPOSIUM)**

### **NATIONAL LGBT HEALTH AND AGING RESEARCH: FORGING NEW FRONTIERS THROUGH PARTNERSHIPS IN MARGINALIZED COMMUNITIES**

Chair: *K.I. Fredriksen-Goldsen, University of Washington, Seattle, Washington*

Given the tremendous growth of the age 50 and older population in the next two decades, the number of lesbian, gay, bisexual, and transgender (LGBT) older adults will exceed 6 million by 2030. Yet, LGBT older adults remain an at-risk, underserved, and under-investigated population. The CDC identifies the lack of attention to sexual orientation as a critical gap in our understanding to reduce health disparities. This symposium highlights important findings from the ground-breaking study of LGBT health and aging, with 2,560 demographically diverse LGBT adults 50 and older, conducted through community based collaborations. Fredriksen-Goldsen and colleagues examine the unique risk and protective factors predicting quality of life and health among LGB older adults. The relationship between living arrangement and personal and social resources are explored by Kim and colleagues, as they relate to both loneliness and depression among LGBT older adults. The needs of specific populations are investigated by Emler and colleagues as they present correlates of HIV-risk behaviors among LGBT older adults and examine the relationship between stigma, efficacy, social support, and HIV risk behaviors. From a life course perspective, Muraco and Fredriksen-Goldsen explore the romantic relationships among LGBT older adults, including long-term commitments and transitions in primary relationships such as through the death of a partner. The presentations in this symposium illustrate the importance of forging partnerships in disadvantaged communities to promote healthy aging in our increasingly diverse society.

#### **THE QUALITY OF LIFE OF LGBT OLDER ADULTS: KEY RISK AND PROTECTIVE FACTORS**

K.I. Fredriksen-Goldsen<sup>1</sup>, H. Kim<sup>1</sup>, C.P. Hoy-Ellis<sup>1</sup>, C.A. Emler<sup>2</sup>, E. Erosheva<sup>1</sup>, A. Muraco<sup>3</sup>, H. Petry<sup>4</sup>, *1. University of Washington, Seattle, Washington, 2. University of Washington, Tacoma, Washington, 3. Loyola Marymount University, Los Angeles, California, 4. University of Applied Sciences, Zürich, Switzerland*

Health disparities of lesbian, gay, bisexual, and transgender (LGBT) older adults are of major concern. Based on data from the national project (N=2,560), this presentation examines the interrelationships between victimization, stress, health behaviors, identity management, social relations, and quality of life of LGBT older adults. Identity management is significantly related to experiences of victimization ( $b=.66$ ;  $p<.01$ ), and high rates of victimization ( $b=-.29$ ;  $p<.001$ ) and adverse health behaviors ( $b=-1.41$ ;  $p<.05$ ) are related to diminished quality of life. While stress mediates the relationship between victimization and quality of life, social relations have a moderating effect on the relationship between victimization and stress. While the stress level does not change by the degree of victimization for those with high levels of social support, the stress level is positively associated with victimization for those with low levels of social support. Interventions must be developed to address the unique needs of LGBT older adults.

#### **LIVING ARRANGEMENT AND HEIGHTENED RISK OF LONELINESS AND DEPRESSION AMONG LGBT OLDER ADULTS**

H. Kim, K.I. Fredriksen-Goldsen, *University of Washington, Seattle, Washington*

Few studies have examined the living arrangement of LGBT older adults and its impact on loneliness and depression. Based on a national survey of LGBT older adults (N=2,560), 55% of the LGBT older adult participants live alone, 37% live with a partner or spouse, and 8% live with others (regardless of partnership status). LGBT older adults living

alone as well as those living with others experience increased loneliness and depression as compared to those living with a partner or spouse, with results similar among both men and women. Personal and social resources fully mediate the association between living arrangement and depression. However, living arrangement remains a significant predictor of loneliness, even after controlling for personal and social resources. Results suggest that LGBT older adults living alone or with others (not including a partner or spouse) are at high risk of loneliness and depression and that tailored supports are warranted.

### **CORRELATES OF SEXUAL RISK BEHAVIOR IN OLDER ADULTS WITH HIV: FINDINGS FROM CARING AND AGING WITH PRIDE**

C.A. Emlert, K.I. Fredriksen-Goldsen, H. Kim, *University of Washington, Seattle, Washington*

The number of older adults infected with HIV is increasing rapidly. Yet, few studies have examined HIV risk behaviors among older adults living with HIV. This study utilizes a subsample of LGBT older adults (n=233) diagnosed with HIV/AIDS, with a mean age of 62.84 (SD=7.31; range= 50 to 86); 59% of the LGBT older adults living with HIV are sexually active. The results of bivariate analyses demonstrate that substance use, health care-related discrimination, neighborhood isolation, self-stigma, and sexual identity disclosure are associated with the extent of HIV risk behaviors. When controlling for background socio-demographic characteristics and sexual activity in a multivariate model, health care-related discrimination (b=0.17; p<.05), stigma (b=.21; p<.05), and the lack of sexual identity disclosure (b=-.28; p<.01) significantly and independently account for the extent of HIV risk behaviors among LGBT older adults living with HIV. Prevention strategies are needed to reduce HIV risk behaviors of this vulnerable population.

### **TRANSITIONS AND RELATIONSHIPS IN THE LIFE COURSE OF LESBIAN, GAY, AND BISEXUAL OLDER ADULTS**

A. Muraco<sup>1</sup>, K.I. Fredriksen-Goldsen<sup>2</sup>, 1. *Sociology, Loyola Marymount University, Los Angeles, California*, 2. *University of Washington, Seattle, Washington*

This paper examines romantic relationships and transitions in the lives of lesbian, gay, and bisexual (LGB) adults, age 50 and over. As with the life course emphasis on interconnected lives and social/historical contexts, the presentation will illustrate current cohorts of LGB adults' experiences in romantic partnerships, partner loss, and related transitions. Using mixed-methods data collected from LGB adults age 50 and older (N=2,560) from a cross-sectional national survey and a sub-sample of in-depth interviews with LGB older adults (N=34), the study examines the current state of romantic relationships in our sample, including both long-term commitments as well as challenges in establishing partnerships. We will explore the influence of a romantic partner on well-being and perceptions of the future, the role of prior heterosexual marriages and children on contemporary lives, and the effects of partner loss and how these affect current social support needs and perceptions of aging and health.

## **SESSION 540 (SYMPOSIUM)**

### **SHAPING NATIONAL LONG TERM SUPPORTS AND SERVICES POLICY: THE MONEY FOLLOWS THE PERSON REBALANCING DEMONSTRATION NATIONAL AND STATE EVALUATIONS**

Chair: *J. Robison, University of Connecticut Health Center, Farmington, Connecticut*

Discussant: *R. Applebaum, Miami University, Oxford, Ohio*

The Money Follows the Person Rebalancing Demonstration (MFP), a multi-year, 44 grantee program, funded by the Centers for Medicare and Medicaid Services (CMS), helps states shift Medicaid long term

supports and services (LTSS) from a historically institutional orientation to greater use of Home and Community-Based Services (HCBS). All participating states set benchmark goals for transitioning people out of institutions and for increasing the proportion of Medicaid LTSS dollars spent on HCBS, in addition to other state-specific rebalancing benchmarks. The national MFP evaluation examines financial, quality of care and quality of life data collected at multiple time points from participants who transition. Further, many ongoing state-level evaluations examine other aspects of the transition process and their own success at reaching state-specific goals. This symposium includes one paper presenting data from the national evaluation and papers from the CT and MD state evaluations. The national evaluation paper describes MFP participants' pre-transition level of care needs. CT MFP participants over age 65 with and without mental health challenges are compared on multiple post-transition outcomes including quality of life and reinstitutionalization. The MD paper combines multiple data sources to compare outcomes among MFP participants and between MFP and non-MFP transitions. MFP is ongoing through 2020, allowing a longitudinal, nationwide assessment of the impacts of rebalancing state LTSS systems and transitioning people out of institutions. The data generated from the national and state MFP evaluations will help policymakers and program providers improve transition experiences and delivery of HCBS to LTSS users throughout the US.

### **LEVEL OF CARE NEEDS AMONG MFP PARTICIPANTS**

S. Simon, J. Ross, C. Irvin, *Mathematica Policy Research, Cambridge, Massachusetts*

The MFP program promotes community living for long-stay institutionalized Medicaid beneficiaries. Currently, little is known about MFP participants' level of care needs and whether states are using the demonstration to transition individuals who have low care needs or those who have relatively higher needs. We linked three data sources for participants who transitioned from a nursing home in 2008 or 2009: Medicaid Analytic eXtract (MAX) claims data, Minimum Data Set (MDS) assessments, and MFP program participation data. Among nearly 4,000 MFP participants, approximately 8 out of 10 participants had medium or high pre-transition care needs. On average, participants with medium care needs were dependent in 1.7 of four late-loss ADLs, while those with high care needs were dependent in 3.1 late-loss ADLs. We conclude that MFP successfully transitions nursing home residents with a broad range of care needs, including a large percentage with heavy ADL dependency.

### **QUALITY OF LIFE IN CONNECTICUT'S MONEY FOLLOWS THE PERSON (MFP) PROGRAM FOR ADULTS AGE 65 AND OLDER WITH AND WITHOUT MENTAL HEALTH CHALLENGES**

K. Kellett<sup>1</sup>, I.C. Reed<sup>1</sup>, M.A. Porter<sup>1</sup>, D. Lambert<sup>2</sup>, J. Robison<sup>1</sup>, 1. *Center on Aging, University of Connecticut Health Center, Farmington, Connecticut*, 2. *Connecticut Department of Social Services, Hartford, Connecticut*

The MFP Program is charting new frontiers by aiming to reduce reliance on institutional care, develop community-based Long Term Supports and Services, and enable people with disabilities to participate fully in their communities. Analysis of this program is crucial for understanding challenges that impede or prevent successful transitions from occurring and for ongoing quality of life (QoL) after consumers have transitioned. This paper reports data from a standardized web-based consumer tracking system that is part of Connecticut's MFP evaluation. Bivariate analyses were used to compare differences between adults age 65 and older with and without MH challenges. Results demonstrate significant differences between the two groups in 5 out of 11 pre-transition challenges, but these challenges did not prevent consumers from transitioning. The majority of QoL measures do not differ between the



two groups, though significantly more (24%) older adults with MH challenges report unmet healthcare needs at 12 months.

### **USING INTEGRATED DATA IN DEVELOPING MFP METRICS**

I. Stockwell, *The Hilltop Institute, Baltimore, Maryland*

To better understand the diverse characteristics of MFP participants, researchers should draw on complimentary data sources. While building a set of evaluation metrics for Maryland's MFP program, The Hilltop Institute combined administrative data from the Medicaid Management Information System (MMIS) and assessment information from the nursing home Minimum Data Set (MDS) at the recipient level. Key findings included a much higher preference to return to the community for MFP participants, and yet a more similar than expected distribution of nursing home acuity levels when compared to continuous Medicaid nursing facility residents. There were also differences within MFP participants in reinstitutionalization rates, ADL deficits, length of stay, and pre- and post-transition expenditures between older adults, participants who were physically disabled, and individuals with developmental disabilities. These data can help MFP program managers appropriately target clients, identify specific characteristics associated with successful or unsuccessful transitioning, and promote individualized transitions planning.

## **SESSION 545 (SYMPOSIUM)**

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### **USING EFFECTIVE RESEARCH-POLICY-PRACTICE COLLABORATION TO ACHIEVE ENHANCED OUTCOMES**

Chair: *K. Love, Center for Excellence in Assisted Living, Falls Church, Virginia*

Co-Chair: *L. Harris-Kojetin, National Center for Health Statistics (CDC), Hyattsville, Maryland* Co-Chair: *L.S. Noelker, Benjamin Rose Institute, Cleveland, Ohio*

Collaborative efforts can effectively integrate knowledge and expertise from the research, policy, and practice sectors to achieve enhanced outcomes. Effective collaboration results in more robust study designs and broadens the diffusion and application of findings. However, the elements leading to effective collaboration and the barriers encountered in translation and diffusion are numerous. For example, research findings are published in peer-review journals that most policy-makers and service providers do not access. Additionally, peer-reviewed articles are not designed to convey information that can be readily understood by non-researchers, thus limiting the impact the findings have to inform policy-making and practice. Tri-sector (research-policy-practice) collaboratives are increasingly being used to improve the translation and application of findings. This session focuses on the knowledge, skills and elements essential to the design and management of successful collaboratives, using examples from local and national projects. Researchers from the National Center for Health Statistics/Centers for Disease Control and Prevention that conducted the National Survey of Residential Care Facilities will detail how they managed a successful collaborative and the enhanced outcomes achieved. Representatives of the Center for Excellence in Assisted Living will discuss how the research team's methods fostered effective collaboration with providers and practitioners. Organizational structures designed to foster practice-research-policy collaboration will be presented using the example of Benjamin Rose Institute on Aging and a local case. The methods and techniques used in the Institute's direct care worker projects that integrate practitioners in residential settings with researchers to apply evidence-based interventions and reduce workforce turnover will be presented.

### **THE 2010 NATIONAL SURVEY OF RESIDENTIAL CARE FACILITIES (NSRCF) – A COLLABORATIVE EFFORT IN LONG-TERM CARE DATA COLLECTION**

*L. Harris-Kojetin, M. Sengupta, National Center for Health Statistics, Hyattsville, Maryland*

Conducted by the National Center for Health Statistics, the NSRCF is a first-time national data collection effort designed to provide nationally representative information about residential care communities and their residents, and that can be used by providers, policymakers, consumers, and researchers. The target survey respondents are directors or administrators of assisted living and other residential care communities. During the NSRCF planning and implementation phases, NCHS pursued a comprehensive outreach strategy to collaborate with several national associations that represent assisted living providers and spread the word about the survey. This presentation reflects on the successful collaboration between NCHS researchers and the provider community. We discuss the collaborative vision and design of the project, the structure and features of collaboration, and the effectiveness of the outreach as measured by project outcomes. Observations and lessons learned from this project may suggest effective ways to collaborate on similar projects in the future.

### **ORGANIZATIONAL FACILITATORS AND BARRIERS TO COLLABORATION: A CASE EXAMPLE**

*L.S. Noelker, F. Ejaz, M. Rose, Benjamin Rose Institute, Cleveland, Ohio*

The challenges of developing and maintaining a direct care workforce of sufficient size and capacity to serve the growing numbers of elderly have been a focus of the Benjamin Rose Institute on Aging for several decades. This presentation reports on the approaches taken to collaborative workforce projects and the methods used by the Institute's service, research and policy units. The inclusion of all three units in a non-profit agency is uncommon and provides a unique context from which to examine leadership, regulatory, and other facilitators and barriers affecting collaborative work. Included among these are the impact of organizational structure, operating environment, resource allocation, and various disciplinary perspectives on the process of collaboration. Strategies to develop a learning organization in which the three units mutually benefit from each other's acquired wisdom and generation of new knowledge will be presented.

### **IMPROVING WORKFORCE OUTCOMES USING A RESEARCH AND PRACTICE COLLABORATION: A CASE EXAMPLE**

*F. Ejaz, L.S. Noelker, M. Rose, Benjamin Rose Institute, Cleveland, Ohio*

This presentation focuses on a local collaboration between researchers and nursing home administrative staff. The project's goal was to implement a variety of best practices in three nursing homes with the aim of reducing staff turnover, promoting incumbent staff to higher paying positions and encouraging minorities to fill management positions. Challenges in setting up an effective collaboration began during the grant writing process and continued throughout various phases of the project. They included ensuring an adequate evaluation budget, setting realistic goals/objectives to assess outcomes, implementing the intervention uniformly across sites, collecting standardized data, obtaining informed consent from staff, evaluating and reporting results and using the findings to improve practice and policy. Discussion will include how effective education and negotiating skills were used by both evaluators and practitioners to understand each other's differing perspectives and create a successful project. The collaboration has implications for planning future research, practice and policy collaborations.

## THE 2010 NATIONAL SURVEY OF RESIDENTIAL CARE FACILITIES (NSRCF): A COLLABORATIVE EFFORT-CEAL

K. Love, *Center for Excellence in Assisted Living, Falls Church, Virginia*

This session will describe the experience from the policy and practice sector perspectives of a successful collaborative outreach effort. Karen Love from the Center for Excellence in Assisted Living (CEAL) will report on the components of effective collaboration the National Center for Health Statistics team skillfully employed on its NSRCF project, and contrast these successful outcomes with less successful ones experienced by CEAL on other research projects.

## SESSION 550 (PAPER)

### ADULT PROTECTION AND ELDER ABUSE

#### EMOTIONAL ABUSE OF THE ELDERLY: STATE STATUTORY REVIEW AND RECOMMENDATIONS

I.C. Freeman, C. Courtney, *William Mitchell College of Law, Minneapolis, Minnesota*

Physical abuse and neglect of the elderly are typically verified with degrees of bodily harm, and financial exploitation is measured in dollar value. Identifying and responding to emotional abuse are often made more difficult by limited objective evidence of harm. While contemporary research is advancing the science of recognizing pain in individuals who cannot report verbally, state laws that define emotional abuse focus largely on the behavior of the alleged perpetrator. This paper presents a 50-state survey of elder emotional abuse laws, inclusive of such related terminology as mental abuse, psychological abuse, emotional distress, and verbal abuse. The state laws are clustered in four categories: states with no provision of this kind, states that include emotional abuse in an overall abuse reporting law without a definition or elements, states that specify elements of emotional abuse in an overall abuse reporting law, and states that have a distinct provision that defines emotional abuse and describes elements. The paper concludes with recommendations for state policies that advance the recognition, investigation, and response to emotional harm in the elderly and other vulnerable adults.

#### RISK FACTORS OF ABUSE AGAINST OLDER WOMEN IN THE HOME-SETTING: A MULTI-NATIONAL EUROPEAN STUDY

L. De Donder<sup>1</sup>, M. Luoma<sup>2</sup>, G. Lang<sup>6</sup>, J. Ferreira Alves<sup>4</sup>, I. Tamutiene<sup>5</sup>, B. Penhale<sup>3</sup>, *1. Vrije Universiteit Brussel, Brussels, Belgium, 2. National Institute for Health and Welfare (THL), Helsinki, Finland, 3. University of East Anglia, Norwich, United Kingdom, 4. University of Minho, Braga, Portugal, 5. Vytautas Magnus University, Kaunas, Lithuania, 6. Research Institute of the Red Cross, Vienna, Austria*

The paper presents the findings of an extensive multi-national survey of abuse of older women in five European countries that took place from 2009-2011. Combating elder abuse requires an integral understanding of those patterns and forces that underlie it. Therefore, this contribution examines the social or ecological risk factors at different levels of severity of abuse against older women. Data from 2,880 older women is randomly collected in five European countries (Austria, Belgium, Finland, Lithuania and Portugal) using a standardized questionnaire. Results indicate that overall 28.1 % older women had at least one experience of abuse in the past year. 5.8 % older women were victim of very severe abuse. Multinomial logistic regression analysis indicated that risk factors could be detected at three levels: individual (e.g. marital status, physical and mental health, coping styles), relationships (cohabitation, loneliness) and macro level (country). In the discussion we will develop the idea that a single emphasis on personal indicators is too simple: abuse and violence are multi-faceted and are embedded

in environmental as well as cultural levels and contexts. Finally, recommendations for policy and practice to reduce abuse among older women, and suggestions for further research will be offered and explored.

#### ELDER ABUSE DETECTION: A SYSTEMATIC REVIEW OF VALIDATED TOOLS

M. Beaulieu<sup>1</sup>, J. Laforest<sup>2</sup>, L. Belzile<sup>3</sup>, *1. U. Sherbrooke, Sherbrooke, Quebec, Canada, 2. National Public Health Institute, Montréal, Quebec, Canada, 3. U. Sherbrooke, Sherbrooke, Quebec, Canada*

Background: Elder abuse detection tools are used to confirm clinical suspicions, to standardise the intake and/or guide intervention. Question: What is the psychometric value of these tools? Aim: After attending this session, participants will be able to compare validated tools based on 18 analysis criteria and make a selection based on these criteria. Method: Systematic review of elder abuse detection tools in French and English scientific journals. Main inclusion criteria: to present some form of psychometric evaluation (validity and reliability). Analysis conducted on 18 dimensions (theoretical framework; types of abuse; aim of the tool; ways to administer it; construct, content and criterion validity; reliability; etc.). Results: 14 tools meet our criteria, which suggest that several tools used in practice are not validated. Tools were developed in USA (5), Canada (4), Australia (2), Spain (1), Israel (1) and Taiwan (1). The first one was published in 1984. There is a diversity of tools such as: specific to one form of abuse or covering several; self-administered by senior or by carer, observation by a practitioner or questions asked by a practitioner to senior or carer; aimed to be used by a specific practitioner or interprofessional, time for completion, etc. Construct validity is the most documented. Discussion: Based on sample size, study limits, diversity of tools, and types of analysis (only one based on sophisticated analysis such as structural equation modeling), many tools need further validation. It is impossible to recommend the use of a single tool for all type of practice.

#### WHAT IS AN ELDER ABUSE FORENSIC CENTER? COMPARING AND CONTRASTING FOUR DIFFERENT MODELS IN CALIFORNIA

J.M. Yonashiro Cho<sup>1</sup>, M.W. Girona<sup>2</sup>, K. Wilber<sup>1</sup>, *1. Leonard Davis School of Gerontology, University of Southern California, Los Angeles, California, 2. School of Dentistry, University of California Los Angeles, Los Angeles, California*

Background: Elder abuse has been recognized as a complex and growing social problem that results in significant personal and societal costs. This session describes the Elder Abuse Forensic Center (FC), an evidence-based model highlighted in the Elder Justice Act that brings together a unique multi-disciplinary team for comprehensive case examination, documentation, consultation, training, and prosecution. This presentation describes the core structural and process components of the FC model by comparing unique and common elements across four different centers. Methods: A mixed-methods analysis utilizes data collected from 4 FCs in California through quarterly progress reports, site visits, and a 22-item team effectiveness survey completed by core team members (N=47). Results: Core collaborative team members meet 2-4 times per month and include program coordinator, geriatrician, neuropsychologist, APS, law enforcement, district attorney, and victim advocate. Sites report that physical/psychological evaluations, medical records review, and home visits are important to moving cases forward. To facilitate greater collaboration and encourage participation two sites co-locate with APS. Team members (n=22/26) report various changes in everyday professional practice as a result of their FC involvement (e.g. adoption of a "forensic eye," clearer documentation, increased prosecution, and improved inter-agency collaboration, communication, and trust). High team effectiveness (3.56/4) was shown across all sites with some differences in domain-specific effectiveness by site. Discussion/Implications: Building on earlier work describing the FC model,

this session examines how structure and process influence team activities to move complex elder abuse cases forward. Implications for future policies regarding FC replication, implementation and evaluation are presented.

### **PERCEPTIONS OF MANDATORY REPORTING BY HEALTH CARE PROVIDERS AND ADULT PROTECTIVE SERVICE WORKERS**

M. Riparetti-Brown<sup>1</sup>, A.E. Navarro<sup>2</sup>, S. Enguidanos<sup>1</sup>, K. Wilber<sup>1</sup>, I. Davis  
*School of Gerontology, University of Southern California, Los Angeles, California, 2. Azusa Pacific University, School of Behavioral and Applied Science, Azusa, California*

**Background:** In California, any person who has assumed full or partial care of an older adult is mandated to report suspected abuse and neglect, including hospice workers and hospital care managers. However, little is known about their attitudes and experiences reporting elder mistreatment, and how APS workers perceive their ability to address reports. **Methods:** An exploratory qualitative study was conducted using three focus groups: hospital senior care managers (n=4), hospice staff (n=16), and APS workers (n=9) in the Los Angeles area. Using a grounded theory approach, transcripts were independently coded by two investigators who reconciled differences in coding patterns and consolidated codes into descriptive themes. **Results:** Thematic analysis of transcripts revealed that focus groups acknowledged similar challenges in reporting and resolving cases of elder abuse—particularly high APS case load and lack of victim cooperation and resources. Hospice staff and senior care managers indicated dissatisfaction with APS's response, preferring instead to remedy abusive situations informally with patients and their families. APS workers recognized these problems, yet identified logistical and legal barriers impeding their effectiveness. Findings suggest that APS's response does not meet the expectations of health care providers, leading some providers to disregard mandatory reporting laws in favor of resolving abusive situations informally. **Implications:** Mandated reporting alone is not sufficient to protect elder abuse victims. Cross-agency collaboration between APS and health care professionals is needed to clarify roles and expectations, and to ensure that reporting leads to successful interventions that improve the lives of victims.

### **SESSION 555 (PAPER)**

#### **HUMANITIES, CRITICAL GENEALOGY, CULTURAL STUDIES, AND METHODS**

#### **ETHICS OF AGING: ART OF LIVING, SELF-REALIZATION AND AGING WELL IN LATE MODERNITY**

J. Dohmen, H. Laccelle, *University for Humanistics, Utrecht, Netherlands*

Late modern society, characterized by individualization, risk, and erosion of traditions, urges people to lead a 'life of their own' (Bauman; Beck; Giddens;). For aging individuals this implies the necessity of shaping the later stages of life according to their own goals and values. Complicating this task is the fact that late modern culture lacks consensus about the meaning and purposes of later life (Baars; Cole, Achenbaum & Carlin; Cole; Holstein). The far-reaching ethical consequences of late modern societal changes have been discussed in a variety of ways, usually criticizing one-sided liberal notions of autonomy and underscoring the constraining, disciplinary influences of structural societal arrangements (Dannefer; Dannefer & Kelley-Moore; Gilleard & Higgs; Hendricks; Hendricks & Hatch; Phillipson; Rose; Taylor). Drawing upon the ethical 'art of living' discourse developed in recent decades (Bauman; Dohmen; Foucault; Hadot; Kekes; Nussbaum; Nehamas; Shusterman; Sennett) we explore the contours of a moral lifestyle for aging individuals. Our concern is with their creation of a solid moral identity. We use recent perspectives on self-realization as a moral orientation

(Honneth; Katz; MacIntyre; Meyers; Taylor; Thomä ; Walker) to propose alternative views of central moral concepts such as identity, agency and autonomy, which we think can do more justice to the life experiences of elderly people, especially when confronted with situations of existential vulnerability. This should provide the outlook of an 'ethics of aging' suitable for coping with the insecurities of late modernity, for exercising autonomous lifestyle choices and for identifying and engaging in goals and experiences providing later life with value and meaning.

#### **WHAT PREDICTS HAPPINESS FOR 45-64 YEAR-OLD ADULTS IN THE WORLD MAJOR METROPOLISES?**

X. Pan, *Miami University, Oxford, Ohio*

**Objective:** the aim of the present study is to identify predictors associated with happiness for 45-64 year-old adults in major metropolises in Europe, East Asia and North America. **Design:** this is a cross-sectional study with the data of Assessing Happiness and Competitiveness of World Major Metropolises, 2006. **Sample:** 3,349 participants aged 45-64 and 1,935 observations are in the study: 30% of them lived in East Asian metropolises, 20% in North America and 50% in Europe. **Method:** ordinal logistic regression is used to analyze the association between predictors and the outcome variable. **Results:** regardless of metropolises' location, women are more likely to be happy than men (OR=0.37, p<.001); people with higher SES are more likely to be happy than those with lower SES (OR=0.39, p<.001); people with higher level of self-rated health (OR=0.68, p<.001) and higher self-efficacy more likely to be happy (OR=0.78, p<.001); people are more likely to be happy if they live closely to their friends (OR=0.20, p<.001). **Conclusion:** the level of happiness differs among age groups, genders, SES; it is also associated with individuals' self-rated health, self-efficacy about one metropolis and satisfaction with economic environment and neighborhood in that metropolis for 45-64 year-old population regardless of the metropolis's location.

#### **MEMENTO MORI: CELEBRATION AND LAMENT IN RENAISSANCE MUSIC**

P. Liebig, *School of Gerontology, University of Southern California, Los Angeles, California*

Historically different and changing social contexts are important in research on aging (Maddox, 2006). A sea change occurred in 14th-16th century Western music, reflecting changes in the centers of power and patronage and the Renaissance emphasis on the classics and the individual. Formal compositions — once dominated by rituals and events of the Church calendar — shifted to commemorating major life events of patrons with political power (e.g., Lorenzo de' Medici) and praising fallen musical colleagues and mentors. This paper focuses on songs of mourning for composers of the Franco-Flemish school by their survivors, creating a circle of empathy (Atchley, 2009) and community of shared loss and acceptance (Cole & Winkler, 1994). Themes include: invoking Apollo, wood nymphs and the Muses instead of Christ and the saints; despair about the survivors' future without their mentors; anger and fear over Death's cruelty; praise for the departed's contributions and character; identification of composers with suffering Biblical figures; and use of emotionally charged words (e.g., bewail, lament, grievous loss). Additionally, an analysis of "family trees" reveals the strength of mentor-mentee relationships, especially in the works of Des Prez and Ockeghem. This focus on death and mourning was expanded in subsequent centuries to songs about death in love (both requited and otherwise), triumphing over mortality, and honoring the legacies of the departed.

## EXPANDING BOUNDARIES: TEACHING AGING TOPICS WITH PHOTOVOICE AND PHENOMENOLOGY

J.E. Ataie<sup>1</sup>, J. McGovern<sup>2</sup>, 1. *Portland State University School of Social Work, Vashon, Washington*, 2. *NYU Silver School of Social Work, New York, New York*

This paper discusses the potential of photovoice and phenomenology as useful pedagogical tools with which teachers can foster interest in and knowledge about a wide range of gerontological topics. As a research method, photovoice gives 'voice' to members of communities not typically heard so they can share their perspectives and concerns through participant-generated photographs, small group discussions, and photo exhibits. As a pedagogical tool, photovoice puts cameras in the hands of students and asks them to explore aging related topics from their social location and point of view. As such, it can assist teachers in developing a way of teaching that encourages students to embrace different perspectives and take on an active role in their own learning. It cultivates critical thinking and reflexivity as a means to discovering both prior assumptions and untapped knowledge about the aging experience. Phenomenology is both a philosophy and a methodology that seeks to deepen understanding of meaning-making processes. Philosophically, phenomenology situates meaning-making as integral to the human experience. As a research method, it offers an approach to understanding the everyday lived experience of individual meaning making. As a teaching tool, it can facilitate the knowledge-building process by providing students with an opportunity to gain insight into the lived experience of late-life. By comparing and contrasting both methods, this paper addresses practical questions pertaining to planning and implementation and discusses issues such as ethics and assignments.

## SESSION 560 (POSTER)

### MECHANISMS OF AGING, CALORIC RESTRICTION AND OTHER INTERVENTIONS

#### MOLECULAR MECHANISMS UNDERLYING GENOTYPE-DEPENDENT RESPONSES TO DIETARY RESTRICTION

S.C. Johnson, J. Schleit, M. Kaerberlein, C.F. Bennett, *Pathology, University of Washington, Seattle, Washington*

Despite the wealth of data indicating that dietary restriction (DR) can slow aging across evolutionarily divergent species there are also examples where DR has been shown to have no effect or even reduce lifespan. Recently, Liao and colleagues (Liao et al. 2010; Rikke et al. 2010; Liao et al. 2011) examined the effect of DR by a 40% reduction in calories on 42 recombinant inbred mouse lines and found a distribution of effects ranging from 98.5% life span extension to a 68.4% reduction in life span. These studies demonstrate that genotype plays a critical role in determining the effect that DR has on longevity. However, the molecular processes that influence genotype-dependent responses to DR remain largely unexplored. Here we examined the effect of DR on the replicative lifespan (RLS) of 169 strains of budding yeast, each lacking a single non-essential gene. Similar to the case in mice, a distribution of effects was observed ranging from dramatic shortening of life span to substantially larger increases in life span relative to what is observed for wild type cells. Three distinct and highly conserved molecular processes were identified as having a profound effect on the longevity-response to DR: defects in vacuolar/lysosomal pH homeostasis or mitochondrial superoxide dismutase cause DR to dramatically shorten RLS, while cells with mitochondrial defects associated with a proteotoxic stress response, such as strains lacking mitochondrial prohibitins or porin, are short-lived under control conditions and respond most positively to DR.

### TIMING OF ANTIOXIDANT INTERVENTION DURING LIFE DETERMINES FUNCTIONAL OUTCOME

N. Sumien, U. Ikonne, J.D. Nguyen, M.A. Rutledge, T. Carbonaro, K. Chaudhari, M. Forster, *Pharmacology & Neuroscience, UNT Health Science Center, Fort Worth, Texas*

Both human and animal studies have yielded variable outcomes with regard to the effectiveness of dietary supplementation with small molecule antioxidants as an anti-aging intervention strategy. The current study evaluated the possibility that the timing of antioxidant intervention during life is a variable that may influence functional outcomes. Mice were supplemented with antioxidants (ascorbate, 1.65 mg/g diet; d- $\alpha$ -tocopheryl acetate, 0.825 mg/g diet, and coenzyme Q10, 0.825 mg/g diet) beginning early or later in life, and these regimens were evaluated for their effect on age-related functional declines. We hypothesized that (i) single and/or combinations of antioxidants would improve psychomotor and cognitive performance if supplemented during late life when age-related deficits were already present and, (ii) long-term supplementation beginning earlier in life would prevent the onset of age-related cognitive and psychomotor deficits. Male C57BL/6J mice received a base diet (NIH-31) or one of seven antioxidant-supplemented diets for either 5 weeks (short-term) or 12 months (long-term), prior to functional testing beginning at 22 months of age. Long-term antioxidant supplementation failed to prevent age-related impairment of psychomotor and cognitive performance as measured in a comprehensive battery of tests. However, a significant improvement in bridge-walking performance (a measure of balance) and running performance on a rotating rod (a measure of coordination) was evident when older mice with pre-existing impairments received the short-term regimens of supplementation. These effects occurred in the absence of any improvement in performance on a wire suspension test (a measure of strength). Furthermore, short-term antioxidant supplementation improved performance on a Morris water maze test (a measure of spatial learning and memory) and on an active avoidance task (a measure of cognitive flexibility). There was no clear indication of beneficial interactions among the antioxidants when supplemented in different combinations on motor function. These results provide a clear indication that timing of antioxidant intervention during aging is a critical determinant of the functional outcome.

#### MODULATING MITOCHONDRIAL BIOGENESIS VIA THE RENIN ANGIOTENSIN SYSTEM IN HUMAN LUNG FIBROBLASTS

B.R. Manwani, C. Lin, P.M. Abadir, J.D. Walston, *Johns Hopkins University, Baltimore, Maryland*

Bhavish Manwani, Chung-Hao Lin, Jeremy Walston, Peter Abadir Division of Geriatric Medicine and Gerontology, Johns Hopkins University Introduction Renin-angiotensin system (RAS) regulates multiple physiological functions through Angiotensin (Ang) II type 1 (AT1R) and type 2 (AT2R) receptors. We recently identified a functional mitochondrial RAS with AT2Rs that declines with age but increases with AT1R blocker losartan. Given that mitochondrial dysfunction is closely linked to age-dependent lung mitochondrial oxidative/nitrosative stress and age-related onset of emphysema and pneumonia, we hypothesize that RAS modulates mitochondrial biogenesis in human lung fibroblasts. Methods Human fetal lung fibroblasts (MRC-5) were grown in culture and treated with losartan & valsartan (AT1R blocker), cgp421140 & c21 (AT2R agonist), or AngII at various concentrations for 48hrs (triplicates). To measure mitobiogenesis, quantitative PCR was used to calculate ND6 (mitochondrial gene)/TK2 (nuclear gene) ratio. Data were normalized with GAPDH and analyzed using the Pfaffl method. Results Losartan increased the ND6/TK2 ratio in a dose dependent manner while valsartan had minimal impact. AngII infusion reduced mitochondrial level (0.74fold) but this effect was interestingly reversed by pre-treatment with valsartan (1.7fold). cgp and c21 treatments, alternatively, significantly increased mitochondrial level (2.5 and 2.0fold respectively).

Conclusion We show that signaling via the AT2R pathway, either by AT1R antagonists or AT2R agonists, increased mitobiogenesis. This is further supported by the dose response observed in the losartan treated cells. Our results indicate that modulating the RAS system does influence mitobiogenesis and may therefore be beneficial in ameliorating the deleterious age-related changes in respiratory physiology associated with mitochondrial dysregulation.

#### **AGING-ASSOCIATED ALTERATIONS IN MAST CELLS LOCATED BY MESENTERIC LYMPHATIC VESSELS**

V. Chatterjee, A.A. Gashev, *SBTM, Texas A&M Health Science Center, Temple, Texas*

Aging impairs mesenteric lymph flow, which is crucial for fluid and macromolecule homeostasis, fat absorption, and immunity. Recent data suggest an important regulatory involvement of some cellular elements in the close proximity of aged mesenteric lymphatic vessels (MLV) and their aging-associated dysfunction. We used immunohistochemical and vital staining to characterize mast cells (MCs) surrounding MLV in adult and aged Fischer-344 rats. We treated mesenteric tissue segments with chemical activator compound 48/80, and with biological activators (IgE, Substance P and peptidoglycan), and used Ruthenium Red staining to identify aging-associated differences in MCs activation. By image analysis we found a greater degree of pre-activation of MCs in aged rats compared to adult animals. Fraction of MCs activated by any treatment was significantly lower in aged mesenteric tissues. These findings reflect lesser ability of aged MCs adjacent to MLV to adequately react to acute inflammatory stimulation in elderly. NIH R01 AG030578, HL094269.

#### **DOWN-REGULATION OF POLO-LIKE KINASE L (PLK1) INDUCES CELLULAR SENESCENCE IN HUMAN FIBROBLASTS AND ENDOTHELIAL CELLS THROUGH A P53-DEPENDENT PATHWAY**

J. Kim, J. Cho, *Aging-associated Disease Research Center, College of Medicine, Yeungnam University, Daegu, Republic of Korea*

Polo-like kinase 1 (PLK1) plays a key role in various stages of mitosis from entry into M phase to exit from mitosis. However, its role in cellular senescence remains to be determined. Therefore, the effects of PLK1 on cellular senescence in human primary cells were investigated. We found that expression of PLK1 decreased in human dermal fibroblasts (HDFs) and human umbilical vein endothelial cells (HUVECs) under replicative senescence as well as premature senescence in response to adriamycin treatment. PLK1 knockdown with PLK1 siRNAs induced premature senescence characterized by large and flattened cell morphology, decreased cell proliferation, increased senescence-associated beta-galactosidase (SA- $\beta$ -gal) activity, and higher protein expression of p53. In contrast, up-regulation of PLK1 in old cells partially reversed senescence phenotypes, including increases in cell proliferation, incorporation of bromodeoxyuridine and population doublings, and a decrease in SA- $\beta$ -gal activity. Cellular senescence by PLK1 inhibition was observed in p16 knockdown cells but not in p53 knockdown cells. Our data suggest that PLK1 might play important roles in the regulation of cellular senescence of human primary cells via a p53-dependent pathway and also contribute to tissue/organismal aging and protection of cellular transformation.

#### **LIFE SPAN EXTENSION BY DIETARY RESTRICTION IN YEAST REQUIRES PROPER CONTROL OF CELLULAR MANGANESE HOMEOSTASIS**

G.L. Sutphin<sup>1,2</sup>, M. Kaeberlein<sup>1</sup>, *1. University of Washington, Seattle, Washington, 2. The Jackson Laboratory, Bar Harbor, Maine*

Dietary restriction extends life span and improves numerous age-associated health parameters in evolutionarily divergent species ranging from the budding yeast to the rhesus monkey. The majority of dietary restriction studies have been carried out in a controlled laboratory envi-

ronment on populations of genetically homogenous individuals. In genetically heterozygous populations such as humans, it remains unknown whether dietary restriction will have a generally positive effect on survival and health, or whether individuals with different genotypes within the population will display a differential response. In the budding yeast, we have identified single gene deletion mutants that show a wide range of responses to dietary restriction, from severely shortened to greatly extended life span. Two of the greatest negative responses to dietary restriction were observed in strains lacking either PMR1 or SOD2. PMR1 encodes a Golgi apparatus calcium/manganese ATPase responsible for transporting calcium and manganese from the cytosol into the Golgi lumen. SOD2 encodes the mitochondrial manganese superoxide dismutase. Further, the poor growth and reduced replicative life span of cells lacking PMR1 subject to dietary restriction are rescued by mutations in SMF2, an Nramp family manganese transporter involved in maintaining manganese homeostasis. Together, these observations indicate that proper control of intracellular manganese is important for an appropriate response to dietary restriction in yeast. This study explores the role that manganese homeostasis and related genes play in the cellular response to dietary restriction.

#### **P49/STRAP MODULATES GENE EXPRESSION AND AFFECTS THE MORPHOLOGY AND STRUCTURE OF MULTIPLE TISSUES**

X. Zhang<sup>1,2</sup>, G. Azhar<sup>1,2</sup>, S.C. Rogers<sup>1,2</sup>, S. Luo<sup>1,2</sup>, J.Y. Wei<sup>1,2</sup>, *1. University of Arkansas for Medical Sciences, Little Rock, Arkansas, 2. Central Arkansas Veterans Healthcare System, Little Rock, Arkansas*

Objective: p49/STRAP (or SRFBP1) is a recently identified binding protein of serum response factor (SRF). It reduces the intracellular NAD/NADH ratio, and induces the deacetylation of SRF protein. It has been showed that p49/STRAP expression is increased in the aging heart. However, the effect of increased expression of p49/STRAP in vivo is not known. Methods/Results: A DNA construct containing p49/STRAP cDNA under the control of CMV promoter was used to generate transgenic mice. After multiple microinjections and screenings, three transgenic mouse lines were established. Western blot and quantitative RT-PCR were used to measure the protein and gene expression, respectively. The p49/STRAP transgenic (p49-Tg) mice had higher level of p49/STRAP expression in mouse tissues, including heart, compared to non-transgenic (NTg) mice (all 3 months old). p49/STRAP down-regulated SRF gene expression. In addition, p49/STRAP over-expression resulted in the dysregulation of some SRF-regulated genes: ANF, beta-myosin heavy chain and cardiac actin. p49/STRAP also down-regulated myocardin, SIRT1 and SIRT2 genes, as well as microRNAs miR-21 and miR-199a. Approximately 10% of the newborn p49-Tg mice had various defects and were dead at birth. The defects and malformations in multiple organs that were apparent on gross and histopathologic examination were found in heart, lung, gut, brain, spine and skeletal muscle. Conclusion: p49/STRAP modulates the transcriptional regulation of SRF, SIRT1, SIRT2 and other genes. Increased p49/STRAP expression significantly affected the morphology and structure of multiple tissues, including heart. These findings suggest that p49/STRAP plays a role in mediating changes from development through maturation and adult aging.

#### **SHORT-TERM RE-FEEDING AFTER CALORIE RESTRICTION ALTERS SUSCEPTIBILITY TO PARASITE INFECTION**

D.M. Kristan, M.C. Cole, S.A. Lang, *Biological Sciences, California State University San Marcos, San Marcos, California*

Long-term calorie restriction (CR) of laboratory mice (*Mus musculus*) increases their susceptibility to infection with the intestinal nematode *Heligmosomoides bakeri*, despite an adequate immune response. The mechanism for increased susceptibility is not yet resolved, nor is

it known if short-term changes in food intake might influence susceptibility to infection. The goals of our study were to determine (1) if short-term re-feeding (RF) would ameliorate the expected increase in worm numbers seen with CR and (2) if RF mice would alter immunoglobulin (Ig) production compared to CR mice in response to infection. We gave male C57BL/6 mice 40% CR for six months and then switched half of the mice to seven days of ad libitum re-feeding (RF) prior to infection; control mice were fed ad libitum (AL). As expected, CR mice harbored more worms than AL mice; RF mice had an intermediate number of parasites that did not differ significantly from either AL or CR mice. In this study, there were no differences in parasite size, sex ratio, egg production, total circulating IgG1, or *H. bakeri* specific IgG1 among mouse treatment groups when mice were infected for 21d. RF mice had intermediate body mass compared to CR and AL mice. We predict that a longer duration of re-feeding may result in a significant decrease in worm numbers of RF compared to CR mice. Longer infection durations should be assessed to determine if RF mice are able to clear infections at a similar rate as AL mice.

### **ESTRUS STATUS AFFECTS SKELETAL MUSCLE STRENGTH, FATIGUE, AND RECOVERY**

T.L. Mader, D.A. Lowe, *Rehabilitation Science, University of Minnesota Medical School, Minneapolis, Minnesota*

There is a marked decline in muscle strength in women with age, particularly at menopause. Because hormone therapy can attenuate the decline, circulating estrogen has been implicated. Low levels of estrogen also occur in young females during the diestrus phase of their cycle. Therefore, we hypothesized that female mice with low circulating levels of estrogen would have lower muscle strength and increased fatigability compared to those with high levels. To test our hypothesis, C57BL/6 mice ( $n=10$ ) were obtained from NIA at 12 months of age (premenopausal). Vaginal cytology was used to identify phases of the cycle when estrogen is high (estrus) and low (diestrus). Muscle strength, fatigue, and recovery of the anterior lower leg muscles were assessed in vivo. Data were compared by T-test. Peak torque was 36% greater for mice in estrus compared to diestrus ( $p=0.011$ ). Fatigue, defined as a loss of 50% initial torque, was reached for mice in estrus and diestrus by contractions 39 and 25, respectively, indicating fatigue resistance for mice in estrus ( $p=0.03$ ). Additionally, rate of recovery from fatigue was faster for mice in estrus ( $p<0.009$ ) with those mice recovering ~95% torque and mice in diestrus only recovering ~50% torque 20 min following the fatiguing contractions. These results further demonstrate that circulating estrogen is beneficial to muscle function. Understanding muscle response to hormones that change with age will better allow for interventions to be designed that will counter muscle weakness, like that experienced by women at menopause. Supported by NIH grants AG031743 and AG036827.

### **MUTATION BURDEN AND AGING**

A.J. Herr, M. Kaeberlein, *Department of Pathology, University of Washington, Seattle, Washington*

The essence of life is the organization and regulation of genetic information encoded in DNA, honed by mutation, selection, sex, and recombination. To maintain the evolutionary innovations of the past, biological organisms invest heavily in a wide variety of DNA repair mechanisms that promote accurate DNA replication during cell division and removal of DNA damage. Mutations nevertheless accumulate in somatic cells and have been proposed to contribute to aging along with other forms of damage. What level of random mutation burden compromises homeostasis of dividing cell populations? Does mutation burden influence the aging of post-mitotic cells? We have previously shown that haploid yeast cell populations collapse when mutation rates exceed an error threshold of one inactivating mutation per essential gene per replication cycle. Here, we show that viable haploid mutator strains with sub-lethal mutation rates exhibit a reduced replicative lifespan, as

measured by the number of times a mother cell can bud. We also show that diploid yeast cells are subject to an error-threshold. Using strains that have combinations of defects in polymerase nucleotide selectivity, proofreading, and post-replicative mismatch repair (MMR), we are defining the upper limit of mutagenesis in diploid yeast. These findings set the stage for determining whether inherited mutation burden synergizes with aging-associated damage to accelerate cellular aging.

**MELATONIN, AGING AND CHRONIC DEGENERATIVE DISEASES. THE TREVISO LONGEVA (TRELONG) STUDY**  
M. Gallucci<sup>1,6</sup>, R. Flores-Obando<sup>2</sup>, S. Mazzuco<sup>3</sup>, A. Zanardo<sup>4,6</sup>, G. Forloni<sup>5</sup>, D. Albani<sup>2</sup>, E. Taioli<sup>7</sup>, 1. *Cognitive Impairment Center, General Hospital of Treviso, Treviso, Italy*, 2. *Laboratory of Molecular Epidemiology, SUNY Downstate Medical Center, Brooklyn, NY, New York*, 3. *Department of Statistics University of Padova, Padova, Italy*, 4. *Department of Clinical Pathology, General Hospital of Treviso, Treviso, Italy*, 5. *Department of Neuroscience, Mario Negri Institute for Pharmacological Research, Milano, Italy*, 6. *FORGEI, Interdisciplinary Geriatric Research Foundation, Treviso, Italy*, 7. *Hofstra North Shore-LIJ School of Medicine, New York, New York*

**Introduction:** It has been reported a compromised ability of the pineal to produce melatonin nightly in elderly humans and that reduced melatonin levels may also be a risk factor for cancer. The purpose of this study was to evaluate the relationship between melatonin, aging and chronic degenerative diseases in the sample of TRELONG Study. **Material and methods:** The TRELONG study started in 2003. Urinary 6-sulfatoxymelatonin (aMT6s), that serves as a useful tool for the estimation of serum-melatonin secretion, was assayed in urine of 260 survivors aging subjects collected in 2010-follow up and stored at  $-80^{\circ}\text{C}$  by using an enzyme-linked immunosorbent assay (ELISA) kit (product 01-EK-M6S, ALPCO Immunoassays, Windham, NH). All aMT6s levels were creatinine standardized ([aMT6s]/[creatinine]). **Results:** Age (77-105 years) mean  $85.3 \pm 6.3$ ; Sex, n (% female) 146 (56.2%); aMT6s  $44.2 \pm 42.7$  ng aMT6/mg creatinine. Melatonin levels tend to have an association with aging and to decline more in males than in females (40.5 vs 47.0) but both not significantly. Melatonin levels are significantly lower in patients reporting insomnia ( $p<0.03$ ). There is a significant inverse correlation between melatonin levels and the Disease Count Index (DCI) ( $p<0.05$ ). The new cases of cancer, after the baseline measurement, tend to have average levels of melatonin lower than in those without cancer (35.6 vs 44.6) even if the difference is not significant. The combination of new cases of cancer with new cases of cerebrovascular disease ( $n=24$ ) show lower levels of melatonin compared to those without these two diseases (35.1 vs 44.9) ( $p=0.08$ ). **Conclusions:** The onset of chronic diseases, after baseline measurement, is still too low to provide meaningful results, but suggests that cancer and cerebrovascular disease are possible candidates for an association with melatonin levels. The association with sleep disorders is confirmed. These early findings would confirm the protective role of melatonin against various chronic diseases.

### **PPAR $\gamma$ PATHWAY IS INVOLVED IN CHLAMYDIA PNEUMONIAE INDUCED FOAM CELL FORMATION**

P. He, B. Cheng, B. Qi, *Department of Gerontology of Union Hospital, Tongji Medical College of Huazhong University of Science and Technology, Wuhan, Hubei, China*

We have previously demonstrated that Chlamydia pneumoniae disturbed macrophage cholesterol homeostasis and induced foam cell formation. To investigate whether peroxisome proliferator-activated receptor  $\gamma$  (PPAR  $\gamma$ ) pathway played a role in the process, we observed the expression of PPAR $\gamma$  and its target genes (SR-A1, ACAT1 and ABCG1) and the effect of PPAR $\gamma$  agonist (rosiglitazone) and inhibitor (GW9662) on foam cell formation in Chlamydia pneumoniae infected lipid-loaded THP-1 macrophage. Results showed that PPAR $\gamma$  and ABCG1 gene expression was suppressed but SR-A1 and ACAT1 gene expression was

increased by Chlamydia pneumoniae. Rosiglitazone could reverse the effect of Chlamydia pneumoniae on these genes while GW9662 showed a similar effect of Chlamydia pneumoniae. Our data demonstrated that PPAR $\gamma$  pathway was involved in Chlamydia pneumoniae induced foam cell formation.

#### ATROPHY PROTEINS IN THE STRIATED MUSCLE DURING ADULT AGING

G. Azhar<sup>1,2</sup>, X. Zhang<sup>1,2</sup>, A. Zuo<sup>1</sup>, J.Y. Wei<sup>1,2</sup>, I. Donald W. Reynolds  
*Department of Geriatrics, University of Arkansas for Medical Sciences, Little Rock, Arkansas, 2. Central Arkansas Veterans Healthcare System, Little Rock, Arkansas*

**Objective:** SRF is a key transcription factor in striated muscle and has been shown to be slightly increased with advancing age in the heart. Young adult transgenic mice with mild cardiac specific over-expression of SRF(Mild-O-SRF Tg) develop features that resemble those in old hearts of non-transgenic (non-Tg), by 6 mos of age, whereas anti-sense SRF (AS Tg) mice have better preserved hearts in old age compared with that of old non-Tg (wild-type) mice. **Method and Results:** We compared protein levels of atrogen-1 and MuRF-2 in the hearts and skeletal muscles in young adult (4-6 mos) and old (18-20 mos) mice of 3 groups: Mild-O-SRF Tg, AS SRF Tg and Non-Tg mice. Atrogen-1 level was higher in hearts of Mild-O-SRF Tg vs. AS and Non-Tg but there was no age-associated difference within each group. In skeletal muscles, atrogen-1 level was not different among the groups, but it was increased with age similarly in all three groups. MuRF-2 protein levels in hearts were higher in Mild-O-SRF Tg vs AS Tg and Non-Tg, but there was no age-associated difference within each group. In skeletal muscles, MuRF-2 level showed no difference among the 3 groups, but it was reduced similarly with age in all 3 groups. **Conclusion:** Atrogen-1 and MurF2 showed opposite age-related differences in skeletal muscle, while there were no age differences for either protein in heart. SRF likely has a role in atrophy pathways in striated muscle.

#### IDENTIFICATION OF AN NRF2 SPLICE VARIANT THAT DOWN REGULATES PHASE II DETOXIFICATION GENE TRANSCRIPTION: IMPLICATIONS FOR THE AGE-RELATED LOSS OF STRESS RESPONSE

N. Thomas<sup>1,2,3</sup>, E. Smith<sup>1,2</sup>, T. Hagen<sup>1,2,3</sup>, I. Biochemistry & Biophysics, Oregon State University, Corvallis, Oregon, 2. Linus Pauling Institute, Corvallis, Oregon, 3. Oregon Statue University IGERT on Aging, Corvallis, Oregon

Nrf2 is an important transcription factor that regulates Phase II detoxification genes containing Antioxidant Response Elements (ARE) in their 5'-flanking region. Thus, it is vital for remediation of the toxicological effects of xenobiotics. The expression of many ARE-driven genes decline with age, rendering the elderly vulnerable to environmental insults at the time of life that these response systems are most needed. Recently, we discovered a splice variant of Nrf2 and showed that it increases in prevalence in aging rat liver via quantitative polymerase chain reaction (qPCR). Sequence analysis revealed that the alternative transcript has a 21 base pair deletion at the intron/exon boundary of Nrf2's NEH4 domain. This truncation thus may affect coactivator binding to the Nrf2 transcriptional complex. To define the relative importance of the alternative splice variant, luciferase vectors containing the promoter region of a quintessential ARE-mediated gene (e.g. gamma-glutamylcysteine ligase, catalytic subunit [GCLC]), and those designed to overexpress either the wild type or truncated isoforms, were co-transfected into H4IIE cells. Results show that overexpression of the alternative transcript does not catalyze reporter gene activity; furthermore, the splice variant actually down regulates even basal activity by >99%. This indicates that the variant may produce a gene product that acts as a dominant negative transcription factor. Because the truncation is in the co-activator domain, we further hypothesized that the lower observed luciferase reporter activity observed resulted from limited co-activator

binding to the Nrf2/ARE transcriptional complex. Chromatin Immunoprecipitation (ChIP) assays performed on young and old rat liver tissue revealed a marked 3.14-fold loss in CREB-activator binding protein (CBP) in the old versus young rats. Thus, we have identified a potential dominant negative isoform of Nrf2 that increases with age in rat liver, which must be considered as a factor in the age-related loss of ARE driven expression.

#### CHEWING THE FAT ABOUT MECHANISMS OF CR

R. Anderson, 1. University of Wisconsin, Madison, Wisconsin, 2. GRECC VA Hospital, Madison, Wisconsin

The primary goal of CR research is to identify novel targets and effective interventions to delay the impact of aging and prevent the onset age-associated diseases. By understanding how CR works, we learn about the underlying causes of disease vulnerability with age. The role of white adipose tissue in systemic regulation has only recently been appreciated. In addition to influencing inflammatory tone, adipose tissue plays a role in metabolic homeostasis. Adipokines and lipokines secreted from white adipose tissue impact peripheral tissue fuel utilization and the balance of energy generation from lipid or carbohydrate sources. White adipose tissue is overtly impacted by the anti-aging regimen of caloric restriction (CR). In addition to a reduction in fat mass, the adipocytes from CR animals are significantly smaller. Changes in adiposity are associated with a change in fat function – adipose tissue metabolism and circulating levels of adipose tissue derived signaling molecules are altered both with age and with CR. We propose that adipose tissue function plays a pivotal role in disease vulnerability with age and its prevention with CR.

#### CHARTING THE SYSTEMS BIOLOGY OF HUMAN AGING - 2012

J.D. Furber, *Legendary Pharmaceuticals, Gainesville, Florida*

This network chart is presented to aid in conceptualizing the many processes of aging, the causal chains of events, and the interactions among them. Viewers studying this network may discover promising intervention points for future therapy development. Viewers of this chart may use it as a study guide or as a reference to knowledge already learned. This diagram is maintained on the Web as a reference for researchers and students. Content is updated as new information comes to light. [www.LegendaryPharma.com/chartbg.html](http://www.LegendaryPharma.com/chartbg.html) The many observable signs of human senescence have been hypothesized by various researchers to result from several primary causes. Inspection of the biochemical and physiological pathways associated with age-related changes and with the hypothesized causes reveals several parallel cascades of events that involve several important interactions and feedback loops. This network model includes both intracellular and extracellular processes. It ranges in scale from the molecular to the whole-body level. Environmental effects and proposed interventions are highlighted around the margins of the network. Important pathways include: **Nuclear mutations**, telomere shortening, chromatin alterations change gene expression. **Extracellular proteins** become damaged, resulting in mechanical stiffness, weakness, inflammation and altered environmental niches for cells. Stiffer blood vessels promote stroke and heart disease. **Lysosomes accumulate lipofuscin**, which impairs autophagic turnover of macromolecules and organelles. **Mitochondrial DNA** mutates. **Lamin-A** splice-variant, **progerin**, accumulates. **Nuclear envelope** pore proteins become oxidized. **Oxidized aggregates** in cytoplasm. **Inflammatory cascades**, promoted by damaged molecules and sick cells. **Neuroendocrine** and **immune** systems degrade. **ER stress:** Misfolded proteins accumulate in ER.

## NITRATE TREATMENT AND THE SKELETAL MUSCLE PROTEIN ANABOLIC EFFECTS OF MIXED NUTRIENT INTAKE IN OLDER ADULTS

K.L. Timmerman, S. Dhanani, C.S. Fry, M.J. Drummond, E.L. Glynn, M.M. Markofski, B.B. Rasmussen, E. Volpi, *Sealy Center on Aging, University of Texas Medical Branch, Galveston, Texas*

Aging is associated with an impaired ability of skeletal muscle to respond to the anabolic effects of nutrient intake. This phenomenon is linked to endothelial dysfunction and may contribute to age-related loss of skeletal muscle and function. We report preliminary data of a study designed to determine if vasodilation with a nitrate (isosorbide dinitrate) improves the anabolic response of skeletal muscle to mixed nutrient intake in healthy, older adults. We measured muscle protein kinetics utilizing stable isotope methodologies ( $^{13}\text{C}_6$  phenylalanine) in the fasting state and during the ingestion of a mixed meal (20g of essential amino acids + 35g of glucose) under two conditions: 1) concomitant sublingual administration of isosorbide dinitrate (ISDN; N=3, 74±3yrs, 26±0.5 kg/m<sup>2</sup>) or 2) no treatment (CON; N=6, 70±3yrs, 25±1 kg/m<sup>2</sup>). Muscle protein fractional synthetic rate (ISDN, basal: 0.059±0.014, meal: 0.076±0.015; CON, basal: 0.059±0.005, meal: 0.057±0.010 %/h) and net balance (ISDN, basal: -25±6, meal: 39±13; CON, basal: -12±3, meal: -2±2 nmol/min-1/100 ml leg) were significantly elevated in ISDN subjects compared to CON (P<0.05). These preliminary data suggest that nitrate treatment may enhance the anabolic effect of mixed nutrient intake and could represent an effective countermeasure against age-related skeletal muscle loss in healthy older adults. Funding: NIH R01 AG018311, P30 AG024832, S10 RR16650, T32 HD07539, and UL1 RR029876.

## ZEBRAFISH SENESCENCE IS ALTERED BY CIRCADIAN OSCILLATIONS AND OXIDATIVE STRESS VIA PNPO

M.E. Matzko, H. Chen, K. Bredbenner, S. Zhang, G. Gerhard, *Geisinger Clinic, Danville, Pennsylvania*

Reactive oxygen species (ROS) have been implicated in aging as well as in circadian signaling pathways. In zebrafish embryos, we found that low concentrations of H<sub>2</sub>O<sub>2</sub> can induce senescence-associated  $\beta$ -D-galactosidase (SA- $\beta$ -gal) staining, primarily in the brain region in a dose-dependent manner. Circadian rhythm also affected senescence, with more intense SA- $\beta$ -gal staining in either control or H<sub>2</sub>O<sub>2</sub>-treated embryos kept in a light/dark cycle versus dark/dark conditions, and a light/light condition falling intermediate. Moreover, treatment with antioxidant reverses the effect of circadian rhythm on SA- $\beta$ -gal staining, suggesting oxidative stress pathways mediate this effect. To clarify potential molecular mechanisms, gene expression profiling using Affymetrix microarrays and total RNA isolated from 24 hour post-fertilization (hpf) embryos cultured in light/dark or dark/dark showed strong upregulation of the pyridoxamine 5'-phosphate oxidase (PNPO) gene, whose enzymatic product is H<sub>2</sub>O<sub>2</sub>. In situ hybridization of zebrafish embryos using PNPO as a probe showed high brain region expression largely overlapping anatomic distribution of senescent SA- $\beta$ -gal staining. Transgenic overexpression of the zebrafish PNPO in zebrafish embryos increased SA- $\beta$ -gal staining, suggesting that enzymatic production of H<sub>2</sub>O<sub>2</sub> by PNPO may mediate the circadian effects of H<sub>2</sub>O<sub>2</sub>-induced cell senescence in zebrafish embryos.

## NECESSITY OF NEUROPEPTIDE Y FOR THE EFFECT OF DIETARY RESTRICTION IN MICE

I. Shimokawa, T. Chiba, R. Mori, T. Komatsu, *Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan*

Neuropeptide Y (NPY) may play a role in the neuroendocrine adaptation to long-term dietary restriction (DR), and thus the anti-aging effect of DR. We investigated the effect of DR on the oxidative stress resistance, lifespan, and pathology in the NPY gene knockout (-/-) mice, compared to the wild type (WT) mice. The NPY (-/-) and WT mice were fed ad libitum (AL) or 30% DR diets from 12 weeks of age. The

well-known effects of DR on stress resistance, lifespan, and prevalence of spontaneous tumors were mostly abrogated in the NPY (-/-) mice, suggesting a key role for NPY in the effect of DR. To elucidate mechanisms by which DR affects those via NPY-related endocrine system, we evaluated the growth hormone (GH)-IGF-1 axis, because NPY is known to inhibit the axis in response to stresses including fasting. Under long-term DR conditions, the GH-IGF-1 or insulin axis was suppressed in the NPY (-/-) mice in a similar manner to that in the WT mice. The diurnal pattern of respiratory exchange ratio in the NPY (-/-)-DR mice was also similar to that in the WT-DR mice. These findings indicate redundancy of the neuroendocrine system and energy metabolism under long-term DR conditions in the NPY (-/-) mice. The present study suggests importance of NPY in the effect of DR rather than the neuroendocrine or metabolic adaptation to DR.

## EVALUATING EFFECTS OF GENES AND AGE TRAJECTORIES OF PHYSIOLOGICAL VARIABLES ON MORTALITY AND MORBIDITY RISKS: APPLICATION OF GENETIC STOCHASTIC PROCESS MODEL

K.G. Arbeev, I. Akushevich, A. Kulminski, S.V. Ukraintseva, L. Arbeeva, I. Culminskaya, D. Wu, A.I. Yashin, *SSRI, Duke University, Durham, North Carolina*

We applied the genetic stochastic process model (J Theor Biol 258 (1): 103-111, 2009) to data on mortality and incidence of diseases (such as CVD and cancer) and longitudinal measurements of seven physiological variables (blood glucose, BMI, total cholesterol, diastolic and pulse pressure, hematocrit and ventricular rate) in participants of the Framingham Heart Study with different polymorphisms in the APOE, ACE and ADRB2 genes. The approach allows for indirect estimating different mechanisms of aging-related changes when such mechanisms are not directly measured in the data (which is typical for human longitudinal data available to date) and evaluate respective characteristics for carriers and non-carriers of specific alleles/genotypes using joint analysis of genetic and non-genetic sub-samples of longitudinal data. We found that carriers of different alleles in these genes differ in the shapes and age dynamics of various aging-related characteristics, such as physiological norms (i.e., age trajectories of physiological variables minimizing mortality/morbidity risks), aging-related decline in stress resistance (associated with the narrowing of U-shapes of the risks as functions of physiological variables) and decline in adaptive capacity (associated with an increase in the time needed for trajectories of physiological variables to return to the state which an organism tends to follow), and mean allostatic trajectories (i.e., trajectories of physiological variables that organisms are forced to follow by the process of allostatic adaptation). We conclude that differences in these characteristics and associated aging-related processes may contribute to the observed differential effects of alleles on mortality and morbidity risks.

## ASSESSMENT AND GENETIC ASSOCIATIONS OF THE 2D:4D FINGER-LENGTH RATIO WITHIN THE BERLIN AGING STUDY II (BASE-II)

F. Arnaout<sup>1</sup>, T. Liu<sup>2</sup>, M. Heinig<sup>1</sup>, E. Steinhagen<sup>1</sup>, L. Bertram<sup>3</sup>, I. Demuth<sup>1</sup>, *1. Charité – Universitätsmedizin Berlin, Research Group on Geriatrics, Berlin, Germany, 2. Max Planck Institute for Human Development, Berlin, Germany, 3. Max Planck Institute for Molecular Genetics, Berlin, Germany*

The length ratio of the second to fourth digit (2D:4D) is frequently used as a retrospective surrogate marker for prenatal androgen exposure. Associations with the 2D:4D finger length ratio have previously been recognized for multiple human phenotypes, such as type 2 diabetes or cardiovascular diseases. In addition, an association between the 2D:4D ratio and a polymorphism in the LIN28B gene was recently described. In order to validate this finding and to potentially identify additional genetic determinants underlying 2D:4D variation, we performed digitometric measurements on 748 subjects (477 females, 271



males) in the context of the Berlin Aging Study II (BASE-II), a multi-disciplinary study with a core sample of 2.200 individuals. Polymorphisms were assessed in the context of a genome-wide association study (GWAS) completed in each BASE-II participant. Using 2D:4D ratios as quantitative trait, we were able to confirm the previously reported association with polymorphism rs314277 in LIN28B. Additionally, we identified a number of novel signals which will be presented at the meeting.

### TRADE-OFF IN THE EFFECT OF THE APOLIPOPROTEIN E POLYMORPHISM ON THE AGES AT ONSET OF CVD AND CANCER: THE ROLE OF AGE AND GENDER ACROSS GENERATIONS

A. Kulminski, I. Culminskaya, K.G. Arbeev, S.V. Ukraintseva, L. Arbeeveva, A.I. Yashin, *Center for Population Health and Aging, Duke University, Durham, North Carolina*

Studies show an important role of pleiotropic genes in complex traits. Recently, we demonstrated that pleiotropy could take a complex form with antagonistic action of the same allele on different diseases that constitutes genetic trade-off (Aging Cell 2011;10:533-541). Here we focus on the same apolipoprotein E (APOE) e2/3/4 polymorphism and ages at onset of cardiovascular diseases (CVD) and cancer to elucidate the role of age and gender across generations in the observed trade-off. We used data on two generations of the Framingham Heart Study (FHS) participants followed up 60 years. Kaplan-Meier screening and Cox regression modeling show that the e4 allele carriers live longer lives without cancer than the non-e4 allele carriers in each FHS generation (relative risk (RR) of cancer onset for pooled generations, RR=0.87, p=0.045). Protective role of the e4 allele against cancer is limited to older ages (RR=0.75, p=0.007; 70+ years) with more pronounced effect in men (RR=0.71, p=0.017). The role of the e4 allele in onset of CVD is age and generation-specific. In the parental generation the e4 allele promotes CVD in younger ages (RR=1.49, p=0.0008; <=75 years) but protects older women (RR=0.69, p=0.025). In the offspring generation the e4 allele promotes CVD in all ages (RR=1.22, p=0.009) with more pronounced role in older women (RR=1.56, p=0.039; 70+ years). These results suggest that the aging-related processes in different generations can readily alter the role of genes in late life in a gender-specific manner suggesting critical role of aging in unraveling genetics of traits in late life.

### PLASMA HEPCIDIN LEVELS AND ANEMIA IN OLD AGE. THE LEIDEN 85-PLUS STUDY

W. den Elzen<sup>1</sup>, A.J. de Craen<sup>2</sup>, E. Wiegnerck<sup>3</sup>, R. Westendorp<sup>2</sup>, D.W. Swinkels<sup>3</sup>, J. Gussekloo<sup>1</sup>, *1. Leiden University Medical Center, Department of Public Health and Primary Care, Leiden, Netherlands, 2. Leiden University Medical Center, Department of Gerontology and Geriatrics, Leiden, Netherlands, 3. Radboud University Nijmegen Medical Center, Department of Laboratory Medicine, Laboratory of Genetic, Endocrine and Metabolic Diseases, Nijmegen, Netherlands*

Background. Pro-inflammatory cytokines induce the production and secretion of hepcidin, an important regulator of iron homeostasis, by hepatocytes. Hepcidin is therefore suggested to be causally related to anemia of inflammation. Objective. We explored the role of plasma hepcidin in anemia among older persons from the general population. Methods. The Leiden 85-plus Study is a population-based prospective follow-up study of 85-year-olds in Leiden, The Netherlands, enrolled between September 1997 and September 1999. At age 86, plasma hepcidin was determined with time of flight mass spectrometry (TOF MS) in 490 participants (160 [32.7%] male). Results. The prevalence of anemia was 23.3% (114/490). Median plasma hepcidin level was 3.0 nM (IQR 1.8-4.9). Plasma hepcidin correlated with body iron status, C-reactive protein levels and levels of erythropoietin. Participants with iron deficiency anemia (n=13) had significantly lower plasma hepcidin lev-

els (1.4 nM [IQR 0.5-2.7]) than participants without anemia (n=376, 3.0 nM [IQR 1.8-4.7], p<0.01). Higher hepcidin levels were found in participants with anemia of inflammation (n=22, 5.5 nM [IQR 3.0-9.8], p<0.01), in participants with anemia of kidney disease (n=8, 5.4 nM [IQR 3.8-7.2], p=0.01), and in participants with unexplained anemia (n=29, 4.2 nM [IQR 2.7-7.2], p=0.01). Conclusions. Among older persons in the general population, lower hepcidin levels were found in case of iron deficiency anemia, and higher hepcidin levels in case of anemia of inflammation, anemia of kidney disease, and unexplained anemia. Future studies should establish the potential value of hepcidin in diagnostic algorithms for anemia and the value of hepcidin antagonists in the treatment of anemia of inflammation in older persons.

### AGE-RELATED CHANGES IN CIRCULATING T CELL SUBSET PHENOTYPE AND T CELL RECEPTOR (TCR) DIVERSITY IN CYTOMEGALOVIRUS(CMV)-NEGATIVE HUMANS

J. Nikolich-Zugich<sup>1</sup>, A.M. Wertheimer<sup>1</sup>, M.S. Bennett<sup>1</sup>, B. Park<sup>2</sup>, C.S. Martinez<sup>1</sup>, N.L. Currier<sup>1</sup>, J. Kaye<sup>2</sup>, *1. Arizona Center on Aging, University of Arizona, Tucson, Arizona, 2. Oregon Health Sciences University, Portland, Oregon*

The impact of intrinsic aging upon the peripheral blood T-cell pool remains incompletely understood. This impact must be distinguished from the influence of latent persistent microorganisms, particularly the cytomegalovirus (CMV), which is believed to cause and/or exacerbate some of the age-related changes. In a cohort of 150 CMV-negative individuals, aged 21-100 years, we have found that aging correlated strictly with the absolute loss of naïve CD8 T cells, but did not affect memory CD8 T cell numbers. In CMV+ individuals (244, range 21-96 years), the loss of naïve T cells was not greater than the loss associated with aging alone. However, CMV+ individuals exhibited an absolute increase in memory CD8 cells, due to an accumulation of the effector/effector memory phenotype cells. The circulating CD4 subset was much less affected by either CMV infection or aging. Analysis of the T-cell receptor diversity in CMV- subjects showed that the number and magnitude of CD8+ T-cell clonal expansions (TCE) increased with aging, and this increase was inversely proportional to the loss of naïve T cells. These findings provide important insight into the age-related changes in the peripheral blood pool of older adults and suggest potential therapeutic targets for immune rejuvenation.

### SENESCENCE-ACCELERATED MICE (SAM) ARE NOT AGING MODELS BUT DEGENERATIVE DISEASE MODELS

K. Tanisawa<sup>1,2</sup>, I. Ohsawa<sup>3</sup>, M. Ito<sup>4</sup>, A. Shimada<sup>5</sup>, M. Mori<sup>6</sup>, M. Higuchi<sup>7</sup>, M. Tanaka<sup>2</sup>, *1. Graduate School of Sport Sciences, Waseda University, Tokorozawa, Japan, 2. Department of Genomics for Longevity and Health, Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, 3. Department of Biological Process of Aging, Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, 4. Department of Molecular Gerontology, Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, 5. Department of Pathology, Institute for Developmental Research, Aichi Human Service Center, Kasugai, Japan, 6. Department of Aging Biology, Institute on Aging and Adaptation, Shinshu University Graduate School of Medicine, Matsumoto, Japan, 7. Faculty of Sport Sciences, Waseda University, Tokorozawa, Japan*

Senescence-accelerated mice (SAM) are a series of mouse strains originally derived from unexpected crosses between AKR/J and unknown mice, from which phenotypically distinct senescence-prone (SAMP) and resistant (SAMR) inbred strains were subsequently established. Although SAMP strains have been widely used for aging research focusing on various age-related phenotypes, such as sarcopenia, osteoporosis, and brain atrophy, the responsible gene mutations have not been fully elucidated. To identify mutations specific to SAMP strains, we performed whole exome sequencing of 6 SAMP and 3 SAMR strains.

This survey revealed 32,019 to 38,925 single nucleotide variants in the coding region of each SAM strain. Among them, we extracted 35 SAMP-specific novel mutations predicted to be deleterious by either the SIFT (score <0.05) or PolyPhen-2 (score >0.5) program. Among the 6 SAMP strains we detected no mutations that were common to all of them. In all SAMP strains except SAMP8, we detected an R473W missense mutation of Ldb3 gene, which has been associated with myofibrillar myopathy. In 3 SAMP strains (SAMP3, SAMP10, and SAMP11), we identified an R167C missense mutation of Prx gene, which mutations have been linked to hereditary motor and sensory neuropathy (Dejerine-Sottas syndrome). In SAMP6 we detected an S540fs frame-shift mutation of Il4ra gene, a mutation that is potentially causative of ulcerative colitis and osteoporosis; and in SAMP10, a Q55X nonsense mutation of Ocm gene, which might lead to brain atrophy. Our data indicate that different combinations of mutations in disease-associated genes may be responsible for the various phenotypes of SAMP strains.

#### **YEAST MOTHER CELL-SPECIFIC AGING: THE ROLE OF AFO1, A MITOCHONDRIAL RIBOSOMAL PROTEIN**

M. Breitenbach, *Department of Cell Biology, Div. of Genetics, University of Salzburg, Salzburg, Austria*

We discovered a yeast mutant in the gene, AFO1, coding for a mitochondrial ribosomal protein, which confers resistance to several oxidants and displays a 60% elongated replicative lifespan. The mutant is respiratory deficient and rho-zero, independent of the retrograde response, and defines a longevity signaling mechanism from the mitochondria to the nuclear/cytoplasmic gene expression system which depends on the presence of an intact TOR1 gene and glucose as a carbon source. The mutant displays an extraordinary low level of oxygen radicals. We show that this mutation grows rapidly and produces ethanol and biomass on glucose with a kinetics comparable to wild type, in stark contrast to a bona fide ethidium bromide induced rho-zero strain, which grows slowly. The growth phenotypes were shown to be the same in two quite different genetic backgrounds, one of them completely prototrophic. Transcriptome and metabolic analysis of wild type and mutant confirms similarity of the two strains and points to futile metabolic cycles in the bona fide rho-zero strain, which could be responsible for slow growth of the rho-zero strain. Taken together, the phenotype of the mutant points to the fact that slow growth of rho-zero strains is not caused by a low production of ATP, but is rather a regulatory phenomenon. It is the objective of this contribution to aid in understanding of the role of oxidative stress response and the mitochondria in the aging process.

#### **MITOCHONDRIA AS THERAPEUTIC TARGETS AND A HUNDRED YEARS OLD DRUG FOR TREATING AGE-RELATED DISORDERS**

H. Atamna, *The Commonwealth Medical College, Scranton, Pennsylvania*

Mitochondrial dysfunction occurs in many of the age-related neurodegenerative disorders. We identified that low-chronic dose of the drug methylene blue (MB) as potent enhancer of mitochondria-specific functions. MB doubled the lifespan of primary human cells (IMR90). We extended these findings to investigate long-term intake of MB in old mice. When we administered MB to old mice it prevented the age-related declines in spatial memory and grip strength. Biochemically, MB increased the activity of mitochondrial complex IV, mitochondrial heme synthesis, GDH, cell resistance to oxidants, and oxygen consumption. MB also enhanced the phosphorylation of AMPK; a key metabolic regulator and inducer of mitochondrial biogenesis and quality control. MB is the only agent to be reported to enhance specific activity of a mitochondrial enzyme i.e., complex IV. The significance of complex IV on energy metabolism is well-known, especially in Alzheimer's patient's brains. MB enhances mitochondrial function, improves cognitive function, and improves grip strength in old mice.

Since these are three major concerns in human aging, MB may be useful agent for delaying the onset of Alzheimer's neurodegeneration and physical impairments associated with aging. MB is an old drug that is acutely used to treat various ailments. We are proposing that chronic low dose of MB could prevent specific age-related disorders. The importance of MB to aging maybe likened to the importance of aspirin to cardiovascular disorders. Repurposing MB, if successful, would save the healthcare system billions of dollars that usually spent to develop new drugs to treat age-related disorders.

### **SESSION 565 (POSTER)**

#### **ANXIETY**

##### **COGNITIVE BEHAVIORAL THERAPY REDUCES NIGHTMARES IN OLDER ADULTS WITH GENERALIZED ANXIETY DISORDER**

M.E. Dozier<sup>1,2</sup>, B. Porter<sup>1,2</sup>, H.M. Rhoades<sup>3</sup>, M.E. Kunik<sup>2,1</sup>, M. Stanley<sup>1,2</sup>, M.R. Nadorff<sup>1,2</sup>, *1. Psychiatry and Behavioral Sciences, Baylor College of Medicine, Houston, Texas, 2. Michael E. DeBakey VA Medical Center, Houston, Texas, 3. University of Texas Health Science Center, Houston, Texas*

Nightmares are co-morbid with a variety of mental health problems, including anxiety and depression. This is also true for older adults with anxiety or depression, who are at increased risk of nightmares relative to their non-anxious or depressed peers. The current study investigated the prevalence and co-morbidities of nightmares in older adults with Generalized Anxiety Disorder (GAD), as well as the efficacy of cognitive behavioral therapy (CBT) for GAD in reducing nightmare frequency. Participants were 227 older adult primary care patients (mean age = 67.4 years), 134 of whom met DSM criteria for GAD, and 93 of whom served as a comparison group. Participants with GAD were treated either with CBT (N = 70) or enhanced usual care (EUC; bi-weekly phone calls in addition to usual care; N = 64). Nightmare frequency was significantly higher in patients with GAD [M = .72 (SD=.97)] than in patients without GAD [M = .35 (SD=.67)] ( $\chi^2=8.09$ ,  $p=.005$ ). Nightmare frequency in the total sample was significantly associated with greater symptoms of depression ( $\rho = .23$ ,  $p = .01$ ), anxiety ( $\rho = .26$ ,  $p = .001$ ), worry ( $\rho = .21$ ,  $p = .01$ ), and poorer quality of life ( $\rho = -.28$ ,  $p = .001$ ). CBT for late-life GAD led to a significant reduction in nightmare frequency compared to EUC ( $t_{112}=2.19$ ,  $p=.03$ ). Thus, older adults with GAD are more likely to suffer from nightmares than those without GAD, and treatment of GAD with CBT can successfully reduce nightmare frequency.

##### **THE UTILITY OF THE GERIATRIC ANXIETY INVENTORY IN A LONG-TERM CARE FACILITY**

L.A. Gerolimatos<sup>1,2</sup>, J.J. Gregg<sup>1,2</sup>, B. Edelstein<sup>1,2</sup>, *1. West Virginia University, Morgantown, West Virginia, 2. Hopemont State Hospital, Terra Alta, West Virginia*

Symptoms of anxiety and worry are common among older adults and are related to increased functional and social impairment, sleep difficulties, and poorer quality of life (Gould & Edelstein, 2010). Thus, the accurate assessment of anxiety in later life is a critical public health issue. The Geriatric Anxiety Inventory (GAI; Pachana et al., 2007) is one well-validated measure designed to detect symptoms of anxiety among older adults; however, few studies have examined its utility in long-term care facilities, where psychological disorders are prevalent. Sixty-nine residents (52% female, 91% Caucasian) at a state-operated nursing home completed the GAI. Participants had a mean age of 69.77 years (SD = 11.14, range 52 to 94 years). Diagnoses included dementia, psychotic disorders, mood disorders, anxiety disorders, substance abuse, sleep disorders, and mental retardation. The mean score on the GAI was 7.65 (SD = 6.12). Internal consistency of the GAI was good ( $\alpha = .92$ ). GAI scores were moderately correlated with scores on meas-

ures of depression,  $r = .39$ ,  $p < .01$ , and adaptive functioning,  $r = -.30$ ,  $p < .05$ , and weakly correlated with scores on a measure of executive functioning,  $r = .24$ ,  $p = .10$ , providing evidence for discriminant validity. To test the predictive validity of the GAI, we conducted a multiple logistic regression analysis in which GAI scores predicted an anxiety disorders diagnosis,  $OR = 1.79$ ,  $95\% CI = 1.15-2.79$ . These results suggest that the GAI may be a useful tool for assessing anxiety among nursing home residents with psychological disorders.

### **ANXIETY PREDICTS HEALTH SERVICE UTILIZATION IN OLDER ADULTS WITH OSTEOARTHRITIS**

J. McPherron<sup>1</sup>, A. Halli<sup>1</sup>, T.L. Harralson<sup>2</sup>, P.A. Parmelee<sup>1</sup>, *1. Center for Mental Health & Aging, The University of Alabama, Tuscaloosa, Alabama, 2. Polaris Health Care, Philadelphia, Pennsylvania*

Psychological distress is among the strongest predictors of health service use among older adults with osteoarthritis (OA). Amelioration of distress could reduce both OA disease burden and service utilization costs; however, the bulk of previous work has focused solely on depression. This study aims to disentangle the roles of depression and anxiety in predicting health service utilization in a sample of older adults with knee OA. Study participants were 48 to 91 years of age ( $M = 68$ ,  $SD = 9.7$ ); 64% female, 73% White, 83% with at least a high school education, 53% married, 93% earned  $\leq \$50,000$ . Baseline  $N = 365$ . Sociodemographic covariates included sex, education, age, marital status, race, and income. Health covariates included: pain, objective health, a count of OA-affected joints other than the knee, and functional disability. Health utilization outcomes included number of doctors, doctor visits, medications, OA-specific medications and hospital stays, and days in a hospital over the past year. In hierarchical OLS analyses, health utilization variables were regressed onto sociodemographic variables (Step 1), health covariates (Step 2), depression (Step 3), and anxiety (Step 4). Depression predicted doctor visits after controlling sociodemographic variables, but not health covariates or anxiety. Anxiety predicted both doctor visits and hospital stays after controlling sociodemographic variables, health covariates, and depression. Discussion addresses the importance of anxiety in contributing to health care utilization, and the importance of preventive and palliative treatment for anxiety in older adults with knee OA. (Supported by R01-MH51800; P. Parmelee, PI)

### **INFORMANTS' PERSPECTIVES ON ANXIETY AND AGITATION IN NURSING HOME RESIDENTS WITH DEMENTIA**

J.C. Williams, L.S. Hess, S. Meeks, *Dept. of Psychological & Brain Sciences, Univ Louisville, Louisville, Kentucky*

Anxiety and agitation are common presentations in dementia. There is confusion regarding how anxiety and agitation may overlap and whether informants can differentiate the two. We examined how well family informants' ratings of mental health history corresponded to resident reports of anxiety, and also how resident-rated anxiety corresponded to nurse aides' reports of resident anxiety and agitation. Thirty-four residents were included who were older than 65 years of age, had a diagnosis of dementia, could communicate in English, and were not currently participating in another research study. Participants were recruited from nursing home facilities in the Kentucky and Southern Indiana areas. Residents completed the Rating of Anxiety in Dementia (RAID) scale and a mental health screener for anxiety derived from the SCID, while their nursing assistants completed the RAID and the Cohen-Mansfield Agitation Inventory (CMAI). Family informants completed the SCID screener. The results indicated little correspondence between residents and their informants on the SCID measures. Findings related to nursing assistants showed a correspondence between resident ratings of anxiety and nursing assistant ratings of agitation ( $r = .47$  between the resident-rated RAID and the CMAI). Overlap occurred between the worry component of anxiety and the verbal component of agitation

( $r = .357$ ). Results have implications for the reliability of informant reports and the utility of staff ratings. Suggestions for future research include how gender, race, and the closeness of the informant's relationship affect the detection of anxiety and agitation.

### **THREE AGE GROUP COMPARISON OF ANXIETY IN OLD AGE**

R.K. Akashi<sup>1</sup>, A. Mui<sup>2</sup>, H. Akashi<sup>3</sup>, *1. Faculty of Sociology and Social Work, Meijigakuin University, Tokyo, Japan, 2. Columbia University School of Social Work, New York, New York, 3. National Center for Global Health and Medicine, Tokyo, Japan*

A review of the literature confirms that psychological well-being is a multifaceted construct consisting of conceptually-related but separate dimensions presenting unique information (Diener, Schollon, & Lucas, 2003). One critical dimension identified in the literature is worries or anxiety (Veroff, Douvan, & Kulka, 1981). The goals of this study are to test the hypotheses of: 1) age groups (ages 50-64, 65-74, and 75 and over) have a unique effect in explaining anxiety after controlling for other factors; and 2) the predictors of anxiety differ among the three age groups. The study was conceptually guided by the stress and coping model and supplemented by socio-emotional selectivity theory, the life course perspective, and critical theory. The data was drawn from the Aging, Status, and Sense of Control study (2001). Overall regression analysis presented no significant differences in anxiety among the three groups. Parallel regression analyses found that the only significant common factor across all the groups was the previous anxiety level in 1995, and all other factors were significant for an age group only. Unique factors predicting anxiety for the soon-to-be-old (ages 50-64) were more stressful life events and less perceived social support. The significant unique factors for the young-old (ages 65-74) were being female, poor perceived health, and less external locus of control. More functional limitations and more financial difficulties were uniquely significant for the old-old (ages 75 and over). The finding of the significant lasting impact of previous anxiety level on the current well-being indicates a crucial implication for early interventions.

### **GENDER DIFFERENCES IN ANXIETY AND DEPRESSION IN MORE ADVANCED OLD AGE**

N.A. Pachana, D. McLaughlin, J. Leung, G. Byrne, A. Dobson, *University of Queensland, Brisbane, Queensland, Australia*

Background: Women report higher rates of depression and anxiety than men, however it is uncertain if this gender difference continues into advanced old age. Barefoot et al. (2001), in a study of an advanced aged cohort (80+ years), found that gender differences in the report of depressive symptoms decreased as the cohort aged. Elsewhere, gender differences in anxiety symptoms are reported as increasing with age (Fuentes and Cox, 2000). Methods: Participants were 78 men and 111 women aged 82-87 years drawn from the Men, Women and Ageing project, incorporating data from two population-based longitudinal studies started in 1996: the 1921-26 birth cohort of the Australian Longitudinal Study on Women's Health (ALSWH) and the Health in Men Study (HIMS). Measures of anxiety (Geriatric Anxiety Inventory), depression (PHQ9), psychological distress (Mental Health subscale of SF-36), general health (general health item of SF-36) and cognitive status (TICS) were analysed. Results: After controlling for cognitive status, general health and education, no significant gender differences emerged on MH scores between men ( $M = 81.92$ ,  $SD = 14.66$ ) and women ( $M = 81.40$ ,  $SD = 14.02$ ),  $t = 0.82$ ,  $p = 0.416$ ; similar findings emerged for the GAI (chi-squared (1) = 0.29,  $p = 0.593$ ) and PHQ (chi-squared (1) = 0.08,  $p = 0.773$ ). Conclusion: These results support the proposition that female predominance in psychological distress diminishes with increasing age. The congruence between men and women may reflect changes in identity associated with age or the effect of decreased emotional valence of some social roles.

## MENTAL HEALTH HISTORY PREDICTS ANXIETY IN LONG-TERM CARE RESIDENTS WITH DEMENTIA

L.S. Hess, J.C. Williams, S. Meeks, *University of Louisville, Louisville, Kentucky*

Psychiatric disorders, including dementia and anxiety, commonly co-occur among older adults in long-term care facilities. Research supports the experience of anxiety in older adults with dementia. However, changes in cognitive functioning may limit their ability to experience anxiety as currently conceptualized. At the same time, many older adults with anxiety report having had anxiety throughout their lives, suggesting older adults with dementia who have a history of anxiety would continue to experience anxiety as their dementia progresses. The purpose of this study is to examine the role mental health history and cognitive functioning play in the experience of anxiety in long-term care residents with dementia. Long-term care residents age 65 and older with a dementia diagnosis (N=47) completed a brief mental health history and the Rating Anxiety in Dementia scale. The measure of cognitive functioning (Brief Interview for Mental Status) was collected from their Minimum Data Sets. A factorial ANOVA was conducted to test the hypothesis that mental health history has an effect on current anxiety, but that this effect is moderated by cognitive functioning. This analysis revealed a significant main effect of mental health history [ $F(1,46) = 8.22, p < .01$ ], suggesting mental health history predicts current anxiety regardless of cognitive functioning. Administration of screening measures to older adults with dementia, specifically those for depression, is standard procedure in long-term care facilities. In light of the persistence of anxiety across the lifespan in this population, screening for anxiety in long-term care facilities should be implemented to provide optimal care.

## SESSION 570 (POSTER)

### CARE FOR THE LONG TERM

#### THE UTILITY OF THE REVISED MEMORY AND BEHAVIOR PROBLEMS CHECKLIST - NURSING HOME VERSION (RMBPC-NH) IN A DEPRESSED LONG-TERM CARE SAMPLE

S. Shah, B. Getz, B. Ludwin, I. Kostiwa, S. Meeks, *Psychological & Brain Sciences, Univ Louisville, Louisville, Kentucky*

The proper detection and delivery of interventions for behavior problems in long-term care residents are important aspects of providing residents with comprehensive care. Medical providers often rely on the report of nursing staff regarding residents' daily psychosocial functioning. The aim of this study was to examine the utility of the Revised Memory and Behavior Problems Checklist - Nursing Home version (RMBPC-NH; Allen et al., 2003) in reference to a sample of 84 clinically depressed long-term care residents. Eighty-four day-shift and 84 evening-shift certified nursing assistants (CNA) were asked to report the frequency of various problematic behaviors exhibited by their respective depressed resident over the last week. Preliminary analyses reveal that although all residents met diagnostic criteria for a depressive disorder, only 36 day-shift and 41 evening-shift CNAs reported observing sad and depressed behavior in the resident over the last week. A significant association was found between the Emotion Subscale of the RMBPC-NH and resident's self-report of negative affect, but not between the Emotion Subscale and residents' self-report of depressive symptoms using the GDS-30. Inter-rater reliability analyses reveal low agreement between day- and evening-shift CNAs across the items composing the Emotion Subscale. These results suggest that CNAs may be better at detecting global levels of emotional distress rather than specific depressive symptoms, and that administration of self-report measures to residents is important for accurately detecting psychological problems. The results also suggest that day- and evening- shift nursing staff report

differences in residents' behaviors, which may have implications on resident care.

#### FAMILY SERVICE USE AND END-OF-LIFE DECISION-MAKING IN THE NHHCS

R.C. Intriери, P. Goodwin, *Psychology, Western Illinois University, Macomb, Illinois*

The 2007 National Home and Hospice Care Survey (NHHCS) represents survey data collected from home health and hospice agencies as well as current patients and discharges. Participating agencies were Medicare and/or Medicaid certified or held a state license to provide home health and/or hospice services. Survey data were collected from agency directors and staff between August 2007 and February 2008. Patient data were abstracted from medical records. The current analysis focuses on the 4,733 identified individuals that received hospice services. Mean age of the sample was 77.36 (SD=13.70). The sample consisted of 2,117 men (M=74.98; 13.48) and 2,616 women (M=79.28; SD=13.57). The current analysis examines the relationship between the patient's family's use of services (for example, bereavement services or services aimed at helping the family manage difficult behaviors) and the presence/absence of an advance directive. Chi square examining bereavement services and advance directives was significant ( $\chi^2(1) = 53.504; p = .0001$ ) indicating that a family's use of bereavement services was related to the presence of an advance directive for the patient. Approximately 90.1% of patients whose families had utilized bereavement services had an advance directive. Chi square examining the link between assistance with dealing with difficult behaviors and presence/absence of advance directives was significant ( $\chi^2(1) = 4.157; p = .041$ ). Approximately 90.6% of patients whose families received assistance with difficult behaviors had an advance directive. Additional analyses highlight the relationship between any type of advance directive and family service use.

#### HOW CERTIFIED NURSING ASSISTANTS IN DIFFERENT LTC FACILITIES FRAME THEIR WORK AS MEANINGFUL

B.B. Shadden, R. DiBrezzo, I. Fort, J. Henry, M. Gray, *Office for Studies on Aging, University of Arkansas, Fayetteville, Arkansas*

Due to the high turnover rates among CNAs, job satisfaction, stress, and recruitment/retention rates have been studied extensively. Since nursing assistants are typically at the bottom of the work hierarchy and report being undervalued (as well as underpaid), they have created a narrative about their experiences that allows them to derive meaning in their work. Qualitative research methods are particularly well suited to exploring the ways in which CNAs enhance intrinsic job satisfaction through their system of beliefs about their work. This abstract reports the outcomes of four focus groups of CNAs from different long term care facilities in northwest Arkansas. Facilities differed in profit status, level(s), and links to independent retirement facilities. Predetermined open-ended questions probed perceptions of positive and stressful aspects of work as a CNA, as well as recommendations for change. All comments were transcribed. A team of researchers coded comments to answer the central question: "What meaning-making themes emerge as CNAs describe their work experience (both the job itself and perceived roles within each facility)?" A secondary question was whether identified themes were consistent across facilities? The five meaning-making themes were: 1) CNA work is good and/or special, 2) relationships with residents are key, 3) CNAs care and protect residents, 4) CNAs are crucial parts of a team, and 5) CNAs are the ones that know the residents. Results are discussed within the framework of understanding factors that motivate CNAs in order to enhance interprofessional interactions, improve resident care, and increase intrinsic job satisfaction for CNAs.

## **I'M STAYING! EXPLORING DIRECT CARE WORKERS' DESIRE TO STAY IN LONG-TERM CARE**

L.D. Vinson<sup>1,3</sup>, J.A. Davis<sup>2,3</sup>, D. Brannon<sup>4</sup>, 1. *Department of Psychology, The University of Alabama, Tuscaloosa, Alabama*, 2. *Department of Management and Marketing, The University of Alabama, Tuscaloosa, Alabama*, 3. *Center for Mental Health and Aging, The University of Alabama, Tuscaloosa, Alabama*, 4. *Department of Health Policy and Administration, The Pennsylvania State University, University Park, Pennsylvania*

As direct care worker (DCW) shortages and high turnover rates continue to plague the long-term care (LTC) industry, there is a dire need to retain individuals in DCW positions. We were particularly interested in understanding how benefits and other job-related factors contributed to DCWs' intent to stay. Data for this project came from a sample of LTC providers in the state of Pennsylvania in 2004. Stratified sampling was used to ensure representation of: 1) all types of LTC providers (e.g. adult daycare centers, home health care agencies, and nursing homes) and, 2) the regions of the Pennsylvania Workforce Investment Areas and rural and urban zip codes. Of the 1,915 providers who received the surveys, 759 providers responded and sent lists of their DCWs (40% response rate). Eliminating providers with missing data resulted in a final sample of 537 DCWs. The data were analyzed using the logistic regression option in Stata 10. DCWs who reported higher job satisfaction, better quality supervision, longer DCW employment, and health insurance benefits had a greater desire to continue working as a DCW. However, DCWs who reported they thought about quitting often, had at least a high school diploma, and had disability insurance had greater odds of leaving. In summary, it appears that having access to benefits has a differential impact on DCW turnover rates in LTC. These results were consistent among all LTC facilities, regardless of type. These results provide LTC leaders with specific intervention target areas for decreasing DCW turnover.

## **BITTER PILLS AND BACK RUBS: THE WORK OF MEDICATION ADMINISTRATION IN ASSISTED LIVING**

P. Carder<sup>1</sup>, R. Rubinstein<sup>2</sup>, 1. *Institute on Aging, Portland State University, Portland, Oregon*, 2. *University of Maryland Baltimore County, Baltimore, Maryland*

How to manage medications administered to persons with dementia who live in assisted living (AL) settings is an important policy and research topic. This paper describes an ethnographic study of the process and culture of medication administration in three Oregon ALs certified for dementia care. Data were collected while shadowing 16 employees throughout the day and evening work shifts for six consecutive days. The observation time averaged 16 hours per day, totaling 316 hours during which approximately 72 scheduled medication passes were observed. Each employee was interviewed about two weeks after the observation. Oregon is one of 31 states that permits unlicensed staff to administer medications; four of the 16 employees in this study had completed formal training courses. "Bitter pills and back rubs" describes the challenges these employees encounter as they coax persons with dementia who do not understand why they are being asked to swallow bitter-tasting pills, to do so anyway. This research makes visible employee—resident interactions, including back rubs, encouraging words, and other employee-generated strategies that have not been previously documented. Further, the findings build on research about the meaning of food to older persons and the dilemma of treating meal time as medication time in the AL setting. Finally, this research provides medication management scenarios that can be used to inform AL policy development and employee training strategies that can improve the care of persons with dementia.

## **THE IMPACT OF SPATIAL CONFIGURATION ON SOCIAL INTERACTION IN LONG-TERM CARE FACILITIES**

F. Ferdous, K. Diaz Moore, M. Rashid, *The University of Kansas, Lawrence, Kansas*

The relationship between the physical environment and the prevalence of social interaction has been a core topic of inquiry within envi-

ronmental gerontology. Social interaction is considered an essential therapeutic intervention for people with Dementia of Alzheimer's Type (DAT). Many studies, including those that use 'space syntax' theories and techniques, show that the physical environment affects social interaction, in turn affecting individual and organizational outcomes. Space syntax is an analytical technique for describing the configurational attributes of a spatial layout. Although studies involving proximity and visibility in Long-term Care Facilities (LTCF) serving DATs are almost absent, based upon previous research in both space syntax and environmental gerontology, this research hypothesized that accessibility and environmental visibility in social spaces found within LTCF-DATs may affect social interactions among residents. After implementing behavior-mapping technique, 50 rounds of behavioral observations related to various levels of social interactions have been collected in the social spaces of the selected facilities by using different metrics of space syntax. The results of correlational analysis show that the residents of the facilities were engaged in very low and high level [0.565 ( $p < .01$ ), -0.538 ( $p < .01$ ) respectively] of social interactions in locations with better and less visibility, accessibility respectively. In conclusion, the findings of this study suggest that spatial variables and configurations of architectural spaces in care facilities could have some positive consequences that affect social interactions among residents and care givers. Based on the findings, a large-scale trial in different spatial layouts of care facilities is also recommended for future analysis.

## **LONG-TERM CARE: WHO IS RESPONSIBLE?**

K. Kimbell, *School of Social Work, The University of Texas at Austin, Austin, Texas*

Individuals are reaching retirement with inadequate planning for potential long-term care (LTC; NASI, 2005, Pinquart & Sorensen, 2002) needs. Yet, most individuals will need some form of LTC in their older adult lives. Public LTC budgets are strained and the LTC system is not expected to endure the weight of the baby boom generation without modifications (CWF, 2006). Total national spending for LTC in 2005 was \$207 billion and is only expected to rise (GULTCFP, 2007). Who is responsible for paying, planning, providing for LTC? This study examined the LTC planning behavior of employed baby boom aged adults, focusing on the influence of individuals' views about whose responsibility is provision of LTC on planning behavior. Data was collected using a mixed modes self-administered 80-item original survey via the internet and regular mail. The study sample (1,066) includes benefit-eligible Black, Hispanic/Latino, and White faculty/staff born in/between the years of 1946 and 1964 from a large southwestern university. Findings suggest baby-boom aged individuals as a whole believe themselves to have a high level of responsibility for their own potential LTC needs, but also that responsibility lies with government, employers, and adult children. Individuals, then adult children, are believed to have greatest responsibility for planning and providing/arranging for LTC, versus, individuals then government for paying for LTC. Regression analyses indicate employer responsibility positively predicts LTCI purchase and LTC-specific savings and government responsibility negatively predicts LTC-specific savings. Racial/ethnic, gender, and SES differences were found. Implications exist for practitioners, employers, program planners, and policy-makers.

## **PREVALENCE AND ASSOCIATED FACTORS OF DYSPHAGIA IN INSTITUTIONALIZED OLDER PEOPLE IN SOUTH KOREA**

Y. Park<sup>1</sup>, H. Chang<sup>1</sup>, S. Yu<sup>3</sup>, J. Lee<sup>1</sup>, B. Oh<sup>2</sup>, 1. *Seoul National University College of Nursing, Seoul, Republic of Korea*, 2. *Seoul National University College of Medicine, Seoul, Republic of Korea*, 3. *Sangi University, Wonju, Republic of Korea*

In South Korea, general data on the prevalence of dysphagia in institutionalized older adults are lacking. Prevalence rates are necessary to

gain insight into the magnitude of dysphagia and to establish a Long-term care policy. This study aimed to obtain insight into the prevalence of dysphagia in Korean older adults in nursing home and to identify factors associated with the dysphagia prevalence. This study was conducted in two urban nursing homes and recruited nursing home residents (N=395, 76.5% women) aged 65 to 103 in South Korea. The dysphagia was assessed using the Gugging Swallowing Screen (GUSS). A standardized questionnaire was used to record demographic data and data on potential factors associated with dysphagia. Out of 395 older adults in two nursing homes, 52.7% had moderate to high risk of dysphagia. Wet-sounding voice (OR 11.006), drooling (OR 8.076), severe dependent functional status (OR 4.507), and feeding time longer than 30 minutes (OR 4.408) were associated with being dysphagia. The dysphagia prevalence of nursing home residents in South Korea is similar to international figures. Older adults with stroke, severe functional status, and 75 years or older may need adequate dysphagia management. Given the negative impact of dysphagia on mortality and morbidity, an emphasis should be placed on an effective long-term care policy.

### VISITORS & RESIDENT AUTONOMY: UNSPOKEN RULES IN ASSISTED LIVING

C.R. Bennett<sup>1</sup>, M. Brazda<sup>1</sup>, A.D. Peebles<sup>1</sup>, R. Perez<sup>2</sup>, M.C. Nemecek<sup>2</sup>, A. Frankowski<sup>2</sup>, 1. *Doctoral Program in Gerontology, UMBC/UMB, Baltimore, Maryland*, 2. *Center on Aging Studies, UMBC, Baltimore, Maryland*

Friends, family and other interpersonal relationships are critical to overall health and well-being for residents in assisted living (AL). When older adults move into AL, however, they often feel distanced from previous social circles. Inviting friends and family to visit in the AL may seem contrived, especially considering the possibility of surveillance and scrutiny by the AL staff or management. Residents may feel uncomfortable inviting a grandchild, for example, to spend the night or weekend with them at their new home. Visits from a spouse or other loved ones who do not reside in the AL may also pose challenges. What might be commonplace visits for community-dwelling older adults can be unacceptable in AL settings. AL policies on visiting are often not officially documented. More likely there are unspoken rules about guests and what they are permitted to do. These rules can inhibit residents' autonomy and curtail important decision-making in daily life. To understand the relationship between visiting and autonomy in AL, this poster examines: (1) both formal and informal AL policies on visiting; (2) residents', families', and staff's views on these policies; and (3) related academic research and policy reports. Data for this poster are drawn from a multi-year, NIA-funded ethnographic study of autonomy. Fieldnotes and interview transcripts from three ALs were coded and analyzed using Atlas.ti software. This poster concludes with recommendations on how best to incorporate visitors into the life of the AL to enhance autonomy of residents.

### SESSION 575 (POSTER)

#### COGNITION AND AGING

##### NARRATING WISDOM: EXPLORING THE LINK BETWEEN GENERALIZED SLOWING AND WISDOM IN AGING

M.C. Costello<sup>1</sup>, L. Manning<sup>2</sup>, A. Hilliker<sup>1</sup>, S. Ratkiewicz<sup>1</sup>, M. Anastasio<sup>1</sup>, A. Jones<sup>3</sup>, D. DeBrule<sup>1</sup>, 1. *Indiana University South Bend, South Bend, Indiana*, 2. *Duke University, Durham, North Carolina*, 3. *Tulane University, New Orleans, Louisiana*

One factor in age-related cognitive decline is generalized slowing, the widespread slowdown in cognitive and behavioral performance. Although generalized slowing is almost universally assumed to be a negative factor in aging, this evaluation is typically based on quantitative tasks that rely largely on timed reaction speeds. Conversely, research exploring the relationship between wisdom and aging typically utilizes

non-timed tasks, and has found preserved or even heightened wisdom capacity with advanced age. Yet the link between generalized slowing and wisdom in aging has been under-explored. In this study, we examine the relationship between these two factors, and whether age mediates the relationship. Older (60-89 yrs.) and younger adults (18-29 yrs.) performed in two testing protocols: 1) a battery of computerized processing-speed tasks; 2) a writing session that assessed lifelong experience and wisdom. Quantitative analyses of processing speed indicate that older adults, compared to younger adults, were significantly slower across all processing speed domains. Qualitative analyses of the writing data indicate strong age-group effects, with younger adults featuring the importance of family, the role of trauma and stress, and the central focus of the self. Older adult writing, in contrast, featured the importance of family dynamics, the pivotal role of major world events, and the role of religious faith. Preliminary analyses of the effect of processing speed on the two age groups indicates that despite generalized slowing in aging, there is little effect regarding the construction and content of the narratives. Implications for research on wisdom in later life are considered.

##### COGNITIVE FUNCTIONING IN ADULTS AGING WITH HIV: EXPLORING COGNITIVE SUBTYPES AND INFLUENTIAL FACTORS

P.L. Fazeli, D. Vance, K. Ball, M. Crowe, V.G. Wadley, L.A. Ross, *Psychology-Graduate School, University of Alabama at Birmingham, Birmingham, Alabama*

Purpose: Research suggests adults and older adults with HIV may be at risk for cognitive declines. Cluster analytic studies have suggested there may be unique cognitive subtypes in HIV. The purpose of this study was to perform a cluster analysis in a sample of adults and older adults (N = 78; Mage = 46.61) with HIV and to compare these clusters with an HIV-negative group (N = 84; Mage = 47.93) on cognitive, functional, demographic, and mental and physical health variables. Method: Two-Step cluster analysis was used to examine cognitive subtypes using six cognitive measures across multiple cognitive domains. MANOVA and chi-square analyses were used to examine differences between the HIV+ clusters and the HIV-negative group. Results: Results revealed a two cluster solution, with Cluster 1 exhibiting lower performance across all cognitive and functional measures except the Finger Tapping Test, and Cluster 2 displaying "normal" performance across all of the measures compared to the HIV-negative group. The most influential factor to cluster membership was age, with Cluster 1 participants being significantly older than Cluster 2. There were no other significant differences between Clusters 1 and 2 on any of the HIV-specific, demographic, or mental and physical health variables. Conclusion: The findings of this study suggest that in this sample there do not appear to be unique cognitive subtypes; rather, there was a subset with "normal" cognitive performance and a subset with lower cognitive performance. Implications for future research and practice are provided.

##### SCAFFOLDING ACROSS THE LIFESPAN: AGE, TASK COMPLEXITY, AND PRESSURE EFFECTS ON DECISION-MAKING

J.A. Cooper<sup>1</sup>, D.A. Worthy<sup>2</sup>, M.A. Gorlick, W. Maddox<sup>1</sup>, 1. *Psychology, The University of Texas at Austin, Austin, Texas*, 2. *Texas A&M University, College Station, Texas*

Recent work from our lab (Worthy, et al, 2011) found an age-related advantage in decision-making that was attributed to older adults' ability to engage additional frontal neural resources. This recruitment of additional frontal neural resources is explained by the neural scaffolding hypothesis. Scaffolding occurs in older adults to compensate for age-related neural declines, and in all age groups when more neural resources must be recruited due to increased task demands (Park & Reuter-Lorentz, 2009). We propose that while scaffolding improves performance on some tasks, increasing task demands will lead older adults

to reach a “crunch” point where the limits of their neural resources are exceeded, resulting in poor performance (Reuter-Lorenz & Cappell, 2008). However, increasing the demands of the task may lead younger adults to engage in scaffolding, improving performance. In the current study, we manipulated task demand through increased complexity or pressure. We had older and younger adults perform a two-choice decision-making task under pressure or no pressure conditions, or a four-choice task under no pressure. We found a three-way interaction between age, complexity, and pressure on decision-making. Whereas older adults performed better under no pressure conditions in the two-choice task, younger adults performed better in the same task under pressure. In addition, younger adults performed better in the four-choice task under no pressure. Thus older adults under no pressure and with low task complexity operate similar to younger adults under pressure and with increased task complexity. We interpret these results as evidence of compensatory scaffolding across the lifespan.

### **STRESS LESS AND REMEMBER MORE: ANXIETY GETS UNDER THE SKULL**

S. Agrigoroaei, M. Lachman, *Brandeis University, Waltham, Massachusetts*

Past studies have found that individual differences and intraindividual variability in control beliefs are related to memory performance, and mediated by anxiety and distraction. Other studies have found that anxiety and intrusive thinking have more deleterious effects for the memory performance of older adults than for the young. We examined trajectories of control beliefs, self-reported anxiety, cortisol reactivity, and distraction in relation to working memory performance and considered whether the relationships change with practice or vary by age. We assessed 56 young and elderly adults on four occasions, one week apart on two working memory tasks, the memory updating numerical test and the N-back, varying in difficulty as a function of speed and number of digits. Younger adults had higher levels of perceived control over performance and increased their control over time, whereas older adults did not. Older adults had higher levels of anxiety at the outset and took longer to reduce their anxiety across sessions. Younger adults showed decreases in cortisol levels across trials. For memory performance, older adults were more responsive to practice, showing greater improvements over time. We found variability in control beliefs was greater for older adults than for younger participants and was positively associated with variability in anxiety and distraction during the tasks. Variability in distraction was negatively related to performance, especially in older adults. Results are discussed in terms of the value of practice and familiarity in reducing anxiety and improving performance for older adults, by increasing the sense of control over performance.

### **COGNITION IN YOUNG ADULTHOOD SIGNIFICANTLY PREDICTS PULMONARY FUNCTION LATE MIDDLE-AGE**

T. Vasilopoulos<sup>1</sup>, M.D. Grant<sup>2</sup>, C.E. Franz<sup>3</sup>, M.S. Panizzon<sup>3</sup>, H. Xian<sup>4,5</sup>, M. Lyons<sup>2</sup>, W.S. Kremen<sup>3,6</sup>, K.C. Jacobson<sup>1</sup>, *1. University of Chicago, Chicago, Illinois, 2. Boston University, Boston, Massachusetts, 3. University of California, San Diego, La Jolla, California, 4. Washington University School of Medicine, St. Louis, Missouri, 5. VA St. Louis Healthcare System, St. Louis, Missouri, 6. VA San Diego Healthcare System, La Jolla, California*

Pulmonary function, a biomarker of aging, is predictive of morbidity and mortality. Furthermore, several studies have demonstrated an association between cognition and pulmonary function and have found pulmonary function to predict cognitive decline. However, few studies have examined how cognition in young adulthood influences later-life pulmonary function. For the present study, we investigated whether cognition in young adulthood predicted pulmonary function in late middle-age. We utilized data from the Vietnam-Era Twin Study of Aging (VETSA), which includes 1237 male twins, mean age=55.4 (range 51-60). Midlife pulmonary function was indexed by forced expiratory flow

(FEF). Young adult cognition (mean age=19.8) was indexed by the Armed Forces Qualification Test (AFQT), a 50-min, 100 question test of general cognitive ability. Young adult AFQT and midlife FEF were significantly and positively correlated ( $r = 0.13$ ). Using linear mixed modeling, we first modeled the effects of age and height on midlife FEF (Model 1). Our second model included Model 1 covariates plus smoking status, pack years, pulmonary disease diagnosis, education, income, and parental education (Model 2). Our third and final model included Model 1 and 2 covariates plus the effect of young adult AFQT (Model 3). Even after controlling for the covariates in Models 1 and 2, young adult AFQT significantly predicted midlife FEF ( $\beta = 0.13$ ,  $p = 0.003$ ). Our findings provide evidence that better general cognitive ability during early adulthood is associated with higher pulmonary function late-middle age. Future analyses will try to identify proximal biological, psychological and social factors that may account for this association.

### **COGMED: A COGNITIVE REHABILITATION INTERVENTION TO IMPROVE WORKING MEMORY IN OLDER ADULTS**

L. Hyer<sup>1</sup>, C.V. Scott<sup>2</sup>, *1. Georgia Neurosurgical Institute & Mercer University School of Medicine, Macon, Georgia, 2. Georgia Neurosurgical Institute, Macon, Georgia*

Deficits in working memory are associated with age-related decline. We report on findings from a clinical trial that examined the effectiveness of Cogmed, a computerized program that trains working memory (WM). We assess this program against a sham control group in older adults. Older adults (N=68) living in the Central Georgia community who had memory impairment during initial screening (RBANS Delayed Memory Index), but had normal MMSEs, ADLs, and IADLs, were assessed. They met criteria for Mild Cognitive Impairment (MCI). Participants were randomized to either Cogmed or to the Sham cognitive program. A total of 25 sessions were completed over 5-7 weeks. Pre, post and post-post (12 weeks after intervention) measures were applied, involving cognitive, mood and function measures. Paired t-tests were conducted to find significant changes in outcomes between pre, post and post-post measures, as well as regression analyses on pre and post/post-post measures. In general, all subjects showed gains relative to the cognitive pre-measures. The Cogmed group showed statistically significant improvements in Digit Span Age, Span Board Age, Letter Number Sequencing Age, Story Memory, and Story Recall evaluations at post assessment. At post-post times, significant improvements were noted for Trails A, Trails B, Coding, Figure Memory, Figure Recall, Coding Age, and Matrix Reasoning Age. The Cogmed group also performed better on adjustment, satisfaction and affect relative to Sham. Results suggest that both the Cogmed group and Sham group enhance working memory in older adults with MCI. Cogmed especially appears to be effective for older adults.

### **SESSION 580 (POSTER)**

#### **COGNITIVE PERFORMANCE AND CHANGE**

##### **OBESITY AND LATE LIFE COGNITIVE ABILITIES - A SYSTEMATIC REVIEW**

A.K. Dahl<sup>1,2</sup>, L.B. Hassing<sup>3</sup>, *1. Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden, 2. Institute of Gerontology, School of Health Sciences, Joenköping, Sweden, 3. Department of Psychology, University of Gothenburg, Gothenburg, Sweden*

Obesity is a health problem that has reached epidemic proportions. Given the high prevalence of obesity, even a small adverse effect of obesity on cognitive abilities might have a serious effect on public health. The purpose of this review is to examine the relationship between obesity and cognitive function in late life, and to evaluate the evidence for a causal association. Medline was used to search for the following

terms: obesity, overweight, cognition, cognitive, age, and aged. The inclusion criteria were population-based sample, dementia free, and a 5-year minimum interval between measurement of the predictor and the outcome. Only 11 studies met the criteria. Seven studies assessed obesity in midlife and cognitive function in later life, and 4 studies assessed obesity and cognitive function in late life. The reviewed studies showed clear evidence that midlife obesity is associated with lower cognitive performance, whereas this association was weaker in late life; thus, obesity in late life was not uniquely related to lower cognitive function. The findings of this review suggest that, although there is evidence for an association between midlife obesity and low cognitive abilities in late life, the direction of the association and the causality remains to be clarified.

### THE ROLE OF INHIBITORY CONTROL IN MENTAL STATE UNDERSTANDING AMONG OLD ADULTS

Z. Wang, Y. Su, *Peking University, Beijing, China*

**Objective** Mental state understanding, which is also called Theory of Mind (ToM), is the ability to infer other persons' mental states, such as desires, intentions and feelings. It plays an important role in social cognition, social behavior and social interaction. The present study aims to investigate the ability of mental state understanding in old adults, and to determine the role of inhibitory control in mental state understanding. **Method** The participants included 30 young-old people (aged from 65 to 74 years old), 30 old-old people (aged from 75 to 89 years old) and 30 young people (aged from 20 to 35 years old). Their ability of mental state understanding and inhibitory control were examined with The Referential Communication Task and Hayling Sentence Completion Test, respectively. **Results** The correct rate of referential communication task was significantly lower in old-old people than those of young-old people ( $p=0.001$ ) and young people ( $p<0.001$ ). Partial correlation analysis showed that the total errors in Hayling Test-B was negatively correlated with the correct rate of Referential Communication Task ( $r=-0.442$ ,  $p<0.001$ ). Hierarchy regression analysis showed that the total errors in Hayling Test-B entered the equation (Beta was  $-0.451$ ) and could independently explained 16.8% of the variance of mental state understanding ability after controlling for age. **Conclusion** Old-old adults show worse performance in mental state understanding, while young-old adults performance as well as young adults. The impairment of inhibitory control can partly explain the decline of mental state understanding in old-old adults.

### INTERDEPENDENCE OF COGNITIVE DEVELOPMENT AMONG THE OLDEST-OLD

V. Thorvaldsson<sup>1</sup>, T. Svensson<sup>2</sup>, B. Johansson<sup>1</sup>, *1. University of Gothenburg, Gothenburg, Sweden, 2. Lund University, Lund, Sweden*

Previous estimations of interdependence across changes in different cognitive abilities in middle age and old age are generally reported as low to moderate. In this study we evaluate the coupling of cognitive trends in very old age using data drawn from a representative Swedish sample (Lund80+ study), followed annually from age 80 until death, on variety of cognitive abilities. Results from a series of multivariate multilevel growth curve models revealed high, or very high, positive correlations across estimated linear rate of changes, and relatively low positive correlations across time specific deviations from the individual linear trends. In all comparisons, a time to death-based time structure accounted better for data than a chronological age metric (according to Akaike's Information Criterion). The age-based models tended to underestimate the associations. Biological and health related mediators of the interdependence among cognitive changes in very old age are further evaluated.

### THE AGING CNS: ASSOCIATION BETWEEN GENE CANDIDATES IN THE CHOLESTEROL PATHWAY AND LONGITUDINAL COGNITIVE CHANGE

C.A. Reynolds<sup>1</sup>, C. Zavala<sup>1</sup>, M. Gatz<sup>2,5</sup>, L.L. Vie<sup>1</sup>, B. Johansson<sup>3</sup>, B. Malmberg<sup>4</sup>, J.A. Prince<sup>5</sup>, N.L. Pedersen<sup>5,2</sup>, *1. University of California Riverside, Riverside, California, 2. University of Southern California, Los Angeles, California, 3. University of Gothenburg, Gothenburg, Sweden, 4. Jönköping University, Jönköping, Sweden, 5. Karolinska Institutet, Stockholm, Sweden*

The APOE gene, encoding apolipoprotein E, features in cholesterol metabolism and has been associated with cognitive performance and change; however, the relationship of additional candidates in the cholesterol pathway has been rarely examined. We considered the association of 25 genes in the cholesterol pathway with longitudinal cognitive performance, testing for age trends and sex-specific effects. Altogether, we evaluated 432 SNP variants genotyped in over 1600 individuals from three population-based Swedish twin studies with up to six waves of cognitive measurement spanning 19 years. Controlling for APOE, cohort, retest, educational attainment and baseline illness, nominally significant effects were observed for 10-16% of the SNPs across eight cognitive tests representing verbal (Synonyms, Information), spatial/fluid (Block Design, Figure Logic, Card Rotations), memory (Thurstone Picture Memory, Digit Span) and perceptual speed (Symbol Digit). The single smallest p-value was observed for the simple association of an ABCA1 candidate (rs12350560) and perceptual speed decline ( $p = 1.18E-06$ ). For other candidates, such as LRP1 and CETP, we observed potential sex moderation for multiple variants (smallest  $p = 1.22E-04$ ). Consistency of findings across cognitive tests and whole gene (multiple SNP) methods are evaluated. Given recent work suggests that serum lipids may differentially predict cognitive change in men and women, the examination of multiple gene candidates in the cholesterol pathway with cognitive change trajectories ought to consider differences in men and women.

### RELATIONSHIP BETWEEN PHYSICAL AND COGNITIVE PERFORMANCE IN OLDER PEOPLE: RESULTS FROM ELES STUDY

E. Urdaneta, M. Gonzalez, U. Diaz-Orueta, D. Facal, A. Rodriguez-Laso, J. Yanguas, *INGEMA, Donostia-San Sebastian, Gipuzkoa, Spain*

**Objective:** In the last years, the study of the cognitive and physical status has become one of the most interesting topics in the literature (Aichberger, Busch, Reischies et al., 2010; Small, Dixon & McArdle, 2011). The aim of this study manuscript is to analyze the relationship between physical and cognitive performance in a Spanish representative sample over 50 years old. **Methods:** Data presented here derived from the pilot study of the ELES (Spanish longitudinal study on aging). ELES is an interdisciplinary panel study created to track the aging process of the Spanish population for a period of 20 years. Regarding physical performance, two variables were analyzed: aerobic endurance and speed of gait. Cognitive performance was assessed by: verbal memory (immediate and delayed), working memory, visuomanual speed, phonological and semantic fluency, denomination and general cognitive functioning. **Results:** A representative population sample of 1,382 Spanish community dwelling individuals 50 years and over have been interviewed. Partial correlations controlling for age, gender and years of education were carried out between physical performance and cognitive functioning. Statistical significant correlations ( $p<0.05$ ) were found between: (1) speed of gait and immediate verbal memory, learning potential, semantic fluency; (2) aerobic endurance and verbal memory (immediate and delayed), learning potential, semantic and phonological fluency, denomination. **Conclusions:** Relationships have been found between both speed of gait and aerobic endurance and functions even when controlling co-variables like age, gender and years of education. A longitudinal study of these relations would help to under-



stand the trajectories of cognitive and physical functioning as well as the influence between these variables.

### **AGE DIFFERENCES IN REMEMBERING TO RESUME INTERRUPTED TASKS**

L. Willoughby<sup>1</sup>, M. Roffler<sup>1</sup>, K. Huber<sup>2</sup>, E. Hilvert<sup>1</sup>, B. Olbinski<sup>1</sup>, 1. *Saint Louis University, St. Louis, Missouri*, 2. *University of Missouri, St. Louis, St. Louis, Missouri*

Remembering to perform an intended action at the proper time, or prospective memory, is critical in maintaining functional independence. Remembering to return to an interrupted task is one example of when dependence on prospective memory functioning can play a significant role in daily life. In this preliminary study, we investigated age differences in returning to interrupted tasks using a controlled laboratory design. We adapted the procedures used by Dodhia and Dismukes (2009) and examined prospective memory performance under varying levels of interruption length and enhancements at encoding and retrieval. Fifteen community-dwelling older adult participants (age 60 years or older) were compared with data collected from 85 younger adults. Participants were randomized to one of three enhancement conditions (encoding, retrieval, or none) and answered trivia-like questions in thematic blocks. Six question blocks were interrupted with a short, medium, or long interruption (two of each). Fisher's exact tests were used to examine age differences in remembering to resume the interrupted task both times per list length condition or not across the different encoding conditions. The results suggest that older adults were less likely to resume the interrupted task following long interruptions and that this difference may be driven by the condition where no enhancements occurred. This study offers insight into important age differences and considerations when attempting to optimize cognitive performance in a multi-task environment.

## **SESSION 585 (POSTER)**

### **CREATIVE COMMUNICATIONS**

#### **NARRATIVE CREATIVITY IN STROKE SURVIVORS: IMAGES OF APHASIA**

H. Ulatowska, *University of Texas at Dallas, Dallas, Texas*

The investigation is a continuation of our studies of illness stories and specifically stroke stories in the elderly. It discusses quest stories of three writers who regained their written language after the stroke and continued their literary careers. One of them is a Swedish poet who won the Nobel Prize in 2011. The other two are prominent American writers. The analysis of the language produced in their illness stories focuses on the themes of perception of psychological effect of loss, identity change, perceptions of themselves by other people, and reflections on their vulnerability and impending death. The remarkable feature is that the recovered language generated in their illness stories reflects their premorbid style and coherence. The study adds to the field of narrative gerontology by providing an understanding of biographical construction and coherence in old age. It also conveys deep human reflection on life devastation but also triumph in regaining the heights of what makes us unique.

#### **SENSITIVITY TO LISTENER NEEDS AND SOCIAL RELATIONS IN OLDER ADULTS**

D. Keller-Cohen, *Institute for Research on Women and Gender, University of Michigan, Ann Arbor, Michigan*

Speakers have been shown to adapt their speech depending on the real or perceived characteristics of listeners different in age. Does the social engagement of older adults affect their ability to adapt their speech to listeners of different ages? Participants (N=34, mean=82 yrs) were surveyed about their social interactions for the past two weeks: number of people, the frequency of interactions, and their satisfaction. Two

language tasks were each used in speaking to a 10 year and a 30 year old: 1) explain how to make a sandwich and 2) narrate a story from a picture sequence. Language variables were: number of wordsTOTWD, number of different wordsDIFFWD, syntactic complexity SYNCOM, number of clausesTOTCL, idea densityIDEADEN, and number of ideasTOTIDEA. A repeated measures ANOVA for each language variable, using demographics and frequency of total interactions as independent variables, revealed a main effect for frequency of interactions and a significant interaction between task and frequency of interactions. A multiple regression found that the frequency of interactions explained a significant amount of the variance for TOTWD, DIFFWD, TOTIDEA, and TOTCL in the sandwich task when talking to a ten year old. This study suggests that older adults with more social interactions showed more linguistic adaptations when using procedural language with a child and points to the need to examine different types of language use when assessing social engagement in aging. Finally, it points to the need to further assess how social contact impacts language use in aging.

#### **HOW TO COMMUNICATE AND "CONNECT" WITH ALZHEIMER'S: QUALITATIVE OBSERVATIONS OF FAMILY VISITS WITH RELATIVES WITH DEMENTIA IN NURSING HOMES**

L. Chen, L. Levy-Storms, *Social Welfare, University of California, Los Angeles, Los Angeles, California*

Family members may find visiting loved ones with dementia especially challenging. Although communication training interventions exist to improve the quality of their visits, the institutional context requires additional insights and strategies. How do family caregivers emotionally relate to their loved ones with dementia during visits in nursing home? A dyadic perspective in caregiving relationships and attachment theory suggests mutual and simultaneous communication dynamics, which, when observed, may demonstrate the provisions of emotional support. Ten regularly-involved family caregivers and their relatives with dementia were videotaped. Quantitative analyses indicated effective use of verbal and non-verbal communication techniques, but qualitative data analyses, including open-coding, categorizing, and grouping into families, resulted in four inter-related themes: 1) sharing discernible comfort, 2) conducting topically distinct conversation, 3) creating natural interaction, and 4) providing multi-dimensional emotional support. Specifically, family members shared discernible comfort with residents and conducted topically distinct conversations. In doing so, residents began to initiate certain questions to participate in the interaction, which, in turn, led to observations of emotional support. That is, family members' subtle verbal and non-verbal communication enabled them to seemingly provide emotional support. Family members and residents shared physical proximity as well as emotional attachment in a natural, primal manner, despite the potential barriers of dementia. The nuances identified in their interactions and communication training interventions enhanced with these subtle techniques may empower less-involved family members to visit more often, feel more comfortable, and ultimately improve the quality of life of their loved ones with dementia.

#### **HOW DO COMMUNICATION DIFFICULTIES IMPACT THE SOCIAL LIVES OF OLDER ADULTS?**

A.D. Palmer<sup>3,1</sup>, J. Newsom<sup>3</sup>, K.S. Rook<sup>2</sup>, 1. *NW Clinic for Voice & Swallowing, Oregon Health & Science University, Portland, Oregon*, 2. *University of California, Irvine, Irvine, California*, 3. *Portland State University, Portland, Oregon*

It is known that communication impairments affect the nature of social relationships in specific populations and it is also known that the size and nature of adults' social networks change with age. To date, however, there is limited information about the relative impact of communication difficulties in the older population. To examine this relationship, data were analyzed from a representative national sample of

community-dwelling adults aged 65 and older living in the continental United States (n=742). All adults had been screened for cognitive impairment prior to inclusion. Results from multiple regressions indicated that communication difficulty was significantly associated with several parameters of social relationships even after controlling for age, gender, partnership status, health, and functional limitations. Communication difficulty was a significant predictor of loneliness ( $p < .001$ ), fewer positive social exchanges ( $p < .01$ ), smaller network size ( $p < .05$ ), and fewer social activities ( $p < .01$ ) but was not a significant predictor of negative social exchanges. These findings suggest that communication impairments in older adults may have a more significant impact on positive than on negative aspects of social relationships.

### **PRESCRIPTION DRUG ADVERTISEMENTS FOR ALZHEIMER'S DISEASE: A CONTENT ANALYSIS**

J. Gooblar, B.D. Carpenter, R.E. Rieger, L. Oglander, J. Shapero, *Psychology Department, Washington University in St. Louis, St. Louis, Missouri*

**Introduction:** Prescription drug advertising is a major source of healthcare information for consumers and physicians. Previous research has examined pharmaceutical advertising for an array of disorders, but no studies have assessed advertisements for Alzheimer's disease (AD) medications. The purpose of this study was to review AD drug advertisements to begin understanding their potential impact. **Methods:** We searched AD, neurology, and general medicine journals (n=5), as well as high-circulating popular magazines (n=4) for advertisements. We also reviewed advertisements in a pharmaceutical advertisement database. All advertisements appeared in print between January, 2008 and February, 2012. Three independent coders reviewed each advertisement for graphic features and content. **Results:** We identified 130 advertisements, 31 of which were unique. Among the unique advertisements, 26% (n=8) appeared in popular magazines, while 74% (n=23) appeared in journals. Advertisements for donepezil appeared most frequently (n=14), while advertisements for memantine (n=7) and rivastigmine (n=7) appeared less often. Advertisements featured a variety of bar and line charts to communicate information about drug efficacy. Other graphic features included brain images, photographs of presumed family members, and physicians. Benefits and side effects were presented strategically to achieve persuasive aims. Narrative tactics attempted to influence perceptions of the drug's impact on quality of life. **Summary:** Prescription drug advertisements for AD appear in popular magazines and professional medical journals. These advertisements attempt to influence consumers and physicians with a variety of design and narrative strategies. Future research could use experimental methods to examine their impact on consumers and health care professionals.

## **SESSION 590 (POSTER)**

### **CROSS-CULTURAL PERSPECTIVES ON COGNITIVE SCREENING**

#### **A LATENT PROXY FOR DEMENTIA SEVERITY IN THE HISPANIC ELDERLY (HEPESE)**

D.R. Royall<sup>1,2,3</sup>, R.F. Palmer<sup>3</sup>, D. Espino<sup>3</sup>, *1. Psychiatry, UTHSCSA, San Antonio, Texas, 2. STVHS GRECC, San Antonio, Texas, 3. UTHSCSA /Family & Community Medicine, San Antonio, Texas*

**Background:** We have re-conceptualized dementia as "the cognitive correlates of functional status" (Royall et al., JAD in press). A latent proxy, "d" is uniquely related to dementia severity and accurately distinguishes Alzheimer's disease (AD), and Mild Cognitive Impairment (MCI) from each other, and controls [Areas Under the Curve (AUC) 0.91-0.997]. It may be possible to construct d from minimal psychometric assessment. **Methods:** Wave 7 data were used to construct d from MMSE and informant rated Instrumental Activities of Daily Living (IADL) among N = 1078 Hispanics (mean age = 85.7, education = 5.0

yr.; MMSE = 21.7). All observed measures were adjusted for age and gender. **Results:** d contributes variance to a wide range of clinical outcomes independently of "f", i.e., the shared variance in IADL items not-related to cognition. d adds more explanatory variance to these models than multivariate regression models constructed from the same observed variables (i.e., 55% vs. 39% for the prediction of care-giver rated medication management). **Conclusions:** The latent variable "d" can be constructed from a minimal dataset, widely available in many large epidemiological studies. It differs from f only in that MMSE scores load on d, and yet d explains variance in clinical outcomes independent of f and more variance than the observed variables used to construct d and f. In other cohorts, d scores are strongly associated with consensus clinical dementia diagnoses. Optimal thresholds for AD's diagnosis can now be transposed to HEPESE and d-based diagnoses validated against blind clinical assessment.

### **ASSESSING THE CROSS-CULTURAL MEASUREMENT PROPERTIES OF THE NEUROPSYCHIATRIC INVENTORY QUESTIONNAIRE**

P. Sayegh, B.G. Knight, *Department of Psychology, Univ Southern California, Los Angeles, California*

The Neuropsychiatric Inventory Questionnaire (NPI-Q) is commonly used to measure dementia-related behavioral and psychological symptoms, such as agitation, delusions, and apathy. However, little attention has been paid to the cross-cultural measurement properties of this scale, calling into question whether meaningful comparisons can be made across cultures when using this scale. Therefore, we tested the factorial and scalar (i.e., intercept) invariance of the NPI-Q in a sample of 444 Hispanic and 11,081 non-Hispanic White outpatients diagnosed with normal cognition or dementia at their initial Alzheimer's Disease Research Center evaluations nationwide. We conducted confirmatory factor analyses to test the cross-cultural measurement invariance of our hypothesized NPI-Q four-factor structure (hyperactivity, apathy, psychosis, and apathy/vegetative symptoms). Results revealed that this four-factor structure was invariant across groups ( $\chi^2/df = 7.72$ , CFI = .918, TLI = .873, RMSEA = .024), as were the patterns of factor loadings ( $\Delta\chi^2(6) = 6.80$ ,  $p = .34$ ,  $\Delta CFI = .00$ ) and covariances ( $\Delta\chi^2(12) = 12.26$ ,  $p = .43$ ,  $\Delta CFI = .00$ ). However, the NPI-Q failed to demonstrate cross-cultural scalar invariance. These findings indicate that the NPI-Q four-factor structure is equivalent and operates similarly in both Hispanics and non-Hispanic Whites, suggesting that meaningful interpretations can be made using this scale across these groups. However, the lack of scalar invariance suggests that Hispanics may be responding systematically higher or lower across items due to issues unrelated to the constructs of interest and that cross-cultural comparisons of the latent mean estimates of the four NPI-Q factors cannot be made.

### **DEVELOPING A SELF-ADMINISTERED CHECKLIST ON COGNITIVE DECLINE FOR OLDER ADULTS IN JAPAN**

F. Miyamae<sup>1</sup>, M. Sugiyama<sup>1</sup>, H. Inagaki<sup>1</sup>, C. Ura<sup>1</sup>, M. Ijuin<sup>1</sup>, S. Awata<sup>1</sup>, H. Yamaguchi<sup>2</sup>, R. Takahashi<sup>1</sup>, *1. Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, 2. Gunma University, Maebashi, Japan*

In this study, we developed and validated a self-administered checklist for Japanese older adults to recognize decline in their cognitive function. In Japan, a growing number of older adults live by themselves; thus, it is increasingly difficult to expect their family members to monitor their physical and cognitive functioning. Accordingly, we aimed to create a set of items with which for older adults to evaluate their instrumental ability of daily living, while considering a relatively higher level of education in the current older population. We collected data from 393 community-dwelling older adults who participated in a 3-month exercise-oriented program to prevent cognitive decline in metropolitan Tokyo and suburban Gunma (mean age = 72.9). Most participants maintained a high level of cognitive function (mean score on MMSE = 27.2); only 1.5% had been diagnosed with dementia. We first generated 20 items

through consultation with geriatricians. We then conducted an exploratory factor analysis on these 20 items, which extracted three factors: Activity Related to Domestic Chores (ADC), Activity for Socializing (AS), and Activity for Problem-Solving (APS). After omitting items with limited factor loading, 15 items were selected finally. A high level of internal consistency was indicated among items selected for each factor by computing Cronbach's alpha. Convergent validity was assessed by examining whether scores on the final set of 15 items parallel with MMSE scores. Specifically, we confirmed that those who scored 24 or over on MMSE were higher than their lower-MMSE-score counterparts both in AS and in APS.

### REVISION AND VALIDATION OF THE MULTIDIMENSIONAL SCALE OF CHINESE INDIVIDUAL MODERNITY IN A SAMPLE OF CHINESE OLDER ADULTS

X. Bai<sup>1,2</sup>, D. Lai<sup>3</sup>, N. Chow<sup>1</sup>, 1. Faculty of Social Sciences, The University of Hong Kong, Hong Kong, China, 2. Jockey Club Centre for Positive Ageing, Hong Kong, China, 3. The University of Calgary, Calgary, Alberta, Canada

Research findings have identified that older people adapting well to the societal modernization process would result in a positive self-image and satisfaction in life. Research on individual modernity on older adults from non-Western cultural backgrounds is scant. This study revised and validated the 50-item Multidimensional Scale of Chinese Individual Modernity Scale (MS-CIM) in a sample of older Chinese. The data were collected in survey research with a non-probability sample of 445 Chinese elders at age of 60 and above in Wuhan, China. A structured questionnaire covering a list of topics including individual modernity, self-image of ageing, and life satisfaction was used for data collection. Exploratory Factor Analysis (EFA) using principal component analysis and varimax rotation was conducted with 350 participants randomly selected from the sample, followed by confirmatory factor analysis (CFA) with another 350 participants. Both the EFA and CFA results supported that 25 items from the original MS-CIM were loaded into a conceptually meaningful seven-factor model, which included Affective Hedonism-Freedom of Marriage; Affective Hedonism-Respect for Affection; Egalitarianism and Open-Mindedness-Egalitarianism; Social Isolation and Self-Reliance-Social Isolation; Optimism and Assertiveness; Egalitarianism and Open-Mindedness-Open-Mindedness; and Social Isolation and Self-Reliance-Self-Reliance. The final 25-item MS-CIM vindicated an acceptable level of internal consistency (Cronbach's alpha = 0.76) and test-retest reliability ( $r = 0.83$ ). Its criteria-referenced validity was illustrated by its positive correlation with elders' interest in carrying out daily activities, self-image of ageing, and life satisfaction. This revised version of MS-CIM is a psychometrically sound instrument for measuring individual modernity of older adults from the Chinese culture.

### SESSION 595 (POSTER)

#### CULTURE, ACCULTURATION, AND WELL-BEING

##### IDENTIFYING LEVEL OF ACCULTURATION AND ITS IMPLICATIONS ON HEALTH AMONG COMMUNITY-DWELLING CHINESE OLDER ADULTS IN CHICAGO

F. Huang<sup>1</sup>, M.A. Simon<sup>2</sup>, E. Wong<sup>3</sup>, B. Wong<sup>3</sup>, E. Chang<sup>1</sup>, Y. Li<sup>1</sup>, X. Dong<sup>1</sup>, 1. Rush University Medical Center, Chicago, Illinois, 2. Northwestern University, Chicago, Illinois, 3. Chinese American Service League, Chicago, Illinois

Background: The onset of U.S. population aging calls for a thorough understanding of its effects to provide better care for the elderly. This study aims to identify the level of acculturation from the perspectives of community-dwelling Chinese older adults in Chicago. Methods: This cross-sectional study has the largest cohort of U.S Chinese older adults in epidemiological studies. Acculturation was measured using a 12-

question scale for Hispanics. Results: Among the surveyed participants (N=1,112), mean age was 74.8, and sixty-four percent were female. Acculturation refers to the participants' integration into American society by way of adapting the English language and socially interacting with Americans. With respect to language use, 95.7% of the participants speak only Chinese or very little English and 92 % only think in Chinese. In terms of media usage, 92.3 % prefer only Chinese media, TV programs and movies. Lastly, regarding ethnic social relations, 91.6 % prefer attending social gatherings with only Chinese persons, and 91.3% only have Chinese friends. But with regards to the acculturation of the children of the participants, 44.4 % wish for their children to resist acculturation and interact only with Chinese person while 28.2% wish for their children to have an equal number of Chinese and American friends. Conclusion: The majority of Chinese seniors experience low level of acculturation, but a much smaller percentage wishes the same for their children. A population-based longitudinal study is necessary to examine the complexities of acculturation and its multifaceted effects on the health of Chinese older adults.

##### SIBLING CONFLICTS AND PSYCHOLOGICAL WELL-BEING IN KOREAN OLDER ADULTS: DOES SIBLING SEX MATTER?

Y. Chee<sup>1</sup>, M. Lim<sup>2</sup>, 1. Ewha Womans University, Human Ecology Research Institute, Seoul, Republic of Korea, 2. Ewha Womans University Department of Psychology, Seoul, Republic of Korea

In informal social networks, kinship is most likely to serve as a primary source of support. Particularly in a close knit family oriented society like Korea, relationships with siblings who have shared a long personal and family history can exert significant impacts on mental health in later life. Based on the hierarchical compensatory model suggesting that a preferred order exists in receiving informal support in elderly persons, we examined sibling relationships (warmth, conflict), social support, and life stress as predictors of psychological well-being (depression, life satisfaction) in different sex constellations of siblings (sisters, brothers, mixed sex siblings). Data were drawn from 249 older adults (M age = 71.18, SD = 6.79) recruited in Korea, with one closest sibling in mind. Regression analysis ( $p < .05$ ) showed significant interaction effects of sibling conflict and social support on depression as well as interaction effects of sibling conflict and life stress on life satisfaction in the entire sample. Further analysis of interaction effects indicated that ( $p < .05$ ) brothers receiving low social support with high sibling conflict experienced greater depressive symptoms compared to those with low sibling conflict. Also, brothers experiencing more life stress with high sibling conflict had lower life satisfaction than those with low sibling conflict. Sisters only with high sibling conflict reported higher depression levels than those with low sibling conflict. In mixed-sex siblings, no statistically significant main and interaction effects were found on psychological well-being. Findings partially confirmed the roles of siblings as support sources among same sex siblings.

##### CULTURAL IDENTITY AND FAMILY SUPPORT EXCHANGES AMONG LATINO AND ASIAN AMERICANS

W. Tseng<sup>1</sup>, K. Hoshino<sup>2</sup>, N. Hikoyeda<sup>3</sup>, D. Gallagher-Thompson<sup>4</sup>, J. Ventura<sup>5</sup>, H. Inoue<sup>6</sup>, 1. School of Public Health, UC Berkeley, Berkeley, California, 2. Institute of East Asian Studies, University of California, Berkeley, Berkeley, California, 3. Stanford Geriatric Education Center, Stanford, California, 4. School of Medicine, Stanford University, Stanford, California, 5. East Bay Asian Youth Education Center, Oakland, California, 6. Synarc, Inc., Newark, California

PURPOSE: This research study examined the relationship between cultural identity development and family support from the perspectives of Latino and Asian American adults. METHODS: The study participants included 20 Peruvian, 20 Chinese, and 20 Japanese Americans who were foreign born, lived in the United States less than 30 years,

had at least one child born in the United States, and was between 40 and 59 years old. In-person interviews were conducted in the San Francisco Bay Area. Content analysis was conducted. **RESULTS AND DISCUSSION:** The results indicated all Japanese adults and almost all Chinese and Peruvian adults had expectations that they would provide supports for their children more than expectations that they would receive supports from their children. In addition, most Chinese, Japanese, and Peruvian adults had expectations that they would provide supports for their parents more than expectations that they would receive supports from their parents. Further, those who were evaluated as cultural identity clarification and biculturalism were more likely to have expectations they would receive supports from their children than those who were evaluated as cultural encapsulation). Those who were evaluated as cultural identity clarification and Biculturalism were more likely to have expectations they would provide supports for their elder parents than those who were evaluated as Cultural Encapsulation. Health professionals need to more effectively serve patient needs based on appropriate assessments that include evaluation criteria of patient's cultural identity and family support.

### **THE TRANSITION TO WIDOWHOOD AND TRAJECTORIES OF DEPRESSIVE SYMPTOMS AMONG OLDER MEXICAN AMERICANS**

M. Monserud, K. Markides, *University of Texas Medical Branch, Galveston, Texas*

Despite numerous studies on the association between widowhood and depressive symptomatology among older adults, little is known about the impact of late-life spousal loss on psychological well-being among Mexican Americans. This study draws on six waves of data from the Hispanic Established Population for the Epidemiologic Study of the Elderly (1993-2007) to investigate trajectories of depressive symptoms among recently widowed, continuously widowed, and continuously married Mexican Americans aged 65 to 99 years. Specifically, using growth curve models, this study examines whether the marital status differences in the age patterning of psychological well-being among older men ( $n = 3,157$ ) and women ( $n = 2,856$ ) of Mexican descent are contingent on individuals' social integration, socioeconomic resources, and health status. Regardless of gender and marital status, higher social support, more frequent church attendance, lower financial strain, and the absence of chronic conditions and ADL limitations were beneficial for psychological well-being among older Mexican Americans. For men, coresidence with adult children and higher education were also related to fewer depressive symptoms. The psychological well-being of continuously widowed Mexican Americans did not differ significantly from that of the continuously married. In contrast, the recently bereaved experienced more depressive symptoms. Yet, social support, socioeconomic resources, and, to a greater extent, health status played an important role in the psychological well-being of recently widowed Mexican Americans at the higher end of the study age range. After accounting for these factors, the differences in depressive symptomatology between the recently widowed and the continuously married narrowed in later life.

### **RELIGIOUS AFFILIATION AND INTERNATIONAL RETIREMENT MIGRATION -DISTINCTIVE FEATURES, MOTIVATIONS AND EFFECTS**

J. Spannari, *Theology, University of Helsinki, Finland, Kotka, Finland*

In migrant communities the role of religion is usually emphasized. Several studies show the relative importance of religion in old age. Isn't it, then, self-explanatory that religious participation and affiliation have a significant role in international retirement migration (IRM) communities? There are, however, distinctive features in IRM communities that call for a closer look. Many IRM communities or persons are on the border of being immigrants or emigrants in their practice of seasonal migration, regularly splitting their year between the country of origin

and their seasonal second home. This gives seasonal IRM a distinctive nature for example in questions of assimilation, motivation and identity. This presentation examines the religious life in the community of Finnish older adults of the sunbird community in Costa del Sol, Spain. The community is studied via mixed methods approach, data ranging from a survey to in-depth interviews and ethnographic observation. The key questions are: What are the motivating factors in participating religious activities in IRM communities? What are the pronounced and perceived effects of the participation? To answer these questions this paper discusses three distinctive factors of the religious participation and affiliation in an IRM community: First the notions of personal liberation or intensification of life related to motivations in both religious participation and the decision to migrate; Second the underlying blend of religion, culture, history and national identity used as a toolkit in the new circumstances; Third the distinctive meanings, roles and functions given to the religious community in the foreign country.

## **SESSION 600 (POSTER)**

### **DEMENTIA/DELIRIUM**

#### **PREDICTING QUALITY OF LIFE IN COMMUNITY-DWELLING OLDER ADULTS WITH MILD COGNITIVE IMPAIRMENT (MCI)**

S.M. McCurry, R.G. Logsdon, K.C. Pike, E.L. McGough, L. Teri, *University of Washington, Seattle, Washington*

Quality of life is a complex construct that incorporates objective and subjective perspectives; medical, psychosocial, and environmental factors; and individual behavioral responses to each unique situation. The current study sought to examine predictors of self-rated quality of life (QOL-AD) in a group of independently-living older, physically inactive adults with MCI based upon Lawton's five categories of behavioral competence (health, functional health, cognition, time use, social behavior). Subjects were 201 participants in a randomized trial of exercise in older adults with MCI. Average age was 84.8 years (range 70-105), 80% were female, and 79% had some education past high school. Mean MMSE score was 26.5 (range 18-30). All participants had a Clinical Dementia Rating of 0.5. At baseline, fatigue (Multidimensional Fatigue Inventory; MFI) accounted for 47% of the predictive variance in QOL, and depression (Geriatric Depression Score) accounted for 9% of the variance. Other measures of health (age, number of co-morbid medical conditions), function (ADAS-FAS, SPPB), cognition (ADAS-Cog, Trails B), time use (PASE), and social behavior (lives alone) were non-significant in the model. Similar results were found in models using individual MFI subscales (general, physical, and mental fatigue; reduced activity and motivation), with the exception of general fatigue, which was not significant. MFI subscale inter-item correlations and descriptive statistics were comparable to those reported for other chronically ill populations. Results suggest that fatigue has a significant impact on QOL in mildly cognitively impaired older adults, and that interventions specifically targeting fatigue may be crucial for maintaining independent function in this population.

#### **QUALITY OF LIFE IN DEMENTIA: RELATIONSHIP TO SUBJECTIVE PAIN REPORTS BY PATIENTS AND THEIR CAREGIVERS**

G. Santangelo, L. Gitlin, *Johns Hopkins University, Baltimore, Maryland*

Pain in dementia patients is often under-recognized and under-treated because of limited assessments for this population and patients' cognitive limitations that prevent self-reporting. Untreated pain adversely affects all aspects of quality of life (QOL). This study evaluated relationships between QOL as rated by caregivers and patients and pain as rated by patients with moderate to severe dementia. Eighty-eight dyads (patients with dementia and caregivers) were interviewed using 3 QOL

measures; Quality of Life in Alzheimer's Disease, DEMQOL and EQ5-D (health-related utility scale). Patients reported pain level using the Pain Assessment in Advanced Dementia (ranging from 0-6 on the scale with 10 being the worse pain). For this sample, 64% of patients reported having some level of pain. However, only 17% were on pain medications. Independent T-tests revealed differences between patients with and without pain such that patients with pain had lower QOL on all three scales and as rated by patients and caregivers, except for EQ5-d patient scale (DEMQOL [patients]:  $p < 0.015$ ; DEMQOL [caregivers]:  $p < 0.000$ ; QOLAD [patients]:  $p < 0.016$ ; QOLAD [caregivers]:  $p < 0.012$ ; EQ5-d [caregivers]:  $p < 0.000$ ). Also, having pain was significantly correlated with sleep medication use ( $r = 0.410$ ,  $p < 0.000$ ). In a regression, patient age and pain medication use did not predict pain level. This cross-sectional study highlights that pain is poorly managed and under-treated in dementia patients. Yet, its presence erodes QOL as perceived by patients and caregivers and for all measures except patient ratings on EQ5-D. This index may be too broad to differentiate patients' perceptions.

### **AN EVALUATION OF A TRAINING PROGRAM TO INCREASE QUALITY OF LIFE FOR INDIVIDUALS WITH DEMENTIA**

C. Garrison-Diehn, C. Rummel, J. Fisher, *Clinical Psychology, University of Nevada, Reno, Reno, Nevada*

Long-term care residents with dementia displaying behavioral problems are often prescribed psychiatric drugs to manage their behavior (Kamble et al, 2009; Stevenson, 2010). These drugs can decrease quality of life for these individuals due to adverse effects including sedation, falls, loss of language, and premature death. This presentation describes the evaluation of a training program funded by the State of Nevada's Bureau of Healthcare Quality and Compliance. The training program utilized a train-the-trainer protocol to promote a contextual model of dementia care. This model emphasizes the: (1) detection, reduction, and prevention of excess disability due to factors such as over-medication and untreated pain; (2) preservation of adaptive behavior; and (3) prevention and management of challenging behaviors through behavioral and environmental strategies. Training was provided to staff in eight skilled nursing facilities and 13 group homes. Outcome data, including observations of residents at two long-term care facilities in northern Nevada, pre- and post- self-report measures of staff member knowledge in the application of restraint free care, and facility-wide descriptive statistics on psychotropic drug use at pre-training and three months post-training will be presented. Barriers to the generalization of training content to resident care will be discussed.

### **A MULTIDIMENSIONAL APPROACH TO ASSESSING QUALITY OF LIFE IN PERSONS WITH DEMENTIA**

C. Rummel, J. Fisher, *University of Nevada - Reno, Reno, Nevada*

Assessing quality of life (QoL) in persons with dementia presents a number of challenges due to the inherently subjective nature of the construct and the verbal deficits that develop over the course of degenerative dementias. Proxy judgments about affected individuals' functioning and QoL can directly influence crucial care decisions for this vulnerable population. The current study employed a multi-trait multi-method paradigm to examine the discrepancies and congruencies between proxy (i.e., family and professional caregivers), direct observation, and self-report measures of QoL for persons with dementia residing in long term care facilities. Participants included 48 long-term care residents with dementia and their respective family and professional caregivers. Results indicated that persons with dementia, professional caregivers, and family caregivers have distinctly different perspectives on the QoL of the person with dementia. Resident and professional caregiver ratings of QoL were significantly higher than family caregiver ratings. Multiple regression was used to examine the extent to which clinical factors predicted QoL ratings, as well as discrepancies in the QoL

ratings. Cognitive impairment, functional status, psychiatric symptoms, and observed affect were variably associated with QoL ratings across the three participant groups. After attending this session, professionals will have an increased understanding of the importance of assessing multiple indicators and perspectives of the quality of life of elderly persons with dementia.

### **FORGET ME NOT: DEMENTIA IN PRISON**

T.M. Maschi, M.E. Morrissey, *Graduate School of Social Service, Fordham University, New York, New Jersey*

The number of older adults with dementia in U.S. prisons is rapidly rising. Yet, the vast majority of this marginalized subgroup of the aging population is left neglected behind bars without access to adequate medical and mental health care services. A proactive, interdisciplinary collaborative efforts to improve practice, policy, and research and to develop a high quality evidence-based continuum of care for this aging population are urgently needed. The objective of this presentation are to raise awareness of the life and experiences of persons with dementia in prison, and to stimulate discussion, research, and advocacy efforts for this forgotten subgroup of older Americans. It describes the growing number of older adults with dementia in U.S. prisons, high risk factors for dementia present in the prison population, and the life and experience of persons with dementia in the culture and environment of prison that is primarily not designed for them. The current state of services and programs for dementia in prison are reviewed. It concludes by proposing practice, policy, and research related priority areas and strategies for interdisciplinary gerontological responses.

### **LIVING WELL WITH DEMENTIA: A NEW FRONTIER FOR AGING-AFFIRMATIVE SOCIAL WORK RESEARCH AND PRACTICE**

J. McGovern, *NYU, New York, New York*

Without a cure, enduring treatments, or sufficient interventions, dementia continues to be perceived as one of the most dreaded late life outcomes, with consequences to how the illness is experienced by the 30-million people who are affected worldwide. However, emergent scholarship that challenges the medical model by addressing the experience of affected relationships, rather than the illness of individuals, hints at a more nuanced experience than was previously suspected. Without denying the challenges of the experience, this paper suggests that recognizing — and facilitating — the possibility of positive outcomes many constitute a new frontier in aging-affirmative social work research and practice. Following in the footsteps of recent qualitative research that submits that the experience cannot be solely defined by loss, the purpose of this phenomenological study is to deepen understanding of the dementia experience in the context of relationships. Ultimately, the study makes recommendations for care based on its emergent findings, which suggest a relationship between couplehood, meaning-making and quality of life for older couples affected by cognitive impairment. The recommendations call for an increase in the range of social work interventions for affected family systems, greater preparedness of the workforce to meet the needs of this growing and vulnerable population, and future research that problematizes assumptions about the disease, addresses the experience of a wider range of affected participants, and challenges restricting research methodologies. By adopting a lifecourse and interdisciplinary approach to problem solving, the paper defines a new frontier in Aging and dementia.

### **SHE'S THE ONE I TOLD YOU ABOUT: RESIDENT PERCEPTIONS OF OTHERS' BEHAVIOR IN A DEMENTIA CARE UNIT**

A.D. Peoples<sup>1,2</sup>, R. Rubinstein<sup>2</sup>, J.K. Eckert<sup>2</sup>, *1. Doctoral Program in Gerontology, UMBC/UMB, Baltimore, Maryland, 2. Center for Aging Studies, UMBC, Baltimore, Maryland*

Dementia care units (DCUs) provide specialized care for older adults with dementia. They are often situated within a larger setting, such as

a nursing home or assisted living residence. Unfortunately, DCUs are susceptible to stigma from residents of the other levels of care. DCUs function to shield residents with dementia from the disapproving remarks and comments from residents without dementia. A parallel function is to shield those without dementia from exposure to those with dementia. Our findings suggest that even within the DCU, residents with dementia are subjected to stigma from other residents. Those who are higher functioning often disapprove and take note of the so-called "problem behaviors" of their fellow residents. For example, a resident who steals things from others' rooms is likely to be remembered, and possibly avoided, by other residents for this behavior. This presentation describes how residents in a DCU react to their fellow residents' behaviors. We discuss how different types of behaviors (e.g., urination, perseveration) elicit different reactions from residents (e.g., comments, warnings, avoidance). The ways in which these behaviors are perceived by the observing residents are also examined. Strategies for improving interactions between higher- and lower- functioning residents in dementia care units are discussed. Data for this presentation were drawn from a 5-year, NIA-funded qualitative study on Stigma in long-term care and from an independent project on Stigma. Data consists of over 80 sets of observational field notes and more than 20 ethnographic interviews with staff, family, and residents.

### **PROACTIVE DEMENTIA CARE: INTEGRATING HEALTH EDUCATION AND SOCIAL WORK SERVICES INTO A NEUROLOGY CLINIC**

T.C. Andersen, *Neurology & Social Work, University of Utah, Salt Lake City, Utah*

A diagnosis of Alzheimer's disease entails the need for significant education and support systems for the patient and caregiver. Unfortunately, educational and social work interventions are often delayed until a specific need, or even a crisis, is evident. We have developed proactive dementia care (PDC) - a program integrating health education and social work interventions into the management plan. The goal of PDC is to empower patients and family members with a unified plan tailored for their needs to enable maximizing quality of life. We are conducting an ethics committee approved randomized clinical trial, comparing the effectiveness of PDC and standard dementia specialist care (SDSC) in achieving important caregiver and patient outcomes. SDSC is defined as the usual care a dementia specialist provides unassisted by social work or health education, which depends solely upon patient and family initiated psychosocial interventions. We compare PDC and SDSC using two separate and mutually informative analyses: directly compare PDC and SDSC outcomes at 4 months, analyze within group changes in the PDC group at 4 months to determine effectiveness. Subjects clinically identified as likely to have a degenerative dementia in a specialty clinic are approached for enrollment in the study.

### **DEMENTIA LITERACY AMONG COLLEGE STUDENTS**

M. Pavletic, C. Anderson-Hanley, *Union College, Schenectady, New York*

For the first time in history, the USA will have more old people (above the age of 65) than young people (Alzheimer's Association, 2010). Although many individuals above the age of 65 live productive lives, approximately 10% of those within this demographic suffer from dementia. How can an outnumbered younger population keep these vulnerable members of society functional and safe for as long as possible? Early diagnosis and intervention seem to help, but Generation Y, the group of America's citizens that will face the brunt of the burden from graying Baby Boomers, must be able to recognize the prodromal symptoms of dementia. Learning about the current state of potential caretakers' knowledge of dementia, or dementia literacy, can help experts measure preparedness for this future epidemic. This study examined the dementia literacy of college students, specifically if the degree of contact with those with Alzheimer's affected the amount of knowledge par-

ticipants. Twenty-eight college students completed a dementia literacy questionnaire and were asked to identify symptoms and diagnoses after viewing four video clips of older adults with varying symptoms of dementia. Correlations revealed an association between familial dementia experience and ability to identify prodromal symptoms ( $r = .44$ ). This study's findings resonate with previous research: laypeople's dementia literacy is fair at best (Werner, 2003). Further research should continue to examine college-aged individuals' ability to recognize the early symptoms of Alzheimer's. By understanding the general population's degree of dementia knowledge, education interventions can be tailored to address this serious, debilitating condition.

### **AN INSIDER PERSPECTIVE OF PREFERRED ACTIVITIES IN NURSING HOME RESIDENTS WITH DEMENTIA**

S.H. Tak, *University of Arkansas for Medical Sciences, Little Rock, Arkansas*

Cognitively stimulating and enjoyable activities appropriate to individual needs are important not only to meet regulatory requirements but also to implement resident-centered care for improving quality of life in the nursing home. The purpose of this study was to explore the extent of activity involvement, motivators and barriers from the perspective of NH residents with mild dementia. Twenty six study participants participated in semi-structured, individual interviews. Content analysis of the interview transcriptions was used. The mean age of participants was 85 (S.D., 6.0) years. The majority of them (76.9%) was women. The mean year of education was 13.3 (S.D., 3.2). Their cognitive impairment ranged from moderate to mild dementia with a mean Mini Mental State Exam score of 15.8 (S.D. 4.2). Preliminary results revealed six types of preferred activities: music and arts, social/interpersonal, spiritual/religious, literal, exercise/physical, and games/cards. Family members, friends, and nursing staffs were the motivators for trying out or engaging in activities. Participants reported a wide range of barriers to participating in activities, including cognitive and physical health status and environmental factors. It is critical to assess the needs and abilities of nursing home residents in order to provide tailored activities and promote engagement in activities in nursing home residents with dementia.

## **SESSION 605 (POSTER)**

### **EDUCATIONAL EVALUATION**

#### **WHAT DETERMINES WHETHER A KNOWLEDGE TRANSFER TOOL TO REDUCE MEDICATION RISK SUCCEEDS OR FAILS?**

C. Tannenbaum, *Université de Montréal, Montreal, Québec, Canada*

We conducted an in-depth qualitative study using the phenomenology approach with a sub-set of 32 older adults with polypharmacy taking at least one inappropriate benzodiazepine prescription who participated in a randomized controlled trial of medication risk reduction. Participants received a paper-based knowledge transfer tool comprising a self-assessment component, presentation of the evidence-based risks associated with benzodiazepine use, knowledge statements designed to create cognitive dissonance about the safety of benzodiazepine use, education about drug interactions, peer-champion stories intended to augment self-efficacy, suggestions for equally or more effective therapeutic substitutes for insomnia and anxiety, and simple tapering recommendations. Participants were selected for interviews using a contrast sample design with three crossed strategic variables: cessation of benzodiazepines (yes or no), duration of benzodiazepine use (<5 years or > 5 years), and age (stratified at age 75). Thematic content

analysis comparing the discourses according to the subject types developed from the strategic variables revealed two important categories of information: 1) mechanisms underlying the success of the knowledge transfer tool (components of the tool, duration of use of the benzodiazepines); and 2) reasons for the failure of the knowledge transfer tool (age-related trade-offs between the quantity and quality of remaining life years, and the presence of non-modifiable internal (anxiety traits) or external (“my doctor told me it was OK”) components). Knowledge transfer interventions aimed directly at medication consumers to reduce risk work best for shorter-term drug users who possess the mental flexibility to embrace and incorporate new knowledge, regardless of age.

### **RIGHT UNDER OUR NOSES: WHY ONE NEW FRONTIER ON AGING SHOULD BE A POST-SECONDARY INTERGENERATIONAL CLASSROOM**

M. Murphy, *Social Work, UBC, Kelowna, British Columbia, Canada*

This session will review the findings of a two year multi-method investigation of an innovative post-secondary intergenerational classroom on the Sociology of Aging with students ages 18-102. The session will provide participants with background on intergenerational theory, explain the theoretical framework employed (including social distance theory), and provide an overview of the research methods used. These methods included five different pre-and-post scales (i.e. ; classroom observations; and focus groups with students. This study was approved by an institutional ethics review board and funded with an internal university innovation grant.

### **FRONTIERS, BORDERS AND CROSS PLAYERS IN INTEGRATING MENTAL AND PHYSICAL HEALTH CARE OF AGING PSYCHIATRIC PATIENTS BY CLINICAL INSTRUCTORS AND YOUNG UNDERGRADUATE STUDENTS**

J. Da Silva, A.M. Marins, L. Fernandes, M. Reis, M. Jardim, R. Cotrofe, T. Silva, *Federal University of Rio de Janeiro, Rio de Janeiro, Rio de Janeiro, Brazil*

The aging of psychiatric patients has posed challenges to health care providers and clinical instructors. In particular related to promotion of healthy lifestyles and protective behaviors of more complex aging adults, with mental disorders and physical co-morbidities. This exploratory descriptive study was developed with 150 day patients who had one or more physical co-morbidities and presented physical and mental accelerated aging process, discrepant from their chronological age in the lifespan and 60 young undergraduate students over the course of two years. Educational games were developed to facilitate undergraduate nursing students explore frontiers, borders and cross players in the first contact with psychiatric day-hospital patients and to set discussion on health issues towards motivating day-hospital patients to sustain mental and physical self-care practices. Key objectives were to (i) provide ice and fear breaking positive experiences in working with psychiatric aging patients; and (ii) develop with undergraduate nursing students thematic games on health issues by cognitive domain to provide learning experiences in creating materials and tailoring these with patient participation and evaluation. Labs, physical exams, cognitive and psychiatric evaluations showed substantial improvement. Students reported no fear after the first experience in caring for psychiatric aging patients and adoption of new paradigms in caring for people with special needs. Additional repercussions were the increase in extra-curricular practicum requests by students and the continuous request of patients, families, undergraduate nursing students and the hospital administration for the study to become a program to be offered on a permanent basis.

### **BUILDING COMMUNITY RESEARCH CAPACITY THROUGH EDUCATION: AN OUTCOME EVALUATION STUDY OF HEALTH EDUCATIONAL INITIATIVES IN CHICAGO CHINESE COMMUNITY**

Y. Li<sup>1</sup>, M.A. Simon<sup>2</sup>, E. Wong<sup>2</sup>, B. Wong<sup>2</sup>, E. Chang<sup>1</sup>, F. Huang<sup>1</sup>, X. Dong<sup>1</sup>, *1. Rush University Medical Center, Chicago, Illinois, 2. Chinese American Service League, Chicago, Illinois, 3. Northwestern University, Chicago, Illinois*

Background: Community-academic partnership is among the most commonly practiced collaborations in community-based participatory research (CBPR) projects. Our study aims to create culturally-appropriate educational programs to increase community's capacity to understand aging research and evaluate its effectiveness. Methods: CBPR approach was utilized to partner with Chicago Chinese community. Key stakeholders constituted the Advisory Board that identified workshop topics most concerning to the community. We conducted 7 educational workshops (English, Cantonese, and Mandarin). We performed pre- and post- tests before and after the workshops, and sent out a follow-up in three weeks' time. SPSS analysis was performed to examine the test scores. Results: There were 208 participants in total. The test scores are based on the accuracy of each question from all participants. The test scores of 74 questions from 7 workshops, increased from 36% in pre-test, to 46% in post-test, to 50% in follow-up (p value=0.001). Depression session had the lowest accuracy score in pre-test (9%) whereas breast cancer session had the highest (69%). The elder abuse session experienced the most significant increase in accuracy, from 29% in pre-test to 55% in post-test, presenting a 26% increase. The grant-writing session had the highest knowledge retention rate after 3 weeks, showing 69 % accuracy in post test to 86% in follow-up test. Conclusion: Culturally and linguistically-appropriate health educational initiatives are effective to increase the knowledge base of health sciences research in the Chinese community. Our study has wide implications for future health educational programs in minority aging population.

### **RESEARCH ON THE INFLUENCE OF THE INTERGENERATIONAL RELATIONSHIPS IN FAMILY TO THE PARTICIPATION OF THE OLD-AGE EDUCATION IN CHINA**

Y. Song, *Institute of Population Research, Peking University, Beijing, China*

Following the reviews of literatures in the old-age education in China, most studies focus on how to advance and polish the existed old-age education systems and policies, describe the current situation and anticipate the development trend, however, few research focuses on the old people themselves, who are the core participant group in aging education. In fact, based on the collected data about elderly education, it indicates that China have a low rate of the old-age education participation. Due to the profound impact of the Chinese traditional culture, the effect of “family” on the elderly behavior will be long-term and significant. This study considered, in the study of Chinese elderly educational issues, the relationship between them should be paid more attention. As a result, this paper aims to explore the factors which might be the key points to confine the participation of aging education activities, and hypothesis has been proposed that intergenerational relationships in family would be the principal factor. In order to test this hypothesis, we use data on 2,000 men random sampled from the East, Middle and West of China, questionnaire was been developed to investigate whether the degree the old age education participation was affected by the wealth flow, emotional intimation and family structure, which were three principal dimensions of the intergenerational relationships in family. This study expects to draw following conclusions: the intergenerational relationships in family would influence the old age education participation significantly.

## INCREASING INTEREST IN GERIATRIC PRIMARY CARE IN AN NP PROGRAM: IT TAKES A VILLAGE

D.A. Hunt, *College of Nursing, University of Central Florida, Orlando, Florida*

**Aim:** To compare the use of a 'Village' of practice patients and caregivers with usual instruction to increase NP student understanding and appreciation of caring for older adults and their caregivers. **Background:** Currently, almost one out of eight Americans is 65 years of age and older. As Baby Boomers age, the demand for geriatric primary care providers will outpace the growth of graduates who specialize in geriatrics. Currently, less than 4% of nurse practitioner students self-identify a desire to specialize in geriatrics. **Methods:** The Village, adapted from the Village Concept for teaching pharmacology to undergraduate nursing (Howe, 2010), is an active teaching method that blends use of practice patients and caregivers, case studies, problem based learning and open discussion in teaching geriatrics to nurse practitioner students. Practice patients and caregivers are introduced early in the semester through the Village directory. The directory includes the names, photographs, demographic data, medical history, and current health status of each community member. During week three of the academic semester, practice patients and caregivers become an integral part of the classroom education experience, with focus on diagnosing and treating geriatric syndromes. During the first and last class meeting, the Kaiser Medicare Quiz and the Reaction to Aging Questionnaires are administered. **Findings:** Students grades and evaluation of the course was compared between spring 2011 and spring 2012. Grades significantly improved and course evaluations were significantly improved with use of the 'Community'. Scores on the questionnaires were significantly improved as were student self-report of perceptions of aging.

## INTERDISCIPLINARY HEALTH PROFESSIONS TRAINING: TRANSITIONING A FACULTY DEVELOPMENT PROGRAM FROM 36 TO 160 HOURS

C. Ford<sup>1</sup>, P. Sawyer<sup>1</sup>, A.G. Rothrock<sup>1</sup>, C.J. Brown<sup>1,2</sup>, C. Ritchie<sup>3</sup>, *1. Gerontology, Geriatrics & Palliative Care, University of Alabama at Birmingham, Birmingham, Alabama, 2. Birmingham/Atlanta VA GRECC, Birmingham, Alabama, 3. University of California, San Francisco, San Francisco, California*

The UAB Geriatric Education Center (GEC) Faculty Scholars Program (FSP) is an interprofessional training program for health professions faculty, which focuses on priority areas identified by the Institute of Medicine (advanced illness, care coordination, frailty, health literacy, medication management, pain management and palliative care). Initially established as a 36-hour curriculum, the program was expanded to a 160-hour curriculum in its fourth year. The new one-year curriculum includes: 1) Five in-person day-long interactive workshops (40 hours); 2) Eight self-study modules (16 hours); 3) Required attendance at a GEC-sponsored interprofessional conference focusing on the care of the complex older adult (2 days; 16 hours); 4) Development of two interprofessional continuing education newsletters by each faculty scholar, one of which is a team project developed with fellow scholars and the other an individual effort (32 hours); and 5) Mentored scholarly products, including manuscripts, geriatric-based curriculum, and other projects approved by the UAB GEC directors (56 hours). The focus of this presentation is Year 4 of the FSP, the first year of the 160 hour program, with enrollment of 24 scholars from 9 universities located throughout the state. This cohort includes faculty from Dentistry, Medicine, Nursing, Nutrition Sciences, Pharmacy, Physical Therapy, Physiology, Psychology, and Social Work. We will discuss the expansion of the curriculum, the recruitment process, and program implementation. After attending this presentation, participants will be able to discuss opportunities and challenges associated with expanding a faculty development program, curriculum development, recruitment strategies, program implementation and evaluation.

## IMPACT OF A COLLABORATIVE INTERPROFESSIONAL LEARNING EXPERIENCE UPON MEDICAL AND SOCIAL WORK STUDENTS, AND MEDICAL RESIDENTS IN HEALTH CARE WITH OLDER ADULTS

Y. Lee, P.R. Gould, L. Bronstein, *Social Work, Binghamton University, Binghamton, New York*

**Purpose:** While interprofessional collaboration is often thought to be a pre-requisite for effective health care delivery for older adults, graduate students and medical residents are rarely trained to work together. Consequently, physicians, social workers, and other health care providers enter practice with limited understanding of one another's roles, which impedes their ability to maximize complementary expertise and patient outcomes. Focus groups evaluated the impact of a collaborative practice experience upon Social Work and Medical graduate students and medical residents, and explored factors related to participants' perception of the effectiveness of the interprofessional team in geriatric health care. **Design and Methods:** Medical and social work students, and medical residents participated in a collaborative practice experience conducting comprehensive geriatric assessments. Two focus groups with six medical students, three social work students, and three medical residents were conducted post-experience to investigate the effectiveness of the model of interprofessional collaboration. Data analysis was conducted in three steps: (1) open coding, (2) axial coding, and (3) selective coding. **Results:** Three major themes relating to the effectiveness of the interprofessional education and implications for practice emerged: (1) benefits of collaborative experiential learning environment, (2) recognition of complementary roles in developing a holistic intervention with complex geriatric patients, and (3) challenges to interprofessional communication. **Implications:** Students in health care professions benefit from interprofessional experiential learning opportunities which translate into improved patient care. Students would benefit from earlier and more frequent exposure to interprofessional practice.

## ENHANCING NURSING CURRICULA TO INCORPORATE BEST PRACTICES IN THE CARE OF OLDER ADULTS: THE GERIATRIC NURSING EDUCATION CONSORTIUM (GNEC)

S. Sofaer<sup>1</sup>, J. Fortin<sup>1</sup>, M. Mezey<sup>2</sup>, A. Shire<sup>1</sup>, J. Stanley<sup>3</sup>, R. Watman<sup>4</sup>, *1. School of Public Affairs, Baruch College, New York, New York, 2. The Hartford Institute, New York, New York, 3. American Association of Colleges of Nursing, Washington, District of Columbia, 4. John A. Hartford Foundation, New York, New York*

Nursing students will care for older adults in the future regardless of where they work and their specialization. To ensure that nursing graduates understand the special needs of older people and the best practices in their care, the John A Hartford Foundation-funded Geriatric Nursing Education Consortium (GNEC) was created by the American Association of Colleges of Nursing (AACN) and The Hartford Institute at New York University. The project aimed to infuse geriatric content into a variety of existing senior level courses in nursing programs across the country. Using evidence-based modules created by The Hartford Institute, the AACN conducted six Faculty Development Institutes (FDIs) across the country for faculty whose Dean/Director committed to support curricular change post FDI. Eight hundred and eight faculty from 481 nursing programs participated in GNEC trainings. An external evaluation, using follow-up surveys one and two years post-FDI, found that among 344 responding organizations, 281, or 82%, enhanced or revised at least one course within two years. Impressively, a total of 676 courses were affected thereby arming nursing students with the skills to provide competent care to our aging population. We will present descriptive and inferential data from the external evaluation which confirms that key elements of the GNEC model, such as support from Deans/Directors, user-friendly modules, the FDIs, and specific actions are returning faculty members all contributed to the number of senior courses revised. This model of achieving curricular change has great



promise and needs to be extended to more nursing programs, faculty and students.

### **GERIATRIC EDUCATION IN THE HEALTH PROFESSIONS: ARE WE MAKING PROGRESS?**

S.H. Bardach, G.D. Rowles, *Graduate Center for Gerontology, Univ of Kentucky, Lexington, Kentucky*

Older adults consume a disproportionately large percentage of health-care resources. Despite advocacy and efforts initiated more than a quarter of a century ago, the number of providers with specialized training in geriatrics is not commensurate with the growing population of older adults. This presentation provides a contemporary update on the status of geriatric education and explores how geriatric coverage is valued, how geriatric competence is defined, and how students are evaluated for geriatric competencies. Semi-structured interviews were conducted with curriculum representatives from seven health professions disciplines –communication disorders, dentistry, medicine, nursing, pharmacy, physical therapy, and physician assistant studies - in a case study of one academic medical center. A comprehensive literature review indicated that geriatric training varies across health professions disciplines but remains limited. All interviews were transcribed and themes were identified through a process of constant comparative analysis. The variability among disciplines and need for greater geriatric coverage were confirmed through our case study. Interviews also revealed that while participants recognized the unique needs of older patients and valued geriatric coverage, they identified shortage of time in packed curricula, lack of geriatrics-trained educators, absence of financial incentive, and low student demand as barriers to improving geriatric training. Findings suggest the need for institutional commitment to enhance geriatric education as a component of health professions curricula. We discuss current efforts to engage educational leaders to develop this commitment.

### **THE NEED FOR PROFESSIONAL TRAINING IN GERIATRIC MENTAL ILLNESS: FINDINGS OF AN URBAN ENVIRONMENTAL SCAN**

D.B. Kaplan<sup>1,2</sup>, M.B. Friedman<sup>2</sup>, K. Williams<sup>2</sup>, K.T. Chan<sup>3</sup>, *1. School of Social Work, Columbia University, New York, New York, 2. The Geriatric Mental Health Alliance of New York, New York, New York, 3. Boston College, Boston, Massachusetts*

Numerous reports have pointed to inadequacies in service provision for older adults with mental health needs. These include overuse of institutions, limited access to services, minimal capacity to serve cultural minorities, ignorance about geriatric mental illness and its treatment, and more. Academic knowledge of geriatric mental health is not being effectively translated to the service providers who directly impact older adults. The proposed paper reviews a mixed-methods environmental scan which evaluated the need for and obstacles to obtaining training regarding geriatric mental illness. Data were collected in a large, urban community in the Northeastern United States. First, a stakeholder advisory committee was established to design the research study. Then, nine focus groups and 16 interviews were facilitated with mental health, aging services, health, and residential providers, leaders of community organizations and professional associations, consumers and advocates, and academics. Finally, based on the findings from qualitative analysis of transcripts, an electronic survey was designed and distributed to health and mental health practitioners and administrators. 180 individuals completed the survey, and those data were evaluated with basic quantitative techniques. The environmental scan illuminates organizational practices across professional fields, the current state of training and program design for geriatric mental health, systemic challenges to improved care within industries, personal capacities among providers, and much more. These findings offer critical insights regarding barriers which must be overcome in order to improve the quality of care for older adults with mental illness.

### **LET'S TALK ABOUT SEX: AGING AND SEXUALITY. DEVELOPMENT AND IMPLEMENTATION OF A WEBINAR FOR PROFESSIONALS, ACADEMICS AND STUDENTS**

P.A. Greenberg, H. Nordell, P. Woischke, *Gerontology, St. Cloud State University, St. Cloud, Minnesota*

This webinar was developed by faculty and students in response to concerns raised by professionals, academics, and students. The focus was if the topic of sexuality and intimacy for older adults is so important and why is it so neglected. To not talk about sex can result in diminished physical and mental health and autonomy for older adults. It is essential for health care and service providers to listen and/or initiate the conversation. Questions raised: why is there such discomfort in approaching this topic; what are the possible implications for older adults themselves (physical, social and mental health), community and health care systems if we do not have this conversation? Foremost it is important to operationalize the terms sex and intimacy. It is crucial to expand our concept of sex beyond just intercourse between heterosexual couples to include all modes of intimate expression between Lesbian, Gay, Bisexual, Transgender and Heterosexual persons. It is the act/expression of intimacy with others and/or with oneself that is at the heart of this webinar. Forty-one people attended the Webinar. Of those 21 were professionals (primarily in residential facilities), 13 were students and 7 were affiliated with an academic institution. Of those, 23 completed evaluations and 74% rated the webinar and its content exceeding/met expectations. Even when respondents stated that they were knowledgeable about the topic they found that the webinar provided means to initiate conversations. In addition to the webinar a companion google site was developed that provided access to research and educational tools.

## **SESSION 610 (POSTER)**

### **EMOTIONS AND MENTAL HEALTH**

#### **PATTERNS OF ALCOHOL CONSUMPTION AND PSYCHOLOGICAL DISTRESS: AN EXAMINATION OF THE RELATION AMONG OLDER ADULTS**

A.N. Bryant, G. Kim, *The University of Alabama, Tuscaloosa, Alabama*

The differences in psychological distress among older adults who participated in varying alcohol consumption patterns were examined. Any past year alcohol consumption and frequency of binge drinking were the consumption patterns used. Data were obtained from the 2009 California Health Interview Survey and selected samples included adults aged 60 and older (CHIS) (n=19,925). Hierarchical multiple regression analyses were conducted. Significant covariates indicated that individuals who were younger, female, unmarried, and had lower annual income were likely to experience elevated levels of psychological distress. Racial/ethnic covariates tested indicated that Asians and Blacks were likely to experience less psychological distress than their White counterparts. A significant main effect was found for frequency of binge drinking indicating that an increased frequency of binge drinking significantly predicted an increase in psychological distress (B=.10, p<.001). The results indicate that older adults who binge drink more frequently may experience increased levels of psychological distress which provides further evidence for the negative effects of binge drinking on the mental health of this age group. These results suggest that

the development of binge drinking interventions for older adults may be an important step in improving the mental health of this age group.

### **A CROSS-SECTIONAL STUDY ON LONELINESS AND WELL-BEING OF COMMUNITY-DWELLING CHINESE OLDER ADULTS IN CHICAGO**

E. Chang<sup>1</sup>, M.A. Simon<sup>2</sup>, E. Wong<sup>3</sup>, B. Wong<sup>3</sup>, F. Huang<sup>1</sup>, Y. Li<sup>1</sup>, X. Dong<sup>1</sup>,  
*1. Rush Institute for Healthy Aging, Rush University Medical Center, Chicago, Illinois, 2. Northwestern University, Chicago, Illinois, 3. Chinese American Service League, Chicago, Illinois*

**Background:** Despite loneliness is an important health indicator of psychological well-being, little attention has been paid to understanding loneliness among immigrant population. Less is known about loneliness in U.S. Chinese older adults whose psychological needs are relatively under-studied. **Methods:** This is a cross-sectional study on 1,112 Chinese persons over the age of 60, and is the largest cohort of U.S. Chinese older adults in epidemiological studies. We examined loneliness among community-dwelling Chinese older adults in Chicago. R-UCLA scale was administered to investigate loneliness in an interview setting. We utilized community-based participatory research approach partner with key stakeholders in Chicago Chinese community. Participants were recruited in community settings such as community centers, churches, senior facilities throughout Chicago. **Results:** Among surveyed participants (N=1,112), the mean age was 74.8 and sixty-four percent were female. With respect to loneliness, 23.9 % of participants reported lack of companionship, in which 6.3% often felt lack of companionship. 17.8 % of participants reported feeling of being left of life. 8.2 % of participants reported feelings of isolation. **Conclusion:** Loneliness is common in Chinese urban population that warrants public attention. Our findings call for future longitudinal population-based study to establish risk and protective factors of loneliness, and to further establish a deeper understanding of loneliness and psychological health. Future prevention and intervention programs with culturally sensitive approach are needed to improve the psychological well-being of this population. This study has wide implications for healthcare professionals, social services agencies and policy makers.

### **GENDER DIFFERENCES IN REPORTED SYMPTOMS OF DEPRESSION IN OLDER ADULTS**

A. Bilbrey<sup>1,2</sup>, J. Rengifo Nevarez<sup>1,2</sup>, A. Stepanenko<sup>1,2</sup>, R. Marquett<sup>2</sup>,  
D. Gallagher-Thompson<sup>2</sup>, *1. Palo Alto University, Palo Alto, California, 2. Stanford University, Stanford, California*

**Background:** One of the oldest and most robust findings is the gender gap in depression, with women averaging higher levels of depression than men. While there are studies exploring the difference between how men and women report their symptoms of depression, there are limited studies that explore these gendered symptoms in older adults. **Method:** Used the BDI-II to examine the differences between men and women in reporting individual symptom severity of depression administered as part of the pre-evaluation battery to depressed older adults (men N=23, women N=37), age range of 60 to 88 (mean age 69.7), who participated in a highly structured CBT-based 12-week intervention program called PEP: Positive Experience Project. **Results:** Women reported higher levels in change in appetite ( $r(58) = -0.273, p < .04$ ), change in sleep pattern ( $r(58) = -0.306, p < .021$ ) and loss of interest in sex ( $r(58) = -0.448, p < .000$ ) when compared to men. **Conclusion:** A majority of older adults regard sexuality as an important part of life and though the prevalence of sexual activity declines with age, a substantial number of older adults are participating in intimate relationships into their 80's and 90's. Sexual desire is an important influence on sexual satisfaction, which is significantly correlated with a quality of life. Depression impacts three important criteria for quality of life for older women. While they may initiate a discussion about changes in appetite or sleep

patterns, women are not likely to discuss loss of interest with their physician.

### **CBT INTERVENTION EFFECTIVE FOR TREATING DEPRESSION IN ETHNICALLY DIVERSE OLDER ADULTS**

J. Rengifo Nevarez<sup>1,2</sup>, A. Stepanenko<sup>1,2</sup>, A. Bilbrey<sup>1,2</sup>, R. Marquett<sup>2</sup>,  
D. Gallagher-Thompson<sup>2</sup>, *1. Palo Alto University, Palo Alto, California, 2. Stanford University, Stanford, California*

There are numerous studies showing the effects of CBT interventions to treat depression in young adults. There are fewer studies demonstrating the effectiveness of CBT in older adults. Additionally, there are myths that older adults may not be good candidates for such interventions due to age, confusion, or cultural competency. Furthermore, little research has been done to show the effectiveness of CBT in an ethnically diverse older adult population. This research aimed to determine whether a group of ethnically diverse older adults can improve depressive symptoms with a 12 week individual CBT intervention. Our study provided a 12 week intervention program called Positive Experience Project (PEP), a highly structured protocol based on cognitive behavioral techniques, to an ethnically diverse group of older adults with depression age 60 and older. Of the 60 participants, 48 (80%) self identified as White and the remainder self identified as either Black (5%), Asian (10%) or American Indian (5%). Ethnically, the sample was quite diverse: while European-Americans comprised 70% of the sample, the remaining 30% were of different cultural backgrounds: 10% identified as Hispanic-Americans; 5% as African Americans; 5% as Native Americans and 10% as Asian Americans. English was the native language for 72% of the participants, while the remaining 28% reported a different native language. All participants had to be English speaking in order to participate. Results showed that this form of CBT intervention was effective in treating depression without culturally modifying the program for ethnically diverse older adults.

### **IDENTIFYING DETERMINANTS OF HAPPINESS: THE ROLE OF AGE, WORK CONDITIONS AND BIOMETRICS**

G. Kyriotakis, *1. Geriatric Research Education and Clinical Center (GRECC), Louis Stokes VAMC, Cleveland, Ohio, 2. Case Western Reserve University, Cleveland, Ohio*

The empirical literature on happiness suffers from serious model uncertainty due to a relatively large number of possible model specifications and theoretical formulations. In this study I address the problem of model uncertainty in the identification of determinants of happiness using data from MIDUS (Midlife Development in the U.S.), a national longitudinal survey. I conduct Bayesian Model Averaging (BMA) to account for the large number of potential models found in the literature. I include in the total model specification both interview data - such as neighborhood conditions and work history, and biometric indicators of physical health, such as blood pressure and cholesterol and serotonin levels. I identify variables having a high posterior probability of being significant determinants of happiness. I examined the possibility of presence of heterogeneity in the results between two age-groups (Middle-Aged - form 40-60 yrs., and Young-Old - 61-80 yrs.), I evaluated the sensitivity of the results to the selection of both model and parameter priors, and I compared the BMA results to traditional models. The findings show that biometric indicators have little to no effect on the level of happiness for both MA and YO. Work characteristics are the most consistent and powerful determinants of happiness. I assessed the models' predictive performance by utilizing the Log Predictive Score, the Continuous Ranked Probability Score (CRPS), and by splitting the samples in testing and training sets. I found that the BMA model specification performs better in all measures of predictive accuracy in identifying determinants of happiness.

## IS IT ALWAYS GOOD TO PERSEVERE? ASSOCIATIONS AMONG HOPE, GRIT, AND COGNITIONS THAT PROMOTE GAMBLING

K.N. Erickson-Dockter, B.A. Randall, *North Dakota State University, Fargo, North Dakota*

Hope (i.e., an individual's ability to see options through which to meet desired goals and the motivation to make use of those options) and grit (i.e., perseverance in striving toward goals, even in the face of challenge and failure) are psychological constructs that are theoretically associated with positive outcomes for individuals. Some empirical evidence supports these linkages. For example, hope has been associated with academic achievement, physical health, and psychological adjustment, while grit has been linked to grade point average, educational attainment, and conscientiousness. Although both hope and grit may help people continue to pursue meaningful worthwhile tasks and to envision the likelihood of their eventual success, these same attitudes may underlie the continued pursuit of harmful behaviors. Problem gambling has been previously associated with cognitions that encourage continued gambling in the face of loss, which on the surface is similar to both hope and grit. Thus, hope and grit may share some common characteristics with problematic gambling cognitions, and may also be associated with elevated levels of gambling. A community sample of upper-Midwest adults (aged 37-89, N=202, 51 were aged 65+) was used to compare the associations for middle-aged and older adults. Results showed that hope and grit were associated with lower levels of cognitions related to problem gambling and lower levels of motivation to engage in gambling for middle-aged adults, but not older adults. Discussion will focus on the implications of the results for promoting well-being.

## WHO LIVES LONGER AND HEALTHIER?: THE EFFECT OF PERSONALITY TRAITS, PHYSICAL ATTRACTIVENESS, AND INTELLIGENCE ON HEALTH AND MORTALITY

K. Kim, *Sociology, University of Wisconsin - Madison, Madison, Wisconsin*

This study explores the effect of personality traits, physical attractiveness, and intelligence on health and mortality using three large longitudinal data: the Wisconsin Longitudinal Study (WLS), National Survey of Midlife Development in the United States (MIDUS), and the Americans' Changing Lives. Past studies suggested that each of those individual characteristics has significant implication for various life course outcomes, including health and longevity. However, prior studies tend to be cross-sectional and based on small samples. Furthermore, inconsistent instruments for measuring those properties resulted in mixed empirical results. Using the Big Five personality instrument and physical attractiveness ratings from multiple judges, this paper is the first to incorporate all of three essential individual characteristics in a single model predicting mortality, self-rated health, and number of doctor-diagnosed physical symptoms. Results from discrete-time event history analyses indicate that Neuroticism is a significant risk factor for all cause mortality both for men and women even after controlling for socioeconomic indicators as well as health behaviors, such as smoking, alcohol consumption, and psychological depression. However, contrary to past research, Conscientiousness did not have a significant protective effect on mortality. Results also suggest that physical attractiveness was significantly and inversely associated with mortality only for women while intelligence did not have any effect on health outcomes for men and women. When sibling fixed-effects model was estimated, the effects of these factors became insignificant, suggesting a significant genetic inheritance. The potential reciprocal relationship between health and personality will be addressed using a cross-lagged model.

## SESSION 615 (POSTER)

### EMPLOYMENT & OLDER WORKERS

#### PATTERNS OF WORK EXPERIENCE AMONG BABY BOOMERS IN KOREA

J. Kim<sup>1</sup>, J. Kim<sup>2</sup>, G. Han<sup>3,4</sup>, *1. Department of Sociology, Social Work and Criminal Justice, Idaho State University, Pocatello, Idaho, 2. Institute on Aging, Seoul National University, Seoul, Republic of Korea, 3. College of Human Ecology, Seoul National University, Seoul, Republic of Korea, 4. Research Institute of Human Ecology, Seoul National University, Seoul, Republic of Korea*

Korean Baby Boomers have highly valued 'work' since they experienced adulthood while Korean economy has been rapidly developed. This generation also has experienced uneasiness and uncertainty associated with current global economic downturn as well as Korean economic crisis in late 1990. So, 'work' has brought a lot of opportunities and challenges to them over the life course. This study aims to explore work experience of Korean Baby Boomers in three dimensions: positive experience, negative experience, job insecurity. We attempted to classify subgroups of work experience and explore attributes for each subgroup by applying Latent Profile Analysis (LPA) to three dimensions. Data used in this study has drawn from the 1st wave (2010) of Korean Baby Boomers Panel Study. The study sample (N=3,511) was comprised of currently working Boomers born in Korea between 1953 and 1964. LPA identified 4 subgroups of work experience: Average, High-Risk and High-Benefit, Insecure, Insensible Types. Multinomial logistic regression analysis revealed that high-risk and high-benefit type was more likely to work longer, have higher level of environmental mastery but experience negative physical symptoms than compared to average type. Insecure type was more likely to be temporary employees and boomers with broken career paths than average type. Insecure type showed lower level of mastery and self-acceptance, but higher rates of having chronic illnesses than the average type. The findings suggest career history is also a central piece of work experience and differently tailored to needs and resources for each group should be developed.

#### COMPUTER ACCOMMODATIONS IN YOUNG AND OLDER WORKING INDIVIDUALS WITH AND WITHOUT DISABILITY

D.S. Jopp<sup>1</sup>, M.E. Paggi<sup>1</sup>, A. Franke<sup>3</sup>, J.A. Sanford<sup>2</sup>, *1. Psychology, Fordham University, Bronx, New York, 2. Georgia Institute of Technology, Atlanta, Georgia, 3. Goethe University Frankfurt am Main, Frankfurt, Germany*

Although more and more people have to rely on computers in the workplace, research on the use of accommodation with respect to computer usage is rather limited. This is especially surprising as also more and more older individuals use computers. The present study investigated the extent to which younger and older individuals use computer accommodations and whether the type of accommodation differs between individuals without and with disability (i.e., visual, auditory, manual, mobility, and cognitive issues). We assessed 391 workers with disabilities (Mage = 50.94, SD = 12.39; age range = 18-80) and 246 workers without disabilities (Mage = 53.67, SD = 12.43; age range = 19-84). Overall, most individuals reported changing the environment of the computer (18%) to deal with work-related computer difficulties, followed by changing the settings (17%), and using add-ons (15%). Only very few people indicated that they would rely on others' assistance. As expected, individuals with specific disabilities reported specific accommodations: for instance, individuals with auditory mostly change settings, whereas those with visual issues mostly used add-ons. Of those with disabilities, older individuals used more add-ons and

changed the environment, whereas younger individuals changed settings more often. Of those without disability, age differences regarding different accommodations used were minimal. In sum, findings suggest that young and older individuals with and without disability use accommodations to deal with computer issues and that more research is needed to determine which accommodations are most successful and for whom.

### **DIFFICULTIES WITH COMPUTER USE IN THE WORKPLACE IN OLDER AND YOUNGER INDIVIDUALS WITH AND WITHOUT DISABILITIES**

M.E. Paggi<sup>1</sup>, D.S. Jopp<sup>1</sup>, J.A. Sanford<sup>2</sup>, *1. Fordham University, Bronx, New York, 2. Georgia Institute of Technology, Atlanta, Georgia*

Studies indicate that the majority of workers with disabilities have been unable to perform a range of work tasks at some point during their employment, but no studies have identified the specific computer-related difficulties they experience. The current study filled this gap, comparing older and younger workers with disabilities ( $n = 391$ ;  $Mage = 50.94$ ,  $SD = 12.39$ ; age range = 18-80) to those without disabilities ( $n = 246$ ,  $Mage = 53.67$ ,  $SD = 12.43$ ; age range = 19-84). For workers with disabilities, 58.9% reported at least one difficulty, compared to 26.1% of workers without disabilities. For workers with disabilities, the most common difficulty was with the monitor (42.9%), followed by the mouse (22.3%), keyboard (18.4%), computer unit (17.6%), word processor (15.0%), and email (13.4%). In contrast, 20.3% of workers without disabilities had difficulty with the monitor, whereas the majority of other problems ranged from 1.2% to 6.2% of the sample.  $\chi^2$  tests indicate that these differences are significant.  $\chi^2$  tests also show that significantly more older workers (50+ years) than younger workers (under 50) with disabilities had difficulty with the monitor (46.9% vs. 35.0%) and word processor (18.3% vs. 9.8%). These findings highlight the unmet needs of workers with disabilities in that most of them report difficulty with at least one computer component and some difficulties are more pronounced in older workers. Thus, employers should ensure that workers with disabilities have the accommodations necessary to complete job tasks to prevent loss of productivity and untimely exit from the workforce.

### **RETURNING TO WORK AFTER RETIREMENT: THE INFLUENCE OF UNPAID PRODUCTIVE ACTIVITIES**

D.C. Carr<sup>1</sup>, B. Kail<sup>2</sup>, *1. Institute on Aging, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, 2. Georgia State University, Atlanta, Georgia*

In recent years, pathways to final retirement have become increasingly blurred. Currently most Americans retire gradually from career jobs, but because of gains in life expectancy and overall health, people of traditional retirement ages can expect to spend a growing number of years during which they are capable of being productively engaged. For some, continued productive engagement involves returning to work after initial retirement — and this trend is likely to increase as the broader impact of the Great Recession continues to affect the retirement portfolios of many retirees. Concurrently, a growing number of initiatives seek to increase older adults' engagement in unpaid productive activities. We know little about how engagement in unpaid productive activities relates to whether individuals return to work after retirement. Using the Health and Retirement Study, we use hierarchical linear modeling to examine the relationship between formal volunteering, informal volunteering, and caregiving for a spouse, parents, or grandchildren and returning to work after retirement. Net of health and social location, preliminary results indicate formal volunteering and caring for grandchildren are associated with greater odds of returning to part-time work after retirement, whereas the other unpaid productive activities do not influence this transition. Similarly, returning to work after retirement was associated with greater odds of formal volunteering, but not associated with other unpaid productive activities.

## **SESSION 620 (POSTER)**

### **END-OF-LIFE PLANNING**

#### **THE ROLE OF PHYSICIAN TRUST IN END-OF-LIFE CARE PLANNING**

S.A. Keary, S.M. Moorman, *Boston College, Chestnut Hill, Massachusetts*

American adults of high socioeconomic status (SES) are more likely than those of low SES to have advance care plans for medical treatment at the end of life (EOL). However, the mechanisms linking SES to EOL preparedness have not been investigated. Prior research has yielded mixed results regarding SES and physician trust; some studies have found people of high SES to be more likely to trust their physicians, while other studies have found people of low SES to have greater levels of physician trust. Therefore, the present cross-sectional analysis tests whether two facets of physician trust mediate or moderate the relationship between patient SES and EOL planning. This sample consists of 3,310 white, Wisconsin high school graduates who were 65 years old when data were collected in 2004. Multinomial logistic regression was used to test the role of physician trust and SES in the following four outcomes: formal plans only (having a living will and/or durable power of attorney), informal plans only (discussion of one's EOL preferences), neither type of planning, or both types of planning. People with more assets, higher education, a financial will, and long-term care insurance were more likely to have made both formal and informal plans for EOL care. Greater trust in physicians and higher SES were associated with a greater likelihood that respondents had completed EOL planning. These findings have important implications with regard to primary care physicians' efforts to facilitate EOL care planning among their patients of low SES.

#### **DECISIONAL CONFLICTS IN MAKING END-OF-LIFE DECISIONS AMONG PARKINSONS OR DEMENTIA PATIENT SURROGATES**

J. Kwak<sup>1</sup>, M. Wallenda<sup>2</sup>, G. Leo<sup>2</sup>, K. O'Connell Valuch<sup>1</sup>, *1. University of Wisconsin-Milwaukee, Milwaukee, Wisconsin, 2. Parkinson Research Institute, Aurora Sinai Medical Center, Milwaukee, Wisconsin*

Family members must often make important end-of-life (EOL) treatment decisions for their relatives with dementia or Parkinson disease (PD) who are cognitively impaired. Yet, little is known about factors influencing EOL decision-making process among surrogates. This study aimed to identify correlates of decisional conflicts experienced in making EOL decisions among family caregivers of persons with dementia or PD by conducting survey. Eighty-four primary family caregivers ( $M\ age = 69, SD = 11, 68\%$  female; 50% completed college or higher) were recruited from a PD research registry, PD support groups, and a community-based program serving frail elders. Ninety percent of caregivers were designated as power of attorney for health care, POAHC. Under hypothetical scenarios about making end-of-life care decisions for relatives, 51% family caregivers chose a palliative care-oriented goal while 36% chose a functional maintenance oriented care goal and 7% chose life-prolonging care goal. Factors predicting subjective measures of decisional conflicts were: relative having communicated preferences for use of feeding tube ( $B = -.470, p < .05$ ) and for ventilator ( $B = .461, p < .05$ ) predicting uncertainty about the decision made ( $R^2 = .293, p < .05$ ); relative having been hospitalized more than once in the last six months ( $B = .307, p < .05$ ), the family caregiver being the POAHC ( $B = -.450, p < .05$ ), and relative having communicated preferences for use of feeding tube ( $B = -.375, p < .05$ ) predicting uncertainty about the role as a surrogate ( $R^2 = .391, p < .05$ ); and higher level of family dysfunction ( $B = .303, p < .05$ ) predicting overall uncertainty about the effectiveness of decision-making ( $R^2 = .303, p < .05$ ). Results suggest that practitioners may need to target efforts to facilitating communication

between patients and surrogates about specific EOL treatment preferences and family functioning and potential conflicts.

### **ROMANTIC RELATIONSHIP QUALITY AND KNOWLEDGE OF A PARTNER'S END-OF-LIFE PREFERENCES**

S.M. Moorman, M. Inoue, *Boston College, Chestnut Hill, Massachusetts*

Terminally ill patients are often physically or cognitively incompetent to make health care decisions for themselves, although choice while dying is a key component of a "good" death. Healthy persons can appoint a durable power of attorney for health care (DPAHC), a surrogate who is legally authorized to make medical decisions on their behalf in such a situation. However, numerous studies that match participants' end-of-life health care treatment preferences to their surrogates' guesses of those preferences indicate that surrogates may often be inaccurate: Random guesses are just as likely as surrogate choices to match the participants' preferences. The present study uses the interdependence model of couple communal coping and behavior change (Lewis et al., 2006) to shed further light on whether (a) relationship quality, (b) health status, and (c) gender are associated with romantic partners' accuracy as one another's health care surrogates. We examine these questions in a nationally representative sample of 1,075 heterosexual American couples aged 18 to 64. We find that a surrogate's own high ratings of relationship quality are associated with a greater likelihood of him/her making an error of overtreatment, whereas a partner's high ratings of relationship quality are associated with a reduced likelihood of the surrogate making an error of overtreatment. These results vary with the health of both partners, but hold for both men and women surrogates. These findings have important implications for gerontologists who work with dying persons and their families.

### **COGNITIVE IMPAIRMENT INCREASES THE LIKELIHOOD OF HAVING ADVANCED DIRECTIVES IN THE NHHCS**

R.C. Intrieri, P. Goodwin, *Psychology, Western Illinois University, Macomb, Illinois*

The 2007 National Home and Hospice Care Survey (NHHCS) represents survey data collected from home health and hospice agencies as well as current patients and discharges. Participating agencies were Medicare and/or Medicaid certified or held a state license to provide home health and/or hospice services. Survey data were collected from agency directors and staff between August 2007 and February 2008. Patient data were abstracted from medical records. The current analysis focuses on the 4,733 identified individuals that received hospice services. Mean age of the sample was 77.36 (SD=13.70). The sample consisted of 2,117 men (M=74.98; 13.48) and 2,616 women (M=79.28; SD=13.57). The current analysis examines the relationship between the cognitive impairment and the likelihood of having an advanced directive. Cognitive status was assessed using a five-level instrument where 0 = No impairment (n=1367 or 28.9%), 1 = Occasional reminders (n=632 or 13.4%), 2 = Some assistance in certain situations (n=692 or 14.6%), 3 = Great deal of assistance/direction in routine situations (n=960 or 20.3%), and 4 = Severe cognitive impairment (n=510 or 10.8%). Approximately 89% of the total sample had some type of advanced directive. Chi Square showed that advanced directives were related to cognitive impairment levels among those with advanced directives ( $\chi^2(4) = 35.996$ ;  $p = .0001$ ). Specifically, greater cognitive impairment increased the likelihood of an advanced directive. Additional analyses will examine the link between type of advanced directive and cognitive impairment.

### **NURSING HOME RESIDENTS' EXPERIENCES WITH COMMUNICATING END-OF-LIFE CARE WISHES**

J.K. Chahal, *Sociology & Gerontology, Miami University, Oxford, Ohio*

Research has indicated that Hospice use within nursing homes has increased from 14% to 33% over the past ten years; it is projected to

double within the next two decades (Daaleman et al., 2009; Miller et al., 2010). Therefore, it is more important to understand nursing home residents' end-of-life care goals in order to provide quality care until death. With a goal of creating open communication regarding end-of-life care wishes, this qualitative study explored how residents have experienced advance care planning, and current perceptions of the role of nursing home staff in initiating and facilitating conversations about end-of-life care issues. The study consisted of seven total participants of which four individuals participated in one group interview and three additional residents, one couple and one individual, agreed to individual interviews. Each interview lasted between one and two hours and was held in a private location within a nursing home in the Greater Cincinnati area. Analysis involved open, axial, and selective coding with grounded theory and a constant comparative approach. Results indicate that residents assume their healthcare provider and the nursing home staff are aware of their end-of-life care wishes, even though they had only communicated wishes with family. Additionally, residents want to only initiate further conversations about care if they experience a major health event, such as a stroke. Future implications show that healthcare staff needs to empower residents to openly communicate their goals for end-of-life care in order to honor residents' wishes in the future.

### **IMPROVING END-OF-LIFE CARE: PRESENCE OF ADVANCE CARE DIRECTIVES AND LENGTH OF HOSPICE UTILIZATION**

J.K. Chahal, *Miami University, Oxford, Ohio*

Advances in medicine combined with higher prevalence of chronic conditions reinforce the need for advance care planning in an aging population. Advance care planning is extremely essential for older adults, who are more likely to experience disease related complications and end-of-life care issues within nursing homes. Although almost 70% of US nursing home residents and 93% of those receiving palliative and/or Hospice care have completed an advance care directive, only 26% have completed two or more forms (Resnick et al., 2009). The goal of this study was to determine if nursing home residents were likely to have more than one form of an advance care directive. Additionally, the study aimed to establish if the presence of an advance care directive, such as a Do-Not-Resuscitate (DNR) form, led to an increased length of Hospice utilization. Data for the study was collected from chart reviews of the fifty previously deceased residents of a nursing home in the Greater Cincinnati area. Findings indicate that although 96% of the residents had a DNR form and 69% had multiple forms of other advance care directives in their chart, only 58% used or were referred to Hospice services, with 55% of those referred averaging a length of stay between 0-6.01 person days. These findings suggest that even with adequate advance care planning, nursing home residents are still not receiving timely referrals to Hospice care. Future implications associated with this study focus on communicating the benefits of timely Hospice referrals as providing quality end-of-life care.

### **PERSPECTIVES AND NEEDS ABOUT ADVANCE CARE PLANNING AMONG LOW-INCOME OLDER ADULTS**

E. Ko<sup>1</sup>, J. Kwak<sup>2</sup>, M. Esperanza<sup>3</sup>, T. Pham<sup>1</sup>, S. Hall<sup>1</sup>, M. Piwowarski<sup>3</sup>, M.U. Mazzyk<sup>3</sup>, *1. San Diego State University, San Diego, California, 2. University of Wisconsin-milwaukee, Milwaukee, Wisconsin, 3. Senior Community Centers, San Diego, California*

This study explores the perspectives and needs regarding advance care planning among low-income older adults. A qualitative design, using in-person interviews with 21 residents at the Transitional Housing Program (THP) in an urban community in southern California was implemented. The majority (71.4%, n=15) of participants had experienced living on the street with average length of 47 months. The mean age of the participants was 65 and two-thirds (62%, n=13) had some

college or a college degree. The majority had been diagnosed with hypertension (n=16, 76.2%), followed by arthritis (n=12, 57.1%), a heart problem (n=7, 33.3%), or psychiatric disorder (n=10, 47.6%). In regard to advance care planning, only three participants completed advance directives (AD) and 43% reported having no one to designate as a health care proxy. The major themes identified through the interviews regarding advance care planning include the importance of 1) gaining control of one's life; 2) having faith with god; 3) having dignity in the last moment of life, and 4) the needs of AD education. A majority of participants rejected the idea of relying on life supports as it is considered to be not "living" and undignified. Faith and spirituality played a significant role in embracing death. Lack of knowledge about AD was predominant.

## SESSION 625 (POSTER)

### ENVIRONMENT AND AGING

#### IMPACTS OF HOME MODIFICATIONS ON AGING-IN-PLACE

E. Hwang<sup>1</sup>, L. Cummings<sup>2</sup>, A. Sixsmith<sup>2</sup>, J. Sixsmith<sup>2</sup>, 1. *University of Tennessee, Martin, Tennessee*, 2. *Simon Fraser University, Vancouver, British Columbia, Canada*

The purpose of this study is to analyze the relationship between home modifications and aging-in-place. Using the ENABLE-AGE UK sample (n=376), we hypothesize that seniors who have modified their housing are likely to have stayed longer in their current housing. The average age of the sample population was 84.9 (SD = 2.7) and the vast majority of the sample was women and widowed. To explore the impacts of home modifications on aging-in-place, we carried out multiple regression analysis. There is a positive relationship between home modifications and aging-in-place. The results indicated that those who had home modifications done were likely to stay longer at their existing housing than those who did not. Home modification positively related to aging-in-place. The results underscore the importance of supportive environments to prolong living in housing settings. With this recent emphasis on aging-in-place policy, specific housing programs and grants have been initiated and this encourages many older people to modify their housing to remove barriers at their housing.

#### EXPLORING CONNECTIVITY AND RURAL AGEING: ISSUES AND CHALLENGES FROM 'THE GREY AND PLEASANT LAND?' PROJECT

R. Means<sup>1</sup>, V. Burholt<sup>2</sup>, C. Hennessy<sup>3</sup>, 1. *Faculty of Health & Life Sciences, University of the West of England, Bristol, United Kingdom*, 2. *University of Swansea, Swansea, United Kingdom*, 3. *University of Plymouth, Plymouth, United Kingdom*

'Grey and Pleasant Land? An Interdisciplinary Exploration of Older People's Connectivity in Rural Civic Society' was a New Dynamics of Ageing project in the UK based on a collaboration between five universities and the project contained seven different work packages varying from a community survey to a work package seeking to engage older people in the research through the internet. From the outset, the challenge of 'holding' such diversity was recognised and 'connectivity' was adopted as an 'heuristic device' to help keep all the different elements of the project together. During the life of the project, the popularity of the term 'connectivity' took off in assorted policy and research funding documents with AHRC leading the multi Research Council programme on 'Connected Communities'. This paper argues that the exploratory power of connectivity make it much more than an heuristic device (a kind of convenient research cellotape). Drawing on the work packages, the diverse ways in which rural elders connect will be illustrated. It will be argued that connection to place still matters to many rural elders but that overall they are starting to transition from place based to a more geographically dispersed connectivity. This movement is

driven by greater mobility (many more of us move from place to place throughout the lifecourse) but also by the transformational power of the internet. The paper concludes with a Connectivity Continuum which embraces the full spectrum of connectivity options from 'place' to the 'virtual'.

#### THE PREFERENCE OF UNIVERSAL DESIGN FEATURES IN RETAIL ENVIRONMENTS

M.G. Pace<sup>1,2</sup>, M.H. Teaford<sup>2</sup>, S.L. Zavotka<sup>2,1</sup>, 1. *Montclair State University, Montclair, New Jersey*, 2. *The Ohio State University, Columbus, Ohio*

As we age, retail shopping continues to be prevalent in our daily activities. This exercise is connected to personal care, leisure, mobility and social interaction. Ultimately, shopping is a channel of independence. Thus, store design should accommodate the functional changes of customers, ages 55 and older. The solution here is to implement Universal Design features, which overall provide an accommodating and pleasing environment (Null, 1989). Examples of measurable design features in this study included wide aisles, visual contrast and signage. Through newly created instruments including a Universal Design Retail Preference Survey, a model combining Approach – Avoidance Theory and the Ecological Model of Aging/Person Fit Theory, black and white photography, and open-ended questions, this study determined that older customers do prefer Universal Design features. The researchers used 24 pairs of photographs showing both Universal Design features and Non Universal Design features. Spatial configuration, including wide aisles and open spaces on the selling floor, was most preferred.

#### THE LOUTH AGE FRIENDLINESS FOR ENVIRONMENTS AND COMMUNITIES TOGETHER STUDY (AFFECT): A MULTIDIMENSIONAL INSTRUMENT FOR ASSESSING LEVELS OF AGE-FRIENDLINESS

R. Bond, A. O'Hanlon, *Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland*

The Louth AFFECT Study: Age Friendliness For Environments and Communities Together is an interdisciplinary and multi-site project which aims to understand and measure levels of age-friendliness in Co. Louth, on the north east coast of Ireland, i.e. the extent to which people feel that their communities support them as they grow older. The study involved extensive consultation processes around Co. Louth with community based mid-life and older adults, multidisciplinary professionals and those with applied and / or academic expertise. The main study (n=1000) includes interviews with adults aged 50+ years, recruited via the geodirectory and convenience sampling. Information is collected on eight main themes: outdoor spaces and buildings, transportation, housing, social participation, respect and social inclusion, civic participation and employment, communication and information, and hospital and community services. The study draws on international evidence and research to make contributions to knowledge and consider overlaps and inter-relationships with other countries and research centres. The measures developed will be useful to those interested in making communities more supportive and friendly towards adults in mid- and later years.

#### IMAGINING DISTANCE: THE IMPACT OF GEOGRAPHY ON MOVES OF OLDER ADULTS

T. Perry, *University of Michigan, Ann Arbor, Michigan*

Distance is relative. Distance in moves of older adults can be conceptualized in terms of spatial relationships to original homes, adult children, and to doctors, and other professionals in one's life. Geographical distance does not always map onto emotional support. There are some older adults whose children live in other states and countries that participate in the moves and others, adult children live close and would not be part of moving day, packing or unpacking. This paper presents case examples of local and non-local moves of older adults, dis-

cussing the challenges of each type of move on older adults and members of their kin network. This ethnographic study of older adults, their family members and supportive professionals highlights the experiences of older adults and their network as they embark on relocation from their homes. Some older adults will move to senior living communities (either CCRCs or subsidized senior housing) while others choose to move to condos or build their own homes. To complete this project, I conducted interviews, participant observation of the moving process (packing, garage sales, moving day, adjustment) and document review with over 35 older adults from Ann Arbor, MI, their kin and supportive professionals in three stages: pre-move planning, move in-process, and post-move adjustment.

#### **ADVERSE EFFECTS OF FINE PARTICULATE AIR POLLUTION ON MARKERS OF INFLAMMATION IN OLDER U.S. ADULTS**

J.A. Ailshire, *Andrus Gerontology Center, Univ Southern California, Los Angeles, California*

Exposure to high levels of air pollution is associated with increased levels of inflammation. Older adults are particularly susceptible to the health consequences of exposure to high levels of air pollution. There are only a few existing studies of the link between air pollution and inflammation among older U.S. adults. However, these studies tend to focus on specific communities of older adults and the results may not be generalizable to the broader population. This study examines the link between residential air pollution exposure and levels of C-reactive protein (CRP) and lung function among older U.S. adults. The study sample includes about 4,000 non-Hispanic white and non-Hispanic black men and women ages 60 and older who participated in the 2006 Health and Retirement Study, a nationally representative study of older adults, and lived in their residence since 2004. CRP was measured using dried blood spots and lung function was assessed using a puff test. Individual data were combined with data on 2004 levels of fine air particulate matter (PM) from the Environmental Protection Agency's Air Quality System monitors. Older adults who lived in more polluted areas had higher CRP levels, net of individual risk factors such as race, education, smoking status, and body mass index. In addition, those who lived in the most polluted areas had reduced lung function even after adjusting for individual characteristics. This study contributes to the growing literature on air pollution and health and provides further evidence of the link between fine air PM and inflammation.

#### **EXPLORING THE CONCEPT OF "PLACE": THE SPATIAL PRACTICES OF LGBQ OLDER ADULTS LIVING IN SAN FRANCISCO**

J. Yeh, *University of California, San Francisco, San Francisco, California*

The spatial concentration of populations in cities influenced by attributes of the urban form has a changing impact on society especially in the way the concept of "place" is understood to have a relationship with aging, health, and well-being. This research used a qualitative approach to examine the lived experiences of lesbian, gay, bisexual, and queer (LGBQ) older adults in San Francisco through photo-elicitation techniques and narrative methods. Participants were asked to identify and represent their environments by recording them with disposable cameras. The photographs served as catalysts for conversation and robust platforms for articulation of their taken-for-granted, varied, and/or hidden cultural practices, social processes, and social and spatial relations. Through grounded theory, narrative, and visual analysis of participants' interviews and photographs, a description emerged of urban space as both a site of queer culture and as one of the many possible milieus for growing older. This presentation will discuss the way in which participants' spatial practices were productive of particular outcomes for LGBQ older adults as well as the way "place" and location shaped the way aged-identities and queer-identities were embodied,

emerge, and enacted. Furthermore, the way in which participants continually worked to re-integrate with their "place" in the face of changes and uncertainty – within their bodies and in their environment as they aged in San Francisco – through social actions, will be discussed. Finally, a theoretical exploration of the concept of "place" will be elaborated and the implications for considering "place" in aging will be discussed.

#### **"I'M JUST NOT GONNA GIVE AN INCH." PHILOSOPHY OF OLDER ADULT MEMBERS OF AN AGING IN PLACE VILLAGE PROGRAM**

A. Lavery Benson, *University of Denver, Denver, Colorado*

Interest in and implementation of village model programs of support are increasing as the older adult population within the United States grows. Membership benefits of a village program often include transportation for doctor's appointments and shopping, assistance with yard work, light home maintenance, referrals to vendors and opportunities for participating in social gatherings. Methods: This qualitative research project explored the experience of older adults who utilize a village model program. The sample included older adults who utilized village services within an urban setting. Eight older adults between the ages of 69 and "91 and a half" participated in individual in-depth interviews. In vivo, initial and then pattern coding were used for analysis. Constant comparative analysis was used to help the data come into place between the different transcripts reviewed. Results: Preliminary findings suggested that older adults who utilized this village model emphasized the importance of supporting each other and the need to resist internal and external messages, thoughts and attitudes that hinder involvement in life, such as participating in social or community activities. Implications: This project provides a better understanding of the strengths and challenges of the older adult who utilizes a village model of aging in place. The findings inform practitioners' about the losses and transitions older adults may experience as they try to live independently. The knowledge and awareness obtained through the voice of these older adults will inform the field about how an older adult's experiences and perspectives inform their decision to age in place.

### **SESSION 630 (POSTER)**

#### **FAMILY & HEALTH**

##### **CAREGIVING AT THE END OF LIFE: A NATIONAL PERSPECTIVE**

J.G. Cagle<sup>1</sup>, A.K. Smith<sup>1</sup>, D.C. Carr<sup>2</sup>, K. Covinsky<sup>1</sup>, 1. *University of California, San Francisco, San Francisco, California*, 2. *University of North Carolina, Chapel Hill, North Carolina*

Care at the end of life is often provided by a network of formal and informal care providers yet nationally representative data describing these networks is lacking. We used the Health and Retirement Study (HRS), a nationally representative study of older adults to present a description of end-of-life caregiving. Exit interviews were conducted with family members following the death of an HRS participant. Family members were asked to describe the decedent's needs for ADL/IADL assistance in the 3 last months of life, and who provided the assistance, i.e., the caregivers. A total of N=8159 HRS participants died between 2000 and 2010. Among these, N=5862 (72%) received ADL or IADL assistance prior to death from at least one unpaid family member/friend. Among these decedents, 54% were female, 76% White, 16% Black, and 7% Hispanic. Their average age at death was 80(SD=10.6) and they had an average of 2.6(SD=1.6) caregivers at the end of life. Caregivers, of which 69% were female, provided a mean of 7 hours of care per day. Primary caregivers, (i.e., the one who provided the most care) provided a mean 11(SD=8) hours of care. For 23% of care recipients, the primary caregiver for ADLs was a spouse, 34% an unpaid relative/friend, and 33% were paid caregivers. For the remaining 9%, only IADL assistance was provided. Family caregivers provide a substantial amount of

care in the last 3 months of life, and need to be viewed as a key component of the end of life care system.

### HEALTH COMMUNICATION NETWORKS OF OLDER ADULTS: WILLINGNESS TO SHARE FAMILY HEALTH HISTORY

S. Ashida, E. Schafer, *University of Memphis School of Public Health, Memphis, Tennessee*

Family health history (FHH) information can inform primary prevention of major chronic diseases, thus, CDC and NIH identified dissemination of FHH as one of the public health priorities. FHH can only be disseminated by older- to younger generation family members, placing a great amount of responsibility on older adults. This study explored the characteristics of social relationships associated with older adults' willingness to share FHH information with their network members. In 2011, 110 senior center participants (ages 60 years and older) were interviewed in Memphis, TN. A total of 1,058 social network members were enumerated, and a two-level logistic regression model was built. Participants were willing to share information about diagnoses (e.g., heart disease, diabetes) of family members to 456 (43%) network members; 63% of children and 46% of siblings. Participants' communication partners were less likely to be older-generation (OR=0.24) and more likely to be younger-generation (OR=1.94) members than same-generation, and those who provided emotional support to (OR=1.67) and were very close to respondents (OR=2.07); these members were more likely to be in the network of respondents who had higher perceived severity if family members encountered heart disease (OR=1.33). Although participants were willing to communicate FHH with younger members, large proportions of those who could benefit were not listed as those they were willing to share, suggesting the need to facilitate FHH dissemination among older adults. Perceptions about family members' risks for chronic diseases and quality of supportive relationships may play roles in how older adults communicate FHH.

### INTERGENERATIONAL HEALTH PROMOTION PROGRAM BY OLDER ADULTS -THREE-YEAR EXPERIENCE AND EFFECTS-

Y. Fujiwara<sup>1</sup>, H. Ohba<sup>1</sup>, M. Yasunaga<sup>1</sup>, K. Nonaka<sup>1</sup>, M. Nishi<sup>1</sup>, Y. Murayama<sup>1</sup>, H. Uchida<sup>2</sup>, S. Shinkai<sup>1</sup>, *1. Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, 2. University of Hyogo, Himeji, Japan*

**Objective:** We are conducting a longitudinal, intergenerational study, known as REPRINTS, in which senior citizens are engaged in reading picture books to children. This paper will focus on findings obtained during the first three years, and will evaluate the potential effectiveness of such social activities. **Methods:** 139 volunteers and 179 controls, all aged 60 years and over (Mean=67.33, SD=5.46), living in three areas in Japan, participated in baseline health check-ups starting in June, 2004. After completion of a 3-month training seminar (once a week, 2 hours per session), volunteers visited elementary schools and kindergartens in groups of 6-10 people for 30 months. They were assessed again with an annual health check-up. **Results:** At baseline, the average number of school years (13.1±2.6 vs. 12.0±2.3 years, p=0.002) was significantly higher in volunteers than in the control group. There was no significant difference in other baseline characteristics between the two groups. At the subsequent follow-up assessments, social network scores for the volunteers were significantly improved: the frequency of contact with children, new friends and acquaintances increased, as compared to the controls. Self-efficacy and Sense of Coherence (SOC) also significantly improved. In addition, the loss of hand-grip strength was significantly less in volunteers. **Conclusions:** Engagement in intergenerational and intellectually stimulating volunteer programs over a period of 30 months, led to markedly improved social network scores, and various aspects of psychological and physical performance were significantly less

declined or improved among senior volunteers, in comparison to the control group.

### FAMILY HEALTH LEGACIES: DIABETES MANAGEMENT AMONG OLDER RURAL ADULTS

M.M. Manoogian, *Gerontology, Psychology Division, Western Oregon University, Monmouth, Oregon*

Economic, cultural, and familial contexts influence health outcomes for older adults in Appalachia where rates of type 2 diabetes (T2DM) are among the country's highest (<http://www.cdc.gov/Features/dsObesityDiabetes/>). As part of a university initiative, this qualitative paper focuses on dyad interviews with older adults diagnosed with T2DM (n = 21; average age 67 years) and family support members (n = 16). Criteria for participation included: (a) a self-report of a diagnosis of T2DM for at least one year; (b) identification of a family support member willing to participate; (c) minimum of 18 years of age; (d) current resident of an Appalachian county; and (e) family history of residence in Appalachia. Relational status of dyads included spouses (n = 10), older parents/adult children (n = 9); sisters (n = 1); and best friends (n = 1). Grounded theory guided data analysis (Strauss & Corbin, 1990) and Erikson's (1950) focus on generativity emerged in narratives. Participants described health legacies that created links between generations, were crafted and negotiated by older family members, and were shared with succeeding generations. Themes included: (a) Diabetes as an expected and ambiguous visitor; (b) Family stories as sources of disease information and management expectations; (c) Health legacies shaping personal health outcomes; and (d) Transmissions of health legacies to younger generations. These intergenerational health legacies had implications for how T2DM was personally understood and managed as well as how disease management occurred within family and health provider relationships.

### A LONGITUDINAL MODEL OF SYMPTOM INCONGRUENCE & FUNCTION IN LUNG CANCER FAMILIES

K.S. Lyons<sup>1</sup>, S. Hiatt<sup>1</sup>, J. Bennett<sup>1</sup>, L. Nail<sup>1</sup>, E.K. Fromme<sup>2</sup>, L.M. Miller<sup>1</sup>, P.J. Johnson<sup>1</sup>, *1. School of Nursing, Oregon Health & Science University, Portland, Oregon, 2. OHSU - School of Medicine, Portland, Oregon*

Previous research on patient-family member incongruence (differing perceptions) suffers from several limitations. Traditional methods (e.g. percent agreement, Pearson correlation, difference scores) are limited in what they can tell us about incongruence; factors associated with incongruence are seldom examined; and changes over time are rarely included. Lung cancer patients (PTs) and their family members (FMs) struggle to manage symptoms, which are often severe, based on their individual perceptions of the PT's experience. Incongruent perceptions can lead to poor symptom management. Without understanding how incongruence changes, and factors associated with change, we cannot know the clinical relevance of incongruence or how best to intervene to support families at end of life or in severe illness. This study examined trajectories of PT-FM incongruence in perceptions of PT symptoms and function. A sample of 114 lung cancer dyads recruited through a cancer registry were followed for up to 12 months. This is one of the first studies to examine trajectories of incongruence using multilevel modeling. Results revealed that, on average, FMs rated PT fatigue, shortness-of-breath, and pain severity higher, and their physical function as lower, at baseline, than did PTs. On average, trajectories of incongruence were stable over time, except for physical function, which showed less incongruence over time. There was significant variability around average trajectories, suggesting a sample of dyads with varying degrees of change. Level 2 models found concealment and communication between dyad members significantly predicted incongruence over time. Discussion will include the importance of the family dyad relationship in managing symptoms.



## EFFECTS OF A LIFE STORY INTERVENTION ON CAREGIVING BURDEN RISK FACTORS

F. Zanjani, B. Downer, A.F. Hosier, J.F. Watkins, *Gerontology, University of Kentucky, Lexington, Kentucky*

**Objectives:** To examine the feasibility of Memory Banking (MB), an intervention emphasizing life story development for caregiver and care recipient preparation. MB is structured to provide the knowledge and skills for collecting, documenting, sharing, and maintaining life stories within the context of social support, brain exercise, and legacy. Dyads participate in MB to strategically document and share their life story, including future dreams, aspirations, plans and decisions. **Methods:** Data (2010-2012) from five MB workshops was examined to determine feasibility of community implementation and the effect of the intervention on indicators of caregiver burden: mental health, social support, and quality of life. Recruitment efforts resulted in N=42 participants. Participants were primarily female (75% white/Caucasian (93.1%), with an average age of 71 years. Results: Participants improved in all mental health domains, with significant improvements in anxiety ( $p=0.015$ ), mood disturbance ( $p=0.0028$ ), and emotional well-being ( $p=.02$ ). Results also indicated patterns for improvement in depression ( $p=0.11$ ) and instrumental support ( $p=0.12$ ). A significant improvement in cognition ( $p=0.0062$ ) was also observed. **Discussion:** The MB intervention resulted in improvement in mental health, but no noteworthy social or functioning improvements. MB outcomes indicate that the intervention is promising and supports continued investigation and development in the area of life story development for caregiver and care receiving preparation. MB effectiveness and versatility can have a major impact on improvement in social care burden, and can positively change the lives of many older adults. Future research is needed to examine the versatility and long-term effects of the MB intervention.

## SESSION 635 (POSTER)

### FAMILY CAREGIVING 1

#### CHALLENGES FACING CHINESE-AMERICAN FAMILY CAREGIVERS FOR ELDER WITH DEMENTIA

X. Lu<sup>1</sup>, H. Chen<sup>1,2,3</sup>, L. Xing<sup>1</sup>, M. Chen<sup>5</sup>, S. LevKoff<sup>1,2,4</sup>, 1. *Environment and Health Group, Inc., Cambridge, Massachusetts*, 2. *Harvard Asia Center, Cambridge, Massachusetts*, 3. *Harvard Medical School, Brookline, Massachusetts*, 4. *University of South Carolina, Columbia, South Carolina*, 5. *Charles B. Wang Community Health Center, New York, New York*

Chinese-American family caregivers face the typical strains of dementia caregiving, compounded due to cultural values. To better understand challenges they face, two focus groups were conducted in New York City: one with 11 Mandarin-speaking, and one with 11 Cantonese-speaking dementia caregivers. Average length of time being a caregiver was 4.45 years (range: 10 months to 10 years). Housing was a significant concern because most landlords refuse to accept families with someone with dementia, and assistant living facilities do not allow paid caregivers to stay. Caregivers of individuals with early-stage dementia were stressed due to uncertainties as to the future, and lack of knowledge about handling behavioral problems and keeping individuals socially active. Caregivers of individuals with late-stage dementia found life difficult due to the demands of 24/7 care. Participants liked seeking professional advice, which was perceived to be helpful. Participants relied on the services of paid caregivers, were highly satisfied, and wanted more services. Most caregivers chose not to send their loved ones to nursing homes, which was viewed as abandonment according to Chinese cultural values. Most participants would not share their concerns with family members, and instead preferred sharing experiences with other caregivers with similar backgrounds. Isolation due to language barriers and unfamiliarity with available resources were common. They are in urgent need of, and willing to accept support and assis-

tance from outside the family, when provided in a way that is consistent with their Chinese values and beliefs.

#### MEXICAN AMERICAN FAMILY CAREGIVER MEDICATION ADMINISTRATION HASSLES FOR OLDER ADULTS

H.S. Kao, *School of Nursing, The University of Texas at El Paso, El Paso, Texas*

Older adults rely increasingly on their families for assistance with taking their medications at home, but little is known about factors influencing this caregiving task. This study explores the effect of acculturation and social exchange on the hassles that Mexican American family caregivers face in administering medication regimen to their older adults residing at home. The study used a descriptive and correlational design with a convenient sample. Multiple regression was used to analyze data. A total of 239 Mexican American adult caregivers of an older adult on a daily prescription medication regimen were recruited in Dallas, Texas, and San Diego, California, where are the two leading states with most Mexican American residents. The caregivers' scores on the medication administration hassles scale were significantly affected by acculturation (such as language preference) and social exchange factors (such as the overall services provided by the elder) that explained 36% of the variance in the scale scores. The social exchange block (23%) had a larger influence than did the acculturation block (13%). Caregiving may be an outcome of dynamic family exchange relationships between the caregiving dyad. The study findings can help healthcare professionals detect potentially at-risk Mexican American families and provide them with timely and culturally appropriate interventions.

#### THE EFFECT OF CAREGIVING ON RN JOB SATISFACTION, WORKPLACE RELATIONSHIPS, AND WORK-FAMILY SPILLOVER

L.J. Clark-Shirley, 1. *Social Gerontology Researcher, Honolulu, Hawaii*, 2. *University of Maryland Baltimore County, Baltimore, Maryland*

Despite a rich literature documenting effects of informal caregiving on work-related outcomes of caregivers, little is known about how providing care to older persons impacts certain professions. For example, only a limited number of studies have explored the impact of registered nurses (RNs) providing informal care in addition to working. This preliminary study builds upon the literature, examining relationships between informal caregiving and RN work outcomes. A web-based survey was administered to 882 RNs, measuring job satisfaction, workplace relationships, and work-family spillover. Respondents self-identified as informal caregivers via a single item; caregiver burden, gains, and quality of support scale scores were collected for those identifying as caregivers. 41.2% (n=363) of RNs self-identified as informal caregivers. Linear regression models were used to first explore the effect of caregiver status on job satisfaction, relationships with managers and co-workers, positive work-family spillover, and work-family conflict. Objective and subjective caregiver burden, caregiver gains, and quality of support were then added into the models. For all outcome variables, caregiver status was not significantly associated with higher or lower scores. However, higher objective and subjective caregiver burden scores significantly predicted higher work-family conflict ( $B=.271, .205, p<.001$ ), lower objective burden and higher caregiver gains scores significantly predicted higher positive work-family spillover ( $B=-.154, .279, p<.001$ ), and higher perceived quality of support significantly predicted higher job satisfaction ( $B=.118, p=.016$ ). Co-worker and manager relationship scores were not influenced by caregiving. These results underscore the importance of caregiving context to future research on the effect of caregiving on RN work outcomes.

## HEALTH BEHAVIOR

**PHYSICAL QUALITY OF LIFE AND BMI AMONG OLDER ADULTS IN BEHAVIORAL WEIGHT MANAGEMENT**

K. Olson, E.A. Kellogg, C. Emery, *Clinical Psychology, The Ohio State University, Columbus, Ohio*

Obesity is a major public health concern in the United States, with one-third of all adults and approximately 20% of individuals over the age of 65 obese (i.e., body mass index (BMI) of 30 or more). Across age groups, obesity is associated with a variety of medical complications as well as impaired physical functioning. Although age-related disability may compound the effects of obesity on physical functioning, behavioral weight management programs do not typically address age-related differences that may exist among treatment-seeking individuals. This study evaluated effects of age on the association between BMI and physical quality of life. Eighty-six obese (average BMI=47.9±11.1) adult participants (mean age = 45.4±11.8 years; age range: 19 to 73 years; 76% female) in a university-based behavioral weight management program completed self-report questionnaires at program entry, including an indicator of quality of life (SF-36). In the total sample, BMI was negatively associated with physical functioning ( $r=-0.47$ ,  $p.001$ ), as measured by the physical functioning subscale of the SF-36. To examine age-related effects, correlations of BMI and physical functioning computed among older (age  $\geq 60$ ) and younger (age  $< 60$ ) participants revealed significantly greater magnitude in the older participants ( $r=-0.89$ ) than in the younger participants ( $r=-0.51$ ; Fisher's  $z=-1.67$ ,  $p=0.048$ ). Thus, obesity was more strongly associated with impaired physical functioning among individuals over age 60, suggesting older patients in behavioral weight management may require additional resources to address limitations in physical functioning.

**PATIENT-PROVIDER COMMUNICATIONS AND THEIR IMPACT ON ELDER HEALTH**

F. Alpass, C. Stephens, R. Flett, *Psychology, Massey University, Palmerston North, New Zealand*

Effective communication is a key component of the patient-provider encounter. While problems with communication may occur in any patient-provider encounter, there are also patient-related factors, such as age which may contribute to miscommunication. Compared to younger patients, there is greater variability in life histories, SES, financial resources, number and severity of illnesses and disabilities, and cognitive and functional ability in older cohorts. Older adults also bring other challenges to the patient-provider encounter. Health literacy decreases with age in patients 65+ years. Age-related changes such as sensory changes and cognitive declines may hinder the communication process. Even relatively healthy, high-functioning older adults experience patient-provider communication problems, with difficulties in comprehending information the most frequently reported problem cited. Ageism in the healthcare system is well documented with older patients less likely to receive a range of treatments and being treated less aggressively than younger patients for the same condition. Clearly, older adults experience greater challenges in the patient-provider encounter. Little is known about the impact of patient-provider communication on health outcomes in older adults. This study uses a nationally representative sample to investigate older community-dwelling New Zealanders' perceptions of the quality of communications with their health care providers, the factors that influence those communications and the impact they have on their health care utilization, and health status. Gaining a better understanding of these communications and their impact on elder health is essential for the development of interventions and policies that promote health, independence and efficient use of health resources.

**FOOD INSECURITY AND HEALTH CARE UTILIZATION IN OLDER ADULTS**

V. Bhargava, J. Lee, *University of Georgia, Athens, Georgia*

Food insecurity is a clinically relevant problem, however its effect on health care utilization among older adults is not known. This study examined the relationship of food insecurity with health care service utilization in older Georgians enrolled in Medicare and meals services using two complementary datasets, Georgia Advanced Performance Outcomes Measures Project (GA POMP) and the 2008 Medicare claims data ( $n=903$ , mean age 76.9, 31.0% male, 35.8% black). Health care utilization during 2008 (i.e., inpatient, outpatient, emergency, and home health visits and prescription medication use) was compared between food insecure and secure participants using negative binomial regression while controlling for potential confounders. About half of the sample (50.4%) was food insecure and they tended to have more chronic diseases than their counterparts. There were no differences in inpatient, outpatient, and emergency room visits and prescription medication use by food insecurity. Food insecure participants, however, had significantly fewer home health visits than food secure participants. These findings suggest unique health care usage patterns by food insecure older individuals. This study was funded in part by Administration on Aging and University of Georgia.

**SOCIAL INTERACTION AND DEMENTIA PREVENTION: EVIDENCE FROM FOLLOW-UP STUDY**

T. Anme, *University of Tsukuba, Tokyo, Japan*

Objectives Prevention-oriented services for dementia are essential to realize healthy longevity. Emphasis is going on developing community-based services which help prevent seniors from becoming dependent by intervening while their need levels are still low. This follow-up study was clarify the relationship between social interaction and the prevention of dementia. Method All participants (aged 65 years and above) lived in farming communities near major urban centers in Japan. The contents of the questionnaire covered social interaction (using an index of social interaction constituting 18 items), health status, physical function, family structure, life events, age, and gender. Results After the baseline survey, participants were analyzed in the three-year, and six-year period: (1) baseline age and physical function were related to dementia; (2) greater social interaction was positively related to reduced dementia; (3) the multiple logistic regression analysis adjusted for baseline age, gender, and physical function indicated that social curiosity and social contribution related to prevent dementia. Discussion These findings highlight the importance of social interaction for dementia prevention. The introduction of new services such as "strengthening of social curiosity" and "social contribution" represent initial steps in establishing systems that enable elderly persons to live healthy longevity. An ongoing longitudinal study of elders in one community demonstrate that prevention-oriented services are essential to improving the healthy longevity of citizens, and that seniors will accept such services.

**CHARACTERISTICS OF ADOPTING AND NON-ADOPTING SITES: EVIDENCE FROM THE FIT AND STRONG! PROGRAM**

R. Smith-Ray, P. Desai, S.L. Hughes, *Center for Research on Health and Aging, Univ Illinois, Chicago, Illinois*

There is growing need to understand factors that influence the dissemination of evidence-based (EB) programs. The National Council on Aging recommends that organizational readiness to adopt EB programs should be assessed by examining two constructs; willingness and capacity to adopt. Willingness assesses the organization's motivation, whereas capacity assesses organizational resources and demand for the program. We surveyed the universe ( $N=226$ ) of potential adopters of Fit and Strong! - an EB physical activity (PA) program for older adults with osteoarthritis (OA) - to examine the characteristics of organizations that did and did not adopt the program. Adopting providers ( $N=26$ ) were

more rural (35%) and less urban (65%) relative to non-adopters (15% and 85%, respectively). Adopting providers were more likely to be medical centers (23% vs. 5%) and senior centers (46% vs. 25%) and less likely to be private gyms (0% vs. 10%), rehabilitation/PT centers (0% vs. 4%), or senior housing facilities (0% vs. 9%). Capacity to adopt Fit & Strong! among non-adopters was high - 85% of organizations had clients who would be interested in the program and 84% had clients with OA. Almost all non-adopter providers had space to conduct exercise programs (90%), employed exercise instructors, and 97% were definitely or probably willing to adopt the program. Findings showed that both willingness and capacity to adopt a program like Fit and Strong! were more pervasive across providers than anticipated and indicate that stepped up marketing efforts should be made increase awareness of the program.

### **MAXIMIZING HEALTH AND FUNCTION: DIETARY AND PHYSICAL ACTIVITY ADVICE AMONG OLDER ADULTS IN PRIMARY CARE**

S.H. Bardach, N.E. Schoenberg, *University of Kentucky, Lexington, Kentucky*

Since older adults frequently interact with the healthcare system, primary care providers (PCPS) may be well situated to provide lifestyle behavior recommendations. To better understand how PCPS discuss diet and physical activity with their older patients, we audio-recorded approximately 110 routine primary care visits and interviewed patients immediately following their visits to ascertain what they recalled and found influential during the PCP visit. We transcribed these interactions and coded the transcripts. Participants ranged in age from 65-95 (mean = 74) years. Lifestyle behavior discussions were initiated by both patients and providers, often in response to functional/health concerns. Over half of the patients reported some recollection of diet or physical activity discussion, though many of these discussions were quite brief and involved minimal provider input. Patients reported appreciating encouragement for recent and planned changes, but also indicated a desire for more specific recommendations and PCP feedback to demonstrate whether their efforts have been beneficial. We discuss implications for PCPs' prevention counseling.

### **MEASUREMENT OF BASIC KNOWLEDGE OF ALZHEIMER'S DISEASE IN RURAL POPULATIONS**

L.K. Wiese, C.L. Williams, R.M. Tappen, *Christine E. Lynn College of Nursing, Florida Atlantic University, Boca Raton, Florida*

Instruments currently in use to assess knowledge of Alzheimer's disease (AD) are either outdated or directed to persons of high socioeconomic and educational levels, rendering the items irrelevant or incongruent for high-risk populations. The Basic Knowledge of Alzheimer's Disease (BKAD) assessment tool is a 30-item, closed-ended test designed to measure levels of knowledge of AD in rural populations. The questions address knowledge of risk, onset, treatment, progression, and prevention of the disease, as well as symptoms and behaviors associated with AD. The measure was field tested with twenty older adults attending a rural health care clinic in Fayette County, West Virginia, a low income, non-Hispanic white population. Preliminary assessment for validity and internal reliability included completion of a content validity index by health professionals currently working among the target population. Lay leaders examined the tool for language, reading level and cultural appropriateness. Nurse researchers with expertise in cognitive screening for AD edited items for appropriateness and clarity. Phase 2 consisted of administration of the revised survey and a qualitative technique using "think aloud" to illuminate reasons for the chosen answers. Findings included that 90% of those surveyed believed that memory loss is a normal part of aging and 60% thought that persons with AD are unable to understand what they see on television. Eighty percent agreed that earlier detection means earlier treatment. Future research will include further tests of reliability and validity to

evaluate worthiness of the tool and administration to a greater and more representative sample of Appalachian residents.

### **DOES COMMUNITY HEALTH EDUCATIONAL INITIATIVES IMPROVE THE UNDERSTANDING OF DEPRESSION AMONG U.S. CHINESE OLDER ADULTS? FINDINGS FROM AN OUTCOME EVALUATION STUDY IN CHICAGO**

Y. Li<sup>1</sup>, M.A. Simon<sup>3</sup>, E. Wong<sup>2</sup>, B. Wong<sup>2</sup>, E. Chang<sup>1</sup>, F. Huang<sup>1</sup>, X. Dong<sup>1</sup>, *1. Rush Institute for Healthy Aging, Chicago, Illinois, 2. Chinese American Service League, Chicago, Illinois, 3. Northwestern University, Chicago, Illinois*

Background: Chinese aging population has been disproportionately affected by mental health issues such as depression. Chinese older women may be at higher risk, specifically, suicide rate among U.S. Chinese older women is a higher leading cause of death compared with the general population. Our study aims to conduct culturally-appropriate educational programs to increase community understanding toward depression and evaluate program effectiveness. Methods: We partnered with Chicago Chinese community to conduct a workshop on depression in English, Cantonese, and Mandarin. Participants received a one-hour didactic workshop on depression symptoms, treatment and prevention. We performed a 15 questions pre-workshop test, post-test and follow-up test after 3 weeks. SPSS was performed to examine the data. Results: The test scores are based on the accuracy of each question from 24 participants. 67% were female. Participants' knowledge of depression increased from 9% in pre-test, to 24% in post-test, to 17% in the follow-up test. Across all questions, "The best way to treat depression" had the lowest accuracy score in pre-test (0%) whereas "older, more depressed" had the highest (38%). "Ginseng's effect on depression" received the highest accuracy rate, from 8% in pre-test to 62% in post test, indicating a 54% increase after the session. With respect to gender, no significant differences was found between men and women (p=0.593). Conclusion: Our study has wide implications for future mental health educational programs in minority aging population. More effort should be devoted to devising culturally appropriate mental health educational initiatives at the community level.

### **ATTENTION HIV: OLDER AFRICAN AMERICAN WOMEN DEFINE SEXUAL RISK BEHAVIOR**

L. McCord, *Social Work, University of Louisville, Lexington, Kentucky*

With the increased sexual transmission of HIV in women and men (CDC, 2010; Orel, Stelle, Watson, & Bunner, 2010; Emler, 2006), this epidemic will continue to be a social problem for aging members in society if they do not become a target population for prevention education. Heterosexual sex with an infected person is the primary mode of transmission for women over the age of 40 (Winningham et al., 2004). Deep insight needs to be considered to the ideologies, social norms, and sexual practices of older adult women of color in order to ascertain the breadth and depth of knowledge and behaviors that exist among this group. The goal of this study was to unearth how older black women define sexual risk behavior. A qualitative approach using a focus group was the design for this project to explore the nature of sexual risk. Seven African American women ages 45 to 62 participated in this research study. After coding, three emergent themes were identified: impulsivity, new status with old habits, and red lights. This study is significant because it addresses the knowledge gap of aging and high risk behavior and introduces a way for creating a culturally sensitive empirical base of knowledge about the how a sub-group of older, ethnic adults define an issue such as sexual risk behavior. This information will benefit gerontologists and social workers, generating multidisciplinary conversations to advocate for aging services and policies to address the importance of aging sexually as an important part of health and lifestyle.

## **SUBSTANCE & PRESCRIPTION DRUG MISUSE AMONG OLDER ADULTS: AN ANALYSIS OF SELECT TREATMENT PROGRAMS**

S. Pasupuleti, A. Masters, *Criminal Justice & Social Work, The University of Toledo, Toledo, Ohio*

The presentation portrays how harm reduction treatment model is more effective in treating alcohol, substance and prescription drug misuse. The poster presents analysis drawn based on the select intervention studies. Developing more evidence based practice is imperative since the numbers of older adults are expected to increase from 1.7 million in 2000 to 4.4 million in 2020. More than 17 percent of older adults are estimated to abuse alcohol and prescription drugs and 2.5 million with problems with alcohol (Center for Substance Abuse Treatment, 1998). Seniors disproportionately account for 30% of prescription drug use in the United States. Majority of older adults who misuse alcohol do not meet DSM-IV criteria and these problems are left untreated (D'Agostino, 2006). Among the treatment strategies, harm-reduction approach has been found to be more effective than other treatment models, either abstinence or integrated care. Although abstinence is the ultimate goal but researchers found better outcomes with harm-reduction approach (Lee et al., 2010, p.55). The harm-reduction strategy employed in the multidimensional care treatment group influenced the completion rate of inpatient and outpatient treatment utilization in a positive manner. Another revelation is that many healthcare professionals in a variety of settings need to be trained to deal with the complex needs of this older adult population suffering from comorbid mental health and substance use problems. With the ever-increasing older adult population, there must be a fundamental shift in training and service delivery catered to this specific population (D'Agostino et al., 2006).

## **SESSION 645 (POSTER)**

### **IMPROVING THE AGING EXPERIENCE**

#### **ENVIRONMENTAL CONTEXTUAL CUES AND DISTRIBUTED PRACTICE AID LONG-TERM MEMORY RETRIEVAL IN OLDER ADULTS**

K. Bercovitz, P. Simone, M. Bell, *Santa Clara University, Santa Clara, California*

With adults over the age of 65 representing the most rapidly growing demographic in the United States, research on maintaining cognition in the second half of life has garnered much attention. Our research focused on the role of environmental contextual cues and spaced practice in long-term memory retrieval in this population. Distributed (spaced) practice leads to increased memory performance on verbal tasks for younger and older adults (Cepeda et al., 2009; Balota et al., 1989). Moreover, environmental contextual cues do not seem to benefit the memory performance of older adults in these retrieval tasks (Puglisi, 1988). In this study, older adults (age 60+) were tasked with learning 20 English/Swahili word pairings on a computer in the first session and recalling what they remembered either immediately (massed) or 24 hours later (spaced) and then tested again 10 days later. Participants were randomly assigned to use the same location or a different location for the second practice session. We found a significant effect of spacing (those who returned 24-h later for a second session did better than those who recalled the words immediately), replicating and extending earlier findings to a retention interval of 10 days. We also found a significant effect of context. When context was constant (all sessions in the same room) participants remembered more words than when context was changed. These findings suggest that not only do older adults benefit from distributed practice, but they also rely on environmental contextual cues to remember information.

## **SERIOUS LEISURE AND SUBJECTIVE WELL-BEING OF OLDER RESIDENTS IN NORTHERN SPAIN**

B.D. Linde<sup>1</sup>, D. Kleiber<sup>1,2</sup>, M. Monteagudo<sup>2</sup>, F. Bayon<sup>2</sup>, J. Cuenca<sup>2</sup>, *1. University of Georgia, Athens, Georgia, 2. Deusto University, Bilbao, Spain*

There is now considerable evidence that active engagement contributes significantly to subjective well being in later life (cf. Menec, 2003; Rowe & Kahn, 1998). Just what constitutes active engagement is not entirely clear, however. Must it have some payoff in terms of a physical health benefit or some other work-like productive outcome? Indeed, beyond the views of Rowe and Kahn that suggest as much, the value of active engagement has most often been associated with "productive" aging, i.e., that associated with paid and volunteer work and other involvement of socio-political significance. This research examined the connection with leisure that is serious enough according to sociologist Robert Stebbins (2002) to mimic some of those more valuable work-related meanings and effects, without the focus on the outcome. Furthermore, the possibility that the apparently lesser value of 'non-productive' engagement for successful aging is a culturally-specific finding, depending particularly on work and business ethics and values (cf. Ekerdt, 1986), suggests a need for cross-national studies at least. Thus, we examined the leisure patterns of 719 older residents of Pais Vasco in Northern Spain, both urban and rural dwellers, to determine what, if anything, of their leisure involvement seemed to predict subjective well-being, as assessed by standardized measures of sense of competence, relationships with others, orientation toward personal growth, depression and life satisfaction. Preliminary results indicated that serious leisure involvement, as indicated by activities in which there was strong identity salience, was significantly associated with warm relationships with others but with no other measure of subjective well being, whereas leisure repertoire was negatively associated with personal growth on the measure of psychological well-being. Cultural factors contributing to these findings are discussed.

## **PET PALS: A PILOT STUDY TO EASE RELOCATION TRANSITION**

J. Bibbo, R. Johnson, C.A. McKenney, *University of Missouri, Columbia, Missouri*

Pet Pals was a pilot study which explored the effects of a dog visit protocol (DVP) on older adults' experiences of adjusting to a nursing home. Participants in this three group pretest-posttest design were first time nursing home residents over the age of 60. The study explored changes in the residents' sense of coherence, mood, attitude, daily hassles and uplifts, and salivary cortisol. Participants (n = 15) were randomly assigned to three groups: DVP, human visit (HV), and a control group. The DVP and HV groups received three 20-minute visits per week for six weeks by a registered and certified therapy dog and handler or a friendly human visitor respectively. The control group received the standard care at the facility. Within group T-tests indicated that there were no significant changes in the DVP group. Results for the HV group indicated that posttest depression scores (M = .60, SD = 1.34) were significantly lower than pretest scores (M = 1.60, SD = 1.52), p = .0341. Results for the control group indicated that participants experienced fewer uplifts at posttest (M = 11.60, SD = 7.44) than at pretest (M = 15.60, SD = 9.29), p = .0189. Social integration for the control group approached significance suggesting that social integration scores were lower at posttest (M = 4.20, SD = 2.49) than at pretest (M = 4.80, SD = 2.77), p = .0705. More research on the effect of DVP on relocation transitioning is needed.

## **PRIMARY CARE OF THE OLDER ADULT: LET'S TALK**

W.P. Moran, P.J. Iverson, *Internal Med and Geriatrics, MUSC, Charleston, South Carolina*

Ageing Q3 is a systematic educational change program that uses successful educational techniques and team-based effort to teach medi-

cine residents about geriatrics and improve the quality of care for the older adult patient in the ambulatory care setting. Aging Q3 encompasses 3 quality domains: Quality of Resident Education, Quality of Life, and Quality of Care for the older adult. Our goal is to saturate the learning environment with prompts and cues that will lead to clinical discussions of aging-related issues between resident physicians and their patients. This paper will focus on only 1 of these domains and explain how a clinic saturated with cues, prompts and reminders has achieved 80% participation in discussions with older adult patients on topics that may otherwise not have been addressed during a patient encounter.

### **THE EFFECT ON SOCIAL WORKER'S PSYCHOEDUCATIONAL INTERVENTION PROGRAM HELPING END OF LIFE DECISION MAKING FOR THE FAMILY CAREGIVER OF DEMENTED KOREAN ELDERLY IN A NURSING HOME**

S. Kim<sup>1</sup>, J.J. Han<sup>2</sup>, J. Kim<sup>1</sup>, 1. *Bergen Regional Medical Center, Paramus, New Jersey*, 2. *Columbia University, Pre Med Program, Menhatten, New York*

This study examines the effect of social worker's PsychoEducational Intervention Program(PEIP) that helps family caregivers in End of Life Decision Making(ELDM) for demented Korean elderly nursing home residents. Social worker conducted 2 hours, one session interview with family caregiver, designed for sharing family caregiver's concerns, educating about Dementia and end of life health care decision, and practicing basic skill of stress relaxation. The data was collected by telephone interview with 106 family caregivers, using quantitative methods with close-ended questions about the understanding of ELDM, decision factors, and completion of decision making in pre and post three months of PEIP. The study uses T-Test with SPSS 14.0 version to examine the effect of PEIP. Results indicated the family caregiver's understanding about ELDM( $p < .01$ ) and completion of ELDM( $p < .001$ ) significantly increased to compare them before PEIP. But physician's consulting did not show significant differences. Family caregivers decided to involve the resident's ELDM for resident's pain relief, medical condition, mental capacity, and treatment type. But their religion, age, and sex were not associated with it. The study suggests that social worker's emotional and educational approach encourages the family caregiver to involve in ELDM for demented elderly residents with respect of resident's quality of life during stressful family events. Also, PEIP will be more effective when conducted by a social worker who can provide bilingual and bicultural service.

## **SESSION 650 (POSTER)**

### **LIFE COURSE AND DEVELOPMENTAL CHANGE**

#### **A CROSS-TIME EXPLORATION OF INFLAMMATION, PSYCHOLOGICAL WELL – BEING AND FRAILITY IN OLDER ADULTS**

R. Roiland<sup>1</sup>, S.M. Heidrich<sup>2</sup>, 1. *School of Nursing, University of Wisconsin Madison, Madison, Wisconsin*, 2. *William S. Middleton Memorial Veterans Hospital, Madison, Wisconsin*

Studies of older adults have focused on biological (inflammatory biomarkers) and clinical correlates and predictors of frailty. Few studies have focused on psychosocial factors that potentially influence both frailty and inflammatory processes. The purposes of this study were to compare bio - psychosocial factors in frail and non – frail older adults and to explore the relationships between inflammatory biomarkers, psychological well – being and frailty. A secondary analysis of baseline and 10-year follow-up data from 239 participants aged 65 years and older from National Survey of Midlife Development in the United States (MIDUS) was completed. At time 2, 124 participants were classified as non – frail, 101 as pre – frail, and 11 as frail, using the Fried classification. At baseline and Time 2, frail participants were significantly

older and reported more chronic illnesses than non – frail participants, but psychological well – being did not differ. At Time 2, frail participants had significantly higher levels of C – reactive protein, but not IL-6, than non – frail participants (controlling for age, gender, number of chronic illnesses, and medications). Future research on frailty should include the examination of different psychosocial factors in order to gain a better understanding of how multiple types of factors may influence the development and progression of frailty.

### **TESTING A MULTIVARIATE MODEL OF SOCIAL COMPARISONS ACROSS ADULTHOOD**

K. Hinkle, S.J. Kohn, *Psychology, Valdosta State University, Valdosta, Georgia*

Much of the previous seminal research on later life social comparisons has focused primarily on issues related to physical well-being, domestic relocation and living arrangements. These points of concentration are important to the lives of older adults because they are salient to health and adaptation. Yet, social comparison research regarding adult development and aging as a function of more abstract areas of perceived social cognition, such as problem-solving, moral reasoning, social interactions, and social roles has been scarce. In this study, we surveyed 616 older ( $n=191$ ;  $M\text{-age}=72.62$ ,  $sd=6.76$ ), middle age ( $n=164$ ;  $M\text{-age}=48.45$ ,  $sd=4.95$ ), and younger ( $n=261$ ;  $M\text{-age}=20.54$ ,  $sd=2.53$ ) adults on perceptions of how they fare relative to age peers on four discrete dimensional clusters that pertain to physicality and health; social-roles and interpersonal skills; problem-solving ability; and moral-reasoning and life-knowledge, respectively. Participants indicated whether they perceived themselves to be, better off (downward comparison), about the same (lateral comparison), or worse off (upward comparison) compared to persons of the same or similar age-range. A 3 (age) X 2 (gender) MANOVA revealed statistically significant main effects regarding cross-sectional differences between the three age groups on a host of the variables within each cluster. A significant age X gender interaction was also found, which suggests that females might make more lateral comparisons as they age; while males appear to maintain a more consistent stance regarding downward comparisons as they mature. These findings demonstrate consistency of gender differences regarding theories of social construals (Cross & Madson, 1997) and self-enhancement in adulthood (Goethals, et al., 1991).

### **AGE AND EXPERTISE DIFFERENCES IN THE SUNK-COST FALLACY**

T. Karns, J. Strough, *Psychology, Morgantown, West Virginia*

The objectives of the present study are to address the extent to which age differences in decisions about sunk costs are moderated by expertise and to investigate reasoning underlying decisions about sunk costs. The sunk-cost fallacy (SCF) occurs when people base decisions on irretrievable “sunk” investments instead of future returns. Older adults are less subject to the SCF, which could reflect that older adults have learned to ignore sunk costs. To disentangle age and expertise, experts (those trained in economics or accounting) and naïve participants were recruited: 56 young adults ( $M\text{ age} = 20.65$ ; 25 naïve, 31 expert), 37 middle-aged adults ( $M\text{ age} = 51.65$ ; 24 naïve, 13 expert) and 37 older adults ( $M\text{ age} = 73.92$ ; 27 naïve, 10 expert). Participants made decisions about 13 hypothetical situations presented using written vignettes (range = 0 to 13) and then provided written justifications for their decisions for five vignettes to investigate why decisions were made. Young adults demonstrated the SCF more than middle-aged and older adults,  $p < .001$ . Expert young adults made more normatively correct decisions than naïve young adults,  $p = .01$ . Young adults justified their answers by focusing on the investment more than middle-aged and older adults,  $p < .001$ . Middle-aged adults justified their answers by stating that the amount of the investment does not matter,  $p < .001$ , and older adults more frequently stated emotional concerns as their justification,  $p =$

.005. Implications for improving decisions about sunk costs across the life span are discussed.

### TRAJECTORIES OF HASSLES AND UPLIFTS IN RELATION TO MORTALITY: THE VA NORMATIVE AGING STUDY

Y. Jeong<sup>1</sup>, H. Igarashi<sup>1</sup>, C.M. Aldwin<sup>1</sup>, A. Spiro<sup>2</sup>, 1. *School of Social and Behavioral Science, Oregon State University, Corvallis, Oregon*, 2. *VA Boston Healthcare System & Boston University, Boston, Massachusetts*

Cross-sectional studies provide conflicting information on how stress varies with age (for reviews, see Aldwin et al., 2011; Almeida et al., 2011), and few longitudinal studies include multiple stress measures. Aldwin et al. (2011) identified four different patterns of life events over 17 years; individuals with either medium or high levels of chronic stress had higher mortality rates. The purpose of the present study is to examine whether hassles and uplifts showed similar patterns over time, and to explore whether these different patterns were related to mortality. The sample included 822 men from the NAS (at baseline, MAge = 63.84, SD=6.7, range=48~83) who completed at least three assessments of hassles and uplifts (Delongis et al. 1981) over a 17 year period (Massessments =4.7, SD=.78, range=3~6). Four patterns for both hassles and uplifts were identified using a growth mixture model (SAS Pro TRAJ; Jones et al. 2001): consistently low (44.9/22.5%), medium (39.5/46.0%), high (13.7/27.2%), and an inverted U (1.9/4.3%). Comparing patterns between hassles and uplifts revealed that fewer than half of individuals were in comparable groups on both variables, suggesting considerable individual differences in hassles/uplifts concordance. Cox proportional hazards models were used to predict mortality. Controlling for health behaviors and demographics showed that patterns of hassles and uplifts, unlike life events, were not in general associated with mortality, although there was an intriguing suggestion that those with high hassles were less likely to experience premature mortality, HR = .612, 95% CI = .037 – 1.003 p = .051), supporting a hormesis model.

### VARIABILITY IN NIGHTLY SLEEP AMONG MIDLIFE AND OLDER ADULTS

M.E. Braun<sup>1</sup>, B. Whitehead<sup>2</sup>, C. Bergeman<sup>2</sup>, J. Payne<sup>2</sup>, 1. *Psychiatry, University of Pennsylvania, Philadelphia, Pennsylvania*, 2. *University of Notre Dame, Notre Dame, Indiana*

Having sufficient quantity and quality of sleep is important for optimal emotional and cognitive functioning. Individuals who habitually receive too little sleep or suffer from poor quality sleep are at increased risk of impaired daytime performance. Night-to-night variability in sleep is another potential factor related to health and well-being outcomes. For example, establishing strict sleep routines is an important part of treating behavioral insomnia, and several sleep therapies have been developed to treat depression. It is also known that sleep is susceptible to age-related changes. In order to better understand how within-person variation affects sleep behavior, 296 adult subjects, ages 33 to 88 (grouped by decades of age), from the Notre Dame Study of Health and Well-Being first completed a measure of global sleep quality (Pittsburgh Sleep Quality Index), followed by 56 consecutive sleep diary questionnaires. Multilevel modeling was used to investigate age-related night-to-night variability in sleep quality, sleep quantity, time to bed, wake time, and total bedtime. Results suggest that global sleep quality suffered with increased age; however, the oldest group age group (>70) reported better night-to-night sleep quality as compared to younger groups. In addition, an increase in age was associated with a decline in variability in all sleep variables, except wake time. Across all ages, greater variability in night-to-night sleep quality and total bedtime was related to poorer nightly sleep quality and less total bedtime, respectively, particularly for poor sleepers. This study provides evidence for

the influence of within-person variability in night-to-night sleep behaviors in adults.

### TRAJECTORIES AND CORRELATES OF CHANGE IN PHYSICAL AND MENTAL HEALTH ACROSS ADULTHOOD AND OLD AGE

J. Morack<sup>1</sup>, F.J. Infurna<sup>1,2</sup>, N. Ram<sup>1</sup>, D. Gerstorf<sup>1,2</sup>, 1. *Pennsylvania State University, State College, Pennsylvania*, 2. *Humboldt University, Berlin, Germany*

Subjective ratings of health predict outcomes such as mortality. However, less is known about how subjective health changes across adulthood and what moderates those changes. We applied growth models to ten-waves of data from the Household, Income and Labour Dynamics in Australia Survey (HILDA, N = 7,268; 15-93 year olds; 54% women) to examine age-related changes in the physical and mental health components of the Short-Form 36 health survey. On average, physical health declined from early midlife through old age, whereas mental health remained relatively stable across adulthood. Examination of individual differences suggested that being a woman, less education, higher neuroticism, lower extraversion and conscientiousness, having a health condition, and reporting a greater number of negative life events were each related to less successful aging. Of note was also that participants higher on openness reported lower mental health. Multi-phase models of change were used to estimate the specific ages at which decline emerged as a prominent feature. Results indicated that mental health increased slightly until about age 70, with a shift to minor declines thereafter. In contrast, physical health declines began already 20 to 30 years earlier than mental health. Discussion focuses on avenues for future research that might target the pathways through which the noted differences in individuals' health trajectories emerge.

### EARLY ADOLESCENT PERSONALITY PREDICTORS OF LIFESPAN TRAJECTORIES OF PSYCHOLOGICAL HEALTH: FINDINGS FROM THE INTERGENERATIONAL STUDIES

C. Jones<sup>1</sup>, D. Banse<sup>1</sup>, H. Peskin<sup>2</sup>, 1. *psychology, california state university, fresno, Fresno, California*, 2. *university of california, berkeley, California*

Longitudinal studies allow researchers the luxury of examining development in "real time," without depending upon fallible retrospective recall. The Intergenerational Studies are rare long-term longitudinal studies, with data collected from participants from birth/early childhood to age 77/85 (Eichorn, 1981). Here the focus is on trajectories of overall psychological health, based on the 100-item California Q-sort (Block, 1961), available from age 14 through to age 75. When lifespan trajectories of psychological health were classified via finite mixture modeling (Nagin, 2005), three patterns emerged: Stable Low (SL), Increasing from Low (IL), and Increasing from Moderate (IM). We explored differences between two of the three trajectories—SL and IL—intriguing because participants begin adolescence with the same overall level of psychological health, yet by late adulthood, those in the IL group achieved significantly higher psychological health than the SL group. We searched for more specific personality characteristics, taken from the Q-sort, that differentiate these two groups in early adolescence, with the aim of then linking those characteristics to later marriage partners and work experiences. When examined separately by gender, at age 14, IL girls were significantly more likely than SL girls to be more conventional and more friendly; IL boys were significantly more likely than the SL boys to be less conventional and less friendly. Results begin to uncover the processes of psychological health development, clearly tied to gender roles and differential pay-off for sociability and conventionality, at least for this cohort of individuals born in the 1920s.

## GENETIC RISK FACTORS MODERATE THE BENEFITS OF LIFESTYLE ACTIVITIES ON COGNITIVE DECLINE IN HEALTHY AGING

S. Hendrix-Buxton<sup>1</sup>, G. McFall<sup>2</sup>, B. Small<sup>1</sup>, R.A. Dixon<sup>2</sup>, *1. School of Aging Studies, University of South Florida, Tampa, Florida, 2. University of Alberta, Edmonton, Alberta, Canada*

Genetic polymorphisms may contribute to heterogeneity of cognitive decline in aging by moderating effects of cognitively-stimulating activities (CSA). Polymorphisms of the Catechol-O-Methyltransferase (COMT) enzyme, the brain-derived neurotrophic factor (BDNF) protein, and the Apolipoprotein E (ApoE) e4 genotype have previously been associated with differential patterns of cognitive decline. This study used 5-wave data from the Victoria Longitudinal Study to examine whether ApoE, BDNF, and COMT moderated relationships between self-reported CSA and cognitive functioning. Participants included 264 individuals between the ages of 55-94 years old. Conditional process modeling was used to quantify the moderating effect of genetic risk factors on the mediating effect of participation in CSA and changes in cognitive functioning. Results indicate the ApoE4 e4 genotype significantly moderates the indirect relationship between age and participation in one class of CSA on word recall and two classes of CSA on verbal fluency ( $p < .02$ ), with non-e4 carriers showing the greatest benefit of CSA. Similar results are seen for the moderating effect of the COMT genotype on vocabulary and one class of CSA ( $p < .02$ ). No interactions between BDNF genotype, participation in CSA and changes in cognition were found. The results suggest that the benefit of participating in cognitive activities may be moderated by genetic predisposition, at least for some cognitive outcomes and genetic variants.

## MENOPAUSAL STATUS, CLIMACTERIC SYMPTOMS, AND FAMILY RELATED VARIABLES IN KOREAN FEMALE BABY BOOMERS

E. Kim<sup>1</sup>, K. Lee<sup>2</sup>, *1. Dept. of Child Development and Family Studies, Changwon National University, Changwon, Republic of Korea, 2. Dept. of Food and Nutrition, Changwon National University, Changwon, Republic of Korea*

For the majority of women, the process of menopause occurs between 45 and 54. This means most of the female baby boomers (born between 1955 and 1963 in Korea) are currently going through the process of menopause. The objectives of this study are to: (1) identify the perceived climacteric symptoms of Korean female baby boomers; (2) whether perceived climacteric symptoms differ by menopausal status (premenopausal, perimenopausal, and postmenopausal); (3) how family related variables, such as living with children, satisfaction with children, and marital satisfaction are associated with the perceived climacteric symptoms by menopausal status. In this study, community sample of 468 Korean female baby boomers who were married and had at least one child were included. Feelings of tiredness, aches in the joints and lumbago were relatively common climacteric symptoms. However, participants reported a low rate of all other symptoms. Postmenopausal women reported menopausal symptoms more frequently than the other two groups. For both premenopausal and postmenopausal stage women, self-rated health, family related variables associated with climacteric symptoms. The results suggested that in the face of the developmental challenges experienced during menopausal transition, family related variables played as primary protective factors for pre- and postmenopausal females. But for perimenopausal women, self-rated health, employment status, and attitudes toward menopause were significant predictors of climacteric symptoms. This finding indicated that to reduce menopausal symptoms, different treatment should be applied based on menopausal status.

## PRIMARY AND SECONDARY CONTROL OF VERY OLD MEN: THE MANITOBA FOLLOW-UP STUDY (MFUS)

A.U. Swift, R.B. Tate, D.J. Bayomi, *Manitoba Follow-up Study, University of Manitoba, Winnipeg, Manitoba, Canada*

It has been theorized that two ways to gain perceived control over otherwise uncontrollable negative circumstances include primary control, or taking direct action upon the environment; and secondary control, or psychologically adapting to negative situations and events. Secondary control beliefs (including psychological adjustment and acceptance) are thought to become particularly important during times of low primary control, such as when facing age-related decline. Limited related research has found that control strategies can be endorsed in combination, but this research has focused mainly on older women. Little is known about control beliefs in older men. The specific and measurable objectives of the present study were twofold: To examine the frequency of primary and secondary control beliefs in very old men over a ten-year timeframe; and to determine whether the amount of overlap between primary and secondary control beliefs changed as the men aged. The study sample included a subset of very old community-dwelling men (mean age 76 years in 1996,  $n = 1756$ ; mean age 86 years in 2006,  $n = 807$ ) from MFUS, one of the longest running studies in the world. Consistent with expectations, the primary-secondary control belief combinations were endorsed with decreasing frequency over time, whereas endorsement of the adjustment-acceptance (secondary control) combination remained constant. These findings shed new light on perceived control by suggesting that unlike primary control, secondary control belief combinations remain important to very old men as they age. The adjustment-acceptance combination may represent how very old men psychologically adapt to age-related decline.

## SESSION 655 (POSTER)

### MANAGING CHRONIC DISEASE

#### MARITAL HISTORY AND TYPE 2 DIABETES PREVALENCE AND MANAGEMENT: WHAT ARE THE RELATIONSHIPS?

C.L. LaCoe, L.A. Wray, *Biobehavioral Health, Pennsylvania State University, University Park, Pennsylvania*

Type 2 diabetes affects over 26% of adults over age 65 and doubles the risk of premature death; proper diabetes management can delay or prevent premature diabetes-related deaths. Cross-sectional and short-term longitudinal studies suggest that there are generally positive relationships between some aspects of marital history (i.e., current marital status and sequence, timing, duration, and types of marital transitions across the lifespan), health behaviors, and non-diabetes health outcomes. Type 2 diabetes prevalence and management patterns are unknown in those who experience a marital dissolution (i.e., divorce/separation and becoming widowed). Using the 1998-2008 core interviews of the nationally representative HRS ( $n=14,815$ ) to examine these relationships, our preliminary analyses show that, at baseline, the prevalence of diabetes was significantly lower in those who were widowed (11.07%) and divorced/separated (10.90%), compared to those who were continuously married (11.21%,  $p<.01$ ). In participants with diabetes, those who were widowed, compared to those who were continuously married, were more likely to report increased severity of diabetes, less likely to report that their diabetes was generally under control, less likely to engage in vigorous physical activity, more likely to report unhealthy weight loss, and likely to have more comorbidities. Results were similar, but not identical, in those with diabetes who were divorced. Other life course factors, such as age and gender, were important covariates. Finally, marital transitions—controlling for other marital history (e.g., duration), health, and sociodemographic factors—had an important effect on diabetes prevalence and management.

## HOME MODIFICATIONS TO IMPROVE THE COMMUNITY PARTICIPATION OF OLDER ADULTS WITH CHRONIC CONDITIONS

S. Stark, E. Somerville, J.C. Morris, *Washington University School of Medicine, St. Louis, Missouri*

Community-dwelling older adults with chronic conditions are at significant risk for disability in activities of daily living. Vulnerable to barriers in the physical environment such as stairs, low lighting or unsafe bathrooms, they may develop excess disabilities caused by environmental barriers. Notably, disabled older adults also report reduced community engagement. The purpose of this study was to determine if a home modification intervention can improve daily activity performance at home and in the community among chronically diseased older adults with mobility impairments. We conducted a matched controlled trial of home modifications in a sample of 40 older adults with chronic conditions. We measured their performance before and after the intervention with a 6 month follow-up. Treatment was provided by occupational therapists according to a manualized intervention protocol. The average age of the participants was 78.8 years. Most (92%) were female and widowed (53%). The average number of comorbidities was 10. The average number of daily activity problems addressed was 6. For the primary endpoints of performance of activities and satisfaction with activities, as measured by the In-Home Occupational Therapy Evaluation, there is a main effect of improved performance and satisfaction in the treatment group ( $p < .000$ ). Geo-coded maps of before and after intervention community participation indicate differential patterns of community participation. The intervention and assessment procedures were well tolerated. Home modifications do improve the performance of daily activities at home and may impact community participation. Limitations of the study include a brief activity monitoring period.

## EVALUATING RECENT HEALTH CARE QUALITY INITIATIVES IN BARBADOS USING PREVENTABLE HOSPITALIZATION

J. Bushelle-Edghill, J.N. Laditka, S.B. Laditka, *University of North Carolina at Charlotte, Charlotte, North Carolina*

Barbados is a developing nation with universal health insurance that should ensure reasonably accessible primary health care. We examined effects of health quality initiatives in Barbados in the past decade on access to primary care. Hospitalization for ambulatory care sensitive conditions (ACSH), sometimes called preventable hospitalization, has been used extensively to indicate access to primary health care of reasonable quality. Using 2003-2008 data from the Queen Elizabeth Hospital ( $n=32,764$ ), the only public acute care hospital in Barbados, linked to the Barbados 2000 Census files, we calculated ACSH rates per 1,000 adults for each study year, adjusting for annual population growth. We examined ACSH total rates and disease-specific rates for the six most prevalent ambulatory care sensitive conditions among adults age 50+. For women and men in both age groups, population ACSH rates generally increased across the study years. For example, the rate per 1,000 women ages 50+ grew 33.6% across the study years, from 19.98 to 26.70 ( $p < 0.0001$ ); the corresponding increase for men was 30.6%, from 24.01 to 31.36 ( $p < 0.0001$ ). Conditions with relatively high rates for both women and men ages 50+ included influenza and pneumonia, hypertension, and heart failure. Rates for diabetes decreased somewhat during the study period. Population rates of preventable hospitalization generally increased during the study period, a time when Barbados worked to improve access to quality health care. Findings suggest an opportunity to enhance chronic disease management, and to further improve access to primary care.

## CSII AND MDII: PERCEPTIONS OF OLDER ADULTS AND SIGNIFICANT OTHERS

M.M. Rosenkoetter, M.E. Stachura, E.A. Wood, D. Brown, J. Dias, *Georgia Health Sciences University, Augusta, Georgia*

Purpose: We investigated the impact of continuous subcutaneous insulin infusion (CSII) (insulin pumps) and multiple daily insulin injection (MDII) on patient lifestyle and diabetes management as perceived by the patient and a "significant other".

Methodology: In Phase I, we developed, tested and validated detailed parallel questionnaires for four groups of patients and their corresponding "significant others": Continuous Subcutaneous Insulin Infusion (pump) (CSIIpt/CSIIso) and Multiple Daily Insulin Injections (MDIIpt/MDIIso). Phase I yielded results from 261 pairs. In Phase II, using results from Phase I, all four instruments were revised, and validity & reliability established. Cronbach's  $\alpha = .901$  (CSIIpt);  $\alpha = .940$  (CSIIso);  $\alpha = .912$  (MDIIpt);  $\alpha = .940$  (MDIIso). For participants  $>50$  yrs  $\alpha = .901$  (CSIIpt);  $\alpha = .940$  (CSIIso);  $\alpha = .912$  (MDIIpt);  $\alpha = .940$  (MDIIso). Instrumentation: Sociotechnical Systems Theory and the Life Patterns Model framed the study. Instruments consisted of 20 demographic items; 43 perception items (5-pt Likert Scale); 10 True/False items; and 2 items (4-pt Likert Scale) on overall satisfaction with diabetes management and impact on lifestyle. Findings: A substantial number of SO's did not know how to suspend the pump in case of severe hypoglycemia ( $< \text{or} = 40$  yrs, 41.86%; 41-60 yrs, 43.88%;  $>60$  yrs, 41.30%). Although management improves with either intensive therapy, fear of hypoglycemia is not reduced. Each age group reported improved satisfaction with disease management, but in co-dependent relationships, improved independence in CSII patients can negatively impact the SO. CSII satisfaction scores were generally more positive than MDII scores for both patients and SOs.

## EXPLORING DETERMINANTS OF MENTAL HEALTH UTILIZATION IN A PALLIATIVE CARE OUTPATIENT SETTING

C. Azuero<sup>1,2</sup>, R.S. Allen<sup>1,2</sup>, P.A. Parmelee<sup>2,1</sup>, E. Kvale<sup>3</sup>, *1. Psychology, University of Alabama, Tuscaloosa, Alabama, 2. Center for Mental Health and Aging, Tuscaloosa, Alabama, 3. University of Alabama at Birmingham, Birmingham, Alabama*

Psychological disorders assume an important role in the etiology, course, and outcomes associated with chronic disease. Prevalence estimates indicate 25% of Americans are affected by mental disorders during a given year. Increased recognition of the high comorbidity of depression with chronic disease has catalyzed integrated mental health (MH) services into care settings treating individuals with chronic conditions. This study investigated the individual association between MH service utilization and fifty patient demographic and clinical characteristics, in a palliative integrated care clinic. Data from one retrospective and one prospective study conducted within the clinic were combined (total  $N=149$ ). These studies assessed patient care and collected similar information on patient characteristics and MH service utilization. Linear regressions were used to test for association between each patient characteristic and the number of MH visits, controlling for total palliative care appointments. Average participant age was 55 years ( $SD=14.7$ ), race and gender were predominantly white (82%) and female (75%) with a primary diagnosis of cancer (78.5%). Participants averaged 4.3 ( $SD=3.84$ ) palliative care visits and 1.7 ( $SD=3.7$ ) MH visits. Depression ( $p=.034$ ), anxiety ( $p=.007$ ), palliative care provider ( $p=.009$ ), and a comorbid gastrointestinal disorder ( $p=.033$ ) were suggestive of association with MH service utilization. MH services located within a palliative care outpatient clinic might improve the likelihood that individuals with psychological disturbances utilize MH services at a rate greater than the general population. Also, provider differences in patient likelihood of utilization might indicate individual differences in ability to detect psychological disturbance and patient's need for services.

## THE EFFECTS OF AGE, GENDER AND EDUCATION ON THE ENDORSEMENT OF DEPRESSIVE SYMPTOMS IN OLDER ADULTS WITH DIABETES

E. Wayne, M. Wood, S.R. Black, F. Scogin, M.R. Crowther, *Psychology, The University of Alabama, Tuscaloosa, Alabama*

Diabetes is one of the leading causes of death and disability in the world. The WHO describes diabetes as a "growing epidemic" and esti-



mates that by the year 2025, there will be 300 million cases worldwide. Diabetes can also have serious effects on individual's mental well being. Research has shown a link between depression and diabetes. We conducted analyses using the The National Health and Nutrition Examination Survey (NHANES), a combination of studies that attempt to assess the health and nutritional status of individuals with diabetes (and other chronic diseases) across the United States. In keeping with earlier research, a secondary data analysis of the 2009-2010 NHANES data set shows that age, gender and education account for a significant amount of variance associated with depressive symptoms among adults with diabetes. The aforementioned variables account for 5.5% of the variance,  $F(3, 630) = 12.21, p < .001$ . Additional data analysis indicated that older adults with diabetes were less likely to endorse depressive symptoms on a questionnaire than younger adults with diabetes,  $F(3, 633) = 2.971, p = .031$ . The implications of this data are that older adults with diabetes are more likely than younger adults to use effective coping skills for dealing with diabetes.

#### POST-POLIO IN AN AGING POPULATION

B. Malmberg, *Institute of Gerontology, Jönköping University, Jönköping, Sweden*

In western countries poliomyelitis nowadays is extinct or show very low prevalence. People that were infected in the 1940ties and 1950ties are now getting older and some of them show post-polio symptoms. In a register of all persons treated for polio at hospital between 1942 and 1955, a sample forty-nine participated in a study of post-polio problems. Among the refusals some stated that they never had had polio. The mean age was 69 years with a range of 52 to 88, 58 % were men and about half working class. Age is inversely correlated to reported general health. Persons that had a severe polio infection also at the time of investigation report more problems than less severely affected. The results show women to report more severe original problems and also more severe post-polio. Women report more problems climbing stairs and walking. There are no gender differences in feelings of depression. In both gender half show pre-obesity or obesity, but this is unrelated to post-polio severity. As the prevalence of polio decreases the consciousness of the disease will be reduced in the general public and health care. Some persons with post-polio symptoms are unaware of that they ever were affected. There is a risk that post-polio symptoms will be intermingled with age changes. General practitioners should be aware of polio as a contributor to daily life problems. Word count 226

#### VIBRATING UNDERPANTS, SMELL SENSORS AND HOSPITAL CONTINENCE SERVICES: TOOLS AND TECHNOLOGIES FOR IMPROVING THE LIVES OF PEOPLE WITH INCONTINENCE

M.L. Gilhooly<sup>1</sup>, E. van den Heuvel<sup>1</sup>, F. Jowitt<sup>1</sup>, I. Sutherland<sup>1</sup>, J. Bichard<sup>3</sup>, A. Long<sup>2</sup>, K. McKee<sup>4</sup>, L. Dahlberg<sup>4</sup>, *1. Brunel Institute for Ageing Studies, Brunel University, Uxbridge, United Kingdom, 2. Bristol Urological Institute, Bristol, United Kingdom, 3. Royal College of Art, London, United Kingdom, 4. Dalarna University, Falun, Sweden*

Social isolation, loss of self esteem and depression are often a consequence of incontinence. The overall aim of this interdisciplinary project was to reduce the impact of continence difficulties and, thus, assist older people in maintaining a positive identity and good quality of life. The TACT3 project was comprised of three research workpackages: Assistive technology development: Vibrating underpants: A washable fabric underwear wetness sensor and alert mechanism has been developed to alert continence pad users of leakage. In addition, a colour change odour indicating formula has been developed to indicate the presence of the odour of urine at a just imperceptible level. Challenging environmental barriers to continence: Two sets of stakeholders were involved, older people with continence difficulties and toilet providers. Focus groups, workshops, interviews and photographic diaries were conducted to identify key issues. A web based map locating toilets in

London was developed which is called the Great British Toilet Map. Improving continence interventions and services: 140 patients and their carers were interviewed twice within a 12 month interval from a specialist continence clinic for older people and generic continence clinic. Twenty Health and social care managers and 200 practitioners were also be interviewed. Care outcomes are being analysed from each clinic and a cost benefit analysis will be carried out. Key findings from this three year interdisciplinary project are highlighted. Prototypes of the vibrating underpants and the odour sensor will be on display. This research was funded by the UK New Dynamics of Ageing Programme.

## SESSION 660 (POSTER)

### MENTAL HEALTH SERVICES

#### COLLABORATIVE CARE FOR DEPRESSION INFLUENCES BOTH TREATMENT AND RELAPSE PREVENTION

S.M. Thielke<sup>1,2</sup>, P. Diehr<sup>1</sup>, J. Unutzer<sup>1</sup>, *1. University of Washington, Seattle, Washington, 2. Puget Sound VA Medical Center, Seattle, Washington*

**Background:** For dynamic conditions like depression, outcomes may be achieved through either treatment or relapse prevention: making the sick healthy, or keeping the healthy from becoming sick again. Little previous research has modeled how interventions accomplish outcomes through relapse prevention. **Methods:** We analyzed data from 1801 depressed older adults in the IMPACT care management program for depression. Half received a collaborative/stepped care intervention, and half received treatment as usual. Outcomes were measured at baseline, 3, 6, 12, 18, and 24 months. Depression was defined as  $\geq 1.0$  on the Hopkins Symptom Checklist (HSCL). Probabilities of transitioning between the depressed and non-depressed states between each of the time intervals were computed. Adjusted regression models estimated the likelihood of treatment success or relapse prevention. **Results:** Of those who started depressed ( $SCL \geq 1$ ), 36% in the intervention had their depression remit between intervals, compared to 22% in the control group. Of those who started nondepressed, 26% in the intervention group became depressed, compared to 37% in the control. In an adjusted generalized estimating equation model adjusted, the intervention group was associated with a 1.8 OR of treatment success, and a 1.7 OR of relapse prevention ( $p < 0.001$ ). **Conclusions:** The intervention reduced the number of depressed patients in the sample by both treatment and relapse prevention. Interventions that work only to treat the sick may be ignoring an important opportunity to reduce the population burden of disease.

#### AGE DIFFERENCES IN SATISFACTION WITH AND PERCEIVED BENEFIT FROM MENTAL HEALTH SERVICES: RESULTS FROM THE COLLABORATIVE PSYCHIATRIC EPIDEMIOLOGY SURVEYS

K. Ford, A.N. Bryant, G. Kim, *University of Alabama, Tuscaloosa, Alabama*

**Objective:** Although an extensive body of research reports older adults' attitudes toward and under-utilization of mental health services (MHS), relatively few studies have focused on age differences in mental health care among those utilizing MHS. This study examined variation by age in satisfaction with and perceived benefit from MHS. **Methods:** Drawn from the Collaborative Psychiatric Epidemiology Surveys (CPES, 2001-2003), 2,179 adults aged 18-87 who used MHS during the past year were included in analyses. Multiple linear regression analyses were performed. **Results:** Results showed that older age was positively associated with both MHS satisfaction ( $p < .05, \beta = .105$ ) and perceived amount of benefit ( $p < .05, \beta = .106$ ), as was better self-rated mental health ( $p < .001, \beta = .186; p < .001, \beta = .177$ ). Having more comorbid psychiatric diagnoses was negatively associated with satisfaction ( $p < .05, \beta = -.089$ ). Marital status was found to be a moderator of the effect of

age: for married respondents, age had a significant effect on both outcome variables ( $p < .05$ ,  $\beta = .102$ ;  $p < .05$ ,  $\beta = .105$ ), but for unmarried respondents, it did not. **Conclusions:** Our findings show clear evidence of age differences in satisfaction with and perceived benefit from MHS. The findings provide important implications for future interventions targeted to improve MHS satisfaction. Age-specific strategies should be developed in order to prevent delaying mental health treatment.

### THE RELATIONSHIP BETWEEN CULTURAL PREFERENCES AND CLINICAL OUTCOMES AMONG OLDER ADULTS RECEIVING MENTAL HEALTH CARE

S. Mavandadi<sup>1,2</sup>, B. Miller<sup>1</sup>, D. Sorokin<sup>3</sup>, D. Oslin<sup>1,2</sup>, 1. *Mental Illness Research, Education, and Clinical Center, Philadelphia VA Medical Center, Philadelphia, Pennsylvania*, 2. *University of Pennsylvania, Philadelphia, Pennsylvania*, 3. *University of California, Irvine, Irvine, California*

**Objective:** Patients' cultural preferences for treatment-related factors (e.g., patient-provider ethnic and language concordance) have been shown to influence engagement in and satisfaction with mental health care. What is less clear, however, is whether preferences and satisfaction with the care received translate into differential clinical outcomes. The current study examined racial/ethnic group differences in older adults' cultural preferences related to mental health care and whether patient preferences and satisfaction were associated with changes in depressive symptoms over time. **Methods:** Participants included 570 older adults with major depression who participated in the Primary Care Research in Substance Abuse and Mental Health for the Elderly study. Psychiatric and psychosocial assessments were conducted at baseline and 6 months. **Results:** Participants (mean age=73.8 (SD=6.5)) were primarily male (65.7%) and non-Hispanic White (33%; 25% African American, 29% Hispanic, 12% Asian/Pacific Islander). At baseline, Asians/PIs reported greater preference for patient-provider ethnic and language concordance, while African Americans reported greater preference for providers understanding their culture. Although there were minimal differences across ethnic groups in satisfaction with care, regression models revealed that when controlling for baseline sociodemographics, depressive symptoms, and treatment group, greater baseline preference for providers' cultural understanding ( $p = .02$ ) and subsequent perceptions that mental health providers did not take their culture, religion, or race/ethnicity into account over the course of treatment ( $p = .001$ ) were related to significantly higher depressive symptoms at 6 months for Asians/PIs. **Conclusions:** These findings underscore the importance of taking older adults' cultural preferences and provider-patient cultural concordance into account when treating mental health problems.

### SUBSTANCE USE IN OLDER ADULTS RECEIVING PRESCRIPTION OPIOID TREATMENT

Y. Chang<sup>1,2</sup>, L.O. Wray<sup>2</sup>, S.A. Maisto<sup>3</sup>, 1. *School of Nursing, The State University of New York, University at Buffalo, Buffalo, New York*, 2. *Buffalo VA Medical Center, Center for Integrated Healthcare, Buffalo, New York*, 3. *Syracuse University Department of Psychology, Syracuse, New York*

**Background:** Older adults are frequently prescribed prescription opioids for their chronic pain. Substance use can have very detrimental effects on one's health and is a risk factor for prescription drug misuse. Additionally, the concurrent use of substances and prescription opioid is especially concerning because of the possible drug-substance interactions which can lead to adverse events. **Purpose:** This study aimed to describe the use of alcohol, tobacco, and illegal drugs in older adults receiving prescription opioid for their chronic pain. **Methods:** This ongoing study uses a cross sectional design. Participants (aged 50 and above) are recruited from a pain management clinic, senior centers in Buffalo area, and Buffalo VA medical center. Instruments used in this study include the Timeline Follow Back (TLFB) and a demographic questionnaire. The TLFB is a semi-structured interview that uses a calendar

format to record the quantity and frequency of substance use (alcohol, tobacco, and marijuana) for the 30 days preceding the interview. **Results:** A total of 102 participants have enrolled in this study. Preliminary findings indicated that 32% of participants reported alcohol consumption with 15 participants reporting binge drinking (consumption of 5 standard drinks on the same day in the past month) and 12 participants reporting heavy drinking. Thirty-three percent of the participants reported tobacco use and 10% reported marijuana use. **Conclusions:** Our findings indicated that substance use in older adults receiving opioid treatment is a common problem. It is important that clinicians assess substance use in this population and provide education to reduce substance use.

### STUDENT PERCEPTION OF THE PROCESS OF AGING AND THE PROVISION OF COUNSELING SERVICES TO OLDER CLIENTS: A GROUNDED THEORY STUDY

S.V. Santiago, *Counseling and Counselor Education, Rochester, New York*

By 2030, persons aged 65 and over will increase to 78 million; approximately 15 million will have mental health concerns. Despite the anticipated demand for gerocounselors, research indicates that counselors are not adequately trained thus, not prepared to serve older clients. The purpose of this qualitative study was to understand how counselors-in-training perceive the aging process and the provision of services to older clients. Grounded theory was used to capture age-related perceptual nuances of students. Data collection was achieved through focus groups and interviews. Preliminary findings revealed ten themes. Participants identified a lack of discourse normalizing the reality that aging happens on a continuum as fostering a disinclination to seek knowledge addressing the needs of older clients. Other themes include how coursework is geared toward mental health issues in early adulthood rather than across the life span, mental wellness as well as mental health concerns should be addressed across the curriculum, classroom discourse is needed to normalize how everyone is in the process of aging, and issues surrounding death and dying are salient for students who want to help families "work through" end-of-life issues. This poster session will be aimed at both educators and practitioners and will hopefully attract a broad transdisciplinary audience interested in understanding how students perceive the process of aging and the likelihood that they will serve older adults in various professional settings. This research has implications for addressing gaps in gerontological literature that will add knowledge to the field of counselor education.

### IMPACT OF EXERCISE ON DEPRESSION TREATMENT FOR OLDER ADULTS

A. Stepanenko<sup>1,2</sup>, A. Bilbrey<sup>1,2</sup>, J. Rengifo Nevarez<sup>1,2</sup>, R. Marquett<sup>2</sup>, D. Gallagher-Thompson<sup>2</sup>, 1. *Palo Alto University, Palo Alto, California*, 2. *Stanford University, Stanford, California*

Late life depression affects from 8-11% of all older adults. Depression in late life is associated not only with mood problems, but also with functional difficulties, cognitive impairment, and medical co-morbidity. Thus, it is important to evaluate what factors may affect treatment outcomes in psychological treatments of depression. Research has demonstrated that exercise can be a valuable and effective treatment for late life depression. This study looked at the mediating role that exercise plays in treatment for older adults with depression. Participants were 60 older adults (37 female, 23 male), ages 60 and over, enrolled in an individual CBT psychoeducation treatment program at Stanford University (the Positive Experience Project). All participants completed self-report questionnaires and participated in a structured clinical interview pre- and post- intervention. All participants met criteria for depression. Participants then underwent a 12-session program based on a CBT intervention, after which their depression was evaluated in a second interview. Results demonstrated that exercise was positively significantly correlated (Spearman  $\rho = .273$ ,  $p = .035$ ) to response to treatment

based on the BDI-II cut off score of 13 or less. There was also a significant correlation between exercise and response to treatment based on the results of the MINI (Pearson  $r=.267$ ,  $p=.039$ ), indicating that a significant number of participants who exercised no longer met criteria for depression. This suggests that exercise may play a mediating role in treating depression. Further research is needed to verify these results.

#### **MENTAL HEALTH COMPONENTS OF GRACE TEAM CARE AT A VETERANS ADMINISTRATION MEDICAL CENTER**

B. Mossbarger<sup>1,2</sup>, C.C. Schubert<sup>1,4</sup>, P. Beaman<sup>1</sup>, M. Rao<sup>1,4</sup>, C.J. Suelzer<sup>1,4</sup>, B. Sutter<sup>1,4</sup>, S.R. Counsell<sup>3,1,4</sup>, 1. *Veterans Administration Medical Center, Indianapolis, Indiana*, 2. *Indiana University School of Medicine, Department of Psychiatry, Indianapolis, Indiana*, 3. *Indiana University Center for Aging Research, Indianapolis, Indiana*, 4. *Indiana University School of Medicine, Indianapolis, Indiana*

GRACE (Geriatric Resources for Assessment and Care of Elders), a model of care delivery developed to improve geriatric and transitional care for high-risk elders, has a positive track record in safety-net, community based medical centers. For more than a year, the GRACE program also has been implemented at the Indianapolis VAMC, with similarly promising results emerging. In addition to medical outcomes (e.g., re-hospitalization rates, condition-specific protocol implementation, etc.), GRACE addresses certain mental health concerns of enrolled patients as well. This poster describes standard mental health protocols utilized, the measures on which they are based, frequency of use, and mental health liaison service affiliated with GRACE Team Care.

#### **THE HEALTHY AGING GROUP: A METHOD FOR REDUCING AGEISM AND PROMOTING SUCCESSFUL AGING IN LATER LIFE**

A. Stripling, J. Doughan, *Psychology, Department of Veteran Affairs San Francisco VA Medical Center, California, California*

A number of unique physical, psychological and social factors affect individuals as they achieve late life. Societal-imposed and internalized ageism are unfortunately one of these factors, which although previously examined in relation to optimal mental and physical health remain largely overlooked as an underlying mechanism for the treatment of late life psychological concerns. The goal of the current presentation is to disseminate a manual and lessons garnered from developing and enacting a time-limited skills-based cognitive-behavioral treatment program that targets the myths and misconceptions regarding aging. The ten, weekly, 90 minute sessions focus on opening a dialogue about aging related issues, reduction of ageist stereotypes, increased awareness of successful aging, as well as, identification and maintenance of preventative health care goals and behaviors. The intervention included psychoeducation about group identified aging related topics (i.e. physical activity, healthy eating, smoking cessation, falls, medical conditions in advancing age, pain sensory decline (vision, hearing), driving, mood, sleep, learning and memory, medication management, and sexuality); relaxation training; behavioral coping techniques; self-monitoring procedures; cognitive restructuring procedures; and problem solving techniques. As previous research indicates providing care for mentally or physically impaired older adults has adverse health consequences group members were recruited in client/caregiver dyads to provide caregiver support and increase adherence, reinforcement, and maintenance of learned knowledge, skills and behaviors. Implications of the current presentation include distribution of a novel treatment program, as well as, presentation of a theoretical framework which incorporates directly addressing ageism as a mechanism of action for treatment of age related concerns.

## **SESSION 665 (POSTER)**

### **MONEY MATTERS**

#### **ALTRUISM AMONG HRS RESPONDENTS: CAN DICTATOR GAMES PREDICT REAL-LIFE GIVING BEHAVIOR?**

D. Gans<sup>1,2</sup>, M. Hurd<sup>2</sup>, L. Carvalho<sup>2</sup>, 1. *UCLA, Los Angeles, California*, 2. *RAND, Santa Monica, California*

Each year individuals give substantial amounts of money to family, friends, and charitable organizations. Two research approaches—real-life giving through survey methodology and laboratory experiments—have been used to study such giving behavior with. A common experiment is the dictator game, where subjects are given some endowment and asked to decide whether to pocket the allowance or to share it with an unknown recipient or a recipient with specific known features. However, whether dictator game behavior relates to real-life giving remains an open question. We took advantage of a special module in the Health and Retirement Study (HRS) in which a sub-sample of respondents played a variant of the dictator game in 2010. By linking the data from the module to extensive data on giving from the 1992-2010 waves of the HRS on the same individuals and applying economic theory, we aimed to: (1) Understand the dictator game predictive power of real-life giving; (2) Estimate the intrinsic propensity to give, independent of economic circumstances; and (3) Study the relationship between such propensity and observable socioeconomic and psychological characteristics. Preliminary findings demonstrated that among those who gave to charity in the game, 56.1% gave in real life and among those who did not give to charity in the game, 55.4% did not give in real life. The difference between fractions giving to charity in real life conditional on giving in the game was significant at 1%. That the dictator game may predict real-life giving is of significance to future research design.

#### **INTERGENERATIONAL FINANCIAL TRANSFERS FROM SHARE: A DETAILED ANALYSIS**

S. Bould, G. Schmaus, *sociology, University of Delaware, Newark, Delaware*

With the aging of the population in Europe together with proposed changes in the retirement age, the question of intergenerational financial transfers has become a significant area of study. Albertini, Kohli and Vogel (2007) analyze intergenerational transfers of money in the first wave of Survey of Health, Ageing and Retirement (SHARE). Their results indicate significant differences between the amount given by the older generation to their children relative to the amount given by the adult children in different European countries. The adult child generation gives almost as much as it receives in France but this is not the case in Germany. Our results confirm their findings for France and Germany for the second wave (2006/2007) of SHARE. A more detailed analysis of the amounts given in Germany, however, indicates that the distribution of given transfers is highly skewed. The majority of respondents gives rather small amounts to their children and only a minority gives higher amounts. There are also a few cases where extremely high amounts are given. Measures such as mean or median do not summarize the distribution very well. The calculation of balances – as seen from the perspective of the children – is problematic; only the fact that the balance is positive or negative is relevant. This paper will present our results for Germany and we will provide a comparison with France in order to better understand which groups are involved in a high level of exchanges and which groups report only a small amount given and received.

## A FRONTIER BEYOND THEIR PARENTS': THE LIFESTYLES AND EXPECTATIONS OF MIDDLE-AGED ADULTS IN THEIR LATE FORTIES AND FIFTIES

S. Lum, *Waseda University, Tokyo, Japan*

Middle-aged adults in their forties and fifties are well aware of the aging population situation in Japan. Currently the men in these generations are in the peak of their careers and the women, having seen their nests emptying, have dabbled with part-time work or businesses. Often, both their parents and parents-in-law are living. Some of their own children have married and have children of their own and some have children who are still unmarried and living with them. This paper will focus on adults in these middle generations and describe their different living arrangements, relationships with their parents, and expectations of their parents' future as well as their own future. The results are based on a qualitative research of healthy, older adults and their adult children living in the Greater Tokyo area. The research was conducted in an 18-month period between 2009 and 2010. Results found that these generations of adult children are very concerned over aging. They are searching for a model out of their parents' experiences and learning from what they see as their parents' mistakes. At the same time, they worry about the predictions of worse economic conditions for themselves in terms of social security. Some actions that they have taken include setting out early to make new friends and find new hobbies before their retirement, actively maintaining their health, and preparing financially for their own aging. While perceiving their parents to be living successfully, they see themselves at a frontier beyond their parents'.

## THE IMPACT OF PUBLIC LONG-TERM CARE INSURANCE ON CAREGIVERS' TIME ALLOCATION: FINDINGS FROM JAPANESE MICRO DATA

M. Kan, *School of Economics, University of Hyogo, Kobe, Japan*

[Objectives] This study investigates how public long-term care (LTC) insurance, which was introduced in the year 2000 in Japan, affected at-home caregivers' labor market activities and other behaviors. [Methods] A type of difference-in-differences estimation was conducted using the data from Survey on Time Use and Leisure Activities. To examine the effect of LTC insurance, two pooled data sets—1996 and 2001, and 1996 and 2006—were constructed. The samples consisted of women aged 40 to 69. They were limited to household heads, spouses of household heads, daughters of household heads, and spouses of household heads' sons. The total number of the sample was 23,828. The sample was divided into two groups depending on whether they are at-home caregivers. [Results] Some positive effect in labor force participation among female caregivers was observed although no significant effects on working hours were observed at all. There was a negative effect on sleep duration, but a positive effect on rest time. Among caregivers, the care time decreased in 2006. The effect in 2001 was negligible. [Discussion] Since care of the elderly has long been borne by women and it has prevented them from labor force participation, the socialization of the care was one of the main objects of the introduction of public LTC insurance. The result suggests that it had a positive effect on female labor participation. However, the Japanese population is aging rapidly, and the care needs are becoming large and diverse. Hence, additional ways to sustainably support caregivers are needed.

## POSSIBLE DETERMINANTS OF EXPECTED MONTHLY PENSION INCOME FOR CHINESE RURAL PEOPLE

H. Mi<sup>1</sup>, C. Niu<sup>1</sup>, C. Shen<sup>2</sup>, 1. *College of Public Administration, Zhejiang University, Hangzhou, Zhejiang, China*, 2. *Graduate School of Social Work, Boston College, Boston, Massachusetts*

Objective: The new rural old-aged social insurance in China has been started to implement in 2009 with the goal to cover all vast rural areas by the end of 2012. It will provide a uniform, low-level basic pension to all rural people 60 years or older nationwide. Because it is a low-level pension scheme the monthly pension income is not adequate to cover

living expenses for majority rural people in most rural areas in China. This study aims to investigate possible determinants of the expected monthly pension income (an ordinal measure) of Chinese old-aged people in rural China. Data and Methods: We utilize data obtained from a survey sample of 2200 aged 60 years or older rural people from 100 villages of 10 counties all around China. We used Chi-squared Automatic Interaction Detector (CHAID) and logistic regression to perform the analyses. Results: CHAID model shows significant effects of age, main income sources and the medical expense in the past year on expected pension income. The logistic model suggested the significant impact of income sources, health condition, family support, and whether living together with their children on expected pension income. Implications: With fast urbanization and rural-to-urban migration for young people in China, the expected pension income will further increase in years ahead. To raise pension payment for older-old and disables people is even more urgent because unlike young-old people who are still productive and have some income of their own.

## "LATE BLOOMERS OR LAST RESORT?": ENTREPRENEURSHIP IN OLD AGE

A. Franke, *Working Group Interdisciplinary Ageing Research, Goethe University Frankfurt am Main, Frankfurt am Main, Hessen, Germany*

Aging societies and hence economical implications indicate the question of new frontiers and potentials for entrepreneurship in every age. While in the USA almost half of the entrepreneurs are 45plus (Fairlie, 2011, Zissimopoulos & Karoly, 2007), in Germany this trend is still relatively uncommon, although it represents an attractive alternative relative to trainings fostering the skills of older unemployed individuals in attempts to reintegrate them into the workforce. Studies investigating which motives and personal factors increase the likelihood of successful entrepreneurship are rare. The goal of the present study was to identify specific characteristics of elderly entrepreneurs by using reports of the entrepreneurs themselves as well as reports provided by experts from banks and consulting institutions. Qualitative interviews were conducted with 18 elderly entrepreneurs between 51 and 69 years (mean age 51) who were self-employed for 4 years, on average. Additional interviews were conducted with 17 experts from 17 renowned banks, business development players etc. Data was coded following the grounded theory approach by Strauss and Corbin. The findings indicate that older entrepreneurs are becoming of increasingly popular due to non-linear biographies and the increasing risk of poverty in old age. In addition, older entrepreneur show a high degree of heterogeneity and diversity, as well and gender differences. The individual work history is reflected in all dimensions of the new business as motives, skills, networks and financial background. In sum, findings suggest that successful "silver entrepreneurship" contributes to individual and social productivity if accompanied by personal preconditions and an age-friendly social policy framework.

## IMPACT OF THE GLOBAL FINANCIAL CRISIS ON MOVING PRACTICES OF OLDER ADULTS

T. Perry, *University of Michigan, Ann Arbor, Michigan*

The global financial crisis has highlighted the tenuous nature of the global markets on the well-being of all generations. This paper highlights the impact of the global financial crisis on older adults who were planning to voluntarily relocate. Through ethnographic case studies, this paper presents the impact of asset reduction and housing insecurity on older adults. Additionally, the paper also demonstrates how concerns about the salability of one's home impacted ideas about home ownership and the desire to continue owning a residence. This study of older adults, their family members and supportive professionals highlights the experiences of older adults and their network as they embark on relocation from their homes to either senior living communities, condos, or other types of housing. To complete this project in the mid-west-

ern United States, I conducted interviews, participant observation of the moving process (packing, garage sales, moving day, adjustment) and document review with over 35 older adults, their kin and supportive professionals in three stages: pre-move planning, move in-process, and post-move adjustment.

### **THEORY OF PLANNED BEHAVIOR: DO DESCRIPTIVE NORMS AND ANTICIPATED REGRET PREDICT INTENTION TO PLAY THE LOTTERY AMONG DIFFERENT AGE GROUPS?**

Y.H. Huang, M. O'Bryan, W. Tang, K. Yung, *Claremont Graduate University, Claremont, California*

The present study added descriptive norms (DN) and anticipated regret (AR) to the Theory of Planned Behavior (TPB) model. Due to potential emotional differences in older adults, age was explored as a possible moderator between AR and intention. The results replicated the findings of previous TPB research: attitudes, subjective norms, and perceived behavioral control significantly predicted intention. Additionally, DN was found to predict intention above and beyond attitudes, subjective norms, and perceived behavioral control. Results indicated that older adults experienced less AR, but AR wasn't a unique predictor of intention. Age did not moderate the relationship between AR and intention. Keywords: theory of planned behavior, descriptive norms, anticipated regret, older adults

## **SESSION 670 (POSTER)**

### **NEURONAL AGING**

#### **APOE E4 STATUS AND ASSOCIATION BETWEEN BRAIN VOLUME AND OLFACTORY PERFORMANCE**

V. Rupp<sup>1</sup>, J.P. Hegarty<sup>2</sup>, K. Hayashi<sup>3</sup>, C. Sumida<sup>1</sup>, C. Murphy<sup>1,3</sup>, *1. San Diego State University, San Diego, California, 2. University of Missouri-Columbia, Columbia, Missouri, 3. University of California, San Diego, San Diego, California*

APOE E4 status is associated with increased risk of developing Alzheimer's disease and reduced volumes on average in brain regions implicated in olfactory processing. Manually delineating regions of interest in neuroimaging data entails long hours, anatomical expertise, and rigorously defined reliability measures. Alternatively, FreeSurfer is a software toolkit for fast, automatic analysis and has been shown to be reliable and accurate in a variety of studies. However FreeSurfer's ability to work with brain regions implicated in olfactory activities, which may be more difficult or impossible for FreeSurfer to detect and measure accurately, has not yet been investigated. The present study uses a correlational analysis to compare performance on tasks requiring olfactory activation with volumetric measurements of manual and automatic segmentation of olfactory brain regions in 39 adult subjects. The manual segmentation was performed using the AFNI neuroimaging software suite and inter-rater reliability was assessed by computing intra-class correlation coefficients with a secondary rater. Significant correlations between manual and automatic measurements of some regions were found, and APOE E4+ subjects were found to have significant correlations between odor identification performance scores and the volumes of the hippocampus and orbitofrontal cortex, while APOE E4- subjects were not. This suggests that diminished performance during olfactory tasks predicts a reduction of volume in these regions. Supported by NIH grant #AG04085 To Claire Murphy from National Institute on Aging

#### **DIFFERENCES IN P2 LATENCY AS A FUNCTION OF AGE, RESPONSE TYPE, AND ELECTRODE SITE**

M.R. Cervantez<sup>1</sup>, L. Graves<sup>1</sup>, A. Green<sup>2</sup>, C. Morgan<sup>1</sup>, C. Murphy<sup>1,2</sup>, *1. San Diego State University, San Diego, California, 2. University of California, San Diego, San Diego, California*

The current study investigated odor memory retrieval in healthy adults across three different age groups. The focus was to examine differences in OERP latencies for response type and how they differ between age groups. OERPs were recorded from the Fz, Cz, and Pz midline scalp electrode sites in 60 participants among 3 different age groups: young (10 F, 10 M, mean= 21.35 years), middle (10 F, 10 M, mean= 50.35 years), and old (10 F, 10 M, mean= 68.95 years). Subjects were instructed that they were performing an odor memory task and completed three sessions: session 1 was an exposure trial for encoding, session 2 was a retrieval trial using odors, and session 3 was a retrieval trial using odor labels. The odors were presented for 200 msec with an inter stimulus interval of 30 secs by a computer-controlled olfactometer. The odor retrieval trial produced significant differences in OERPs as a function of age, electrode site, and response types: hits, misses, correct rejections, and false positives. Among the middle age group, correct rejections and false positive response types had significantly longer P2 latencies than hits and misses, across electrode site. However, older adults had significantly longer P2 latencies for hits and misses than correct rejections and false positives [ $F(12,48) = 2.198, p = 0.028, \eta^2 = .087$ ]. These findings suggest that older adults take longer to retrieve odors that were previously presented while middle age adults take longer to retrieve new odors, both regardless of response accuracy.

#### **NEURAL CORRELATES ASSOCIATED WITH GRASP FORCE MATCHING TASKS IN OLDER WOMENCNS\_NEUROSCIENCE**

D.E. Adamo<sup>1,3</sup>, A.M. Daugherty<sup>2,3</sup>, *1. Department of Health Sciences, Wayne State University, Detroit, Michigan, 2. Psychology Department, Wayne State University, Detroit, Michigan, 3. Institute of Gerontology, Wayne State University, Detroit, Michigan*

Central effects on motor behaviors have been significantly advanced by the use of Magnetic Resonance Imaging (MRI) techniques. Neuroanatomical volumetric differences have been associated with age-related cognitive and motor deficits (Kennedy & Raz, 2005). However, few studies have considered the neuroanatomical correlates to age-related differences in motor tasks that vary as a function of cognitive demand. To investigate this, older right hand dominant women (mean laterality index of  $0.84 \pm 0.18$ ) grasped cylindrical devices embedded with strain gauges and performed two matching tasks, based on a 20% maximum voluntary exertion reference force. In the Ipsilateral Remembered condition, the reference and matching forces were produced with the same hand and for the Contralateral Remembered condition the memorized reference force information was transferred to the opposite hand/hemisphere to produce the match. Dependent variables included relative matching error and constant error. Relative matching error was greater in the contralateral than ipsilateral remembered condition. Directional differences (right hand overshoot, left hand undershoot) were significant in the CR condition for individuals who showed greater left than right hand strength and equivalent hand strengths. Findings from this study showed that asymmetries in the directional differences of grasp forces are related to differences in force perception derived from contralateral reference limb information and differences in grip strength. Correlations between MRI indices of brain integrity and the grasp data are currently being processed.

#### **OLDER ADULTS AND EPILEPSY: THE LONG AND WINDING ROAD TO DIAGNOSIS**

W. Miller, J. Buelow, *Nursing, Indiana University, Bloomington, Indiana*

Background: The incidence of new-onset epilepsy is highest in older adults. Results of preliminary studies indicate that older adults face

difficulties in being diagnosed with epilepsy, but researchers have not investigated their experiences. The purpose of this study was to describe experiences of older adults diagnosed with epilepsy at or after age 60. Methods: Qualitative description was employed using semi-structured interviews and content analysis. Results: Twenty older adults (mean age 70), 12 women and 8 men, participated. There were three types of diagnosis experiences: Satisfactory (n=2), Unsatisfactory (n=13), and Mixed (n=5). The majority who had unsatisfactory experiences were women (n=11), and all of these participants cited a delay in diagnosis as the prime dissatisfying factor. Delays ranged from six months to seven years and occurred mostly in women. Participants attributed delays to their own actions (n=3), those of providers (n=8), or both (n=2). Those attributing delays to their own actions did not seek treatment due to lack of recognition of their symptoms as seizures. Providers contributed to the delay by not taking participants' concerns seriously, failing to consider epilepsy as a diagnosis, misdiagnosing them with other conditions, or contributing symptoms to co-morbidities. Implications: Lack of a timely diagnosis for older adults with epilepsy leads to improper treatment, increased costs, and decrements in quality of life. The pervasiveness of the problem of delayed diagnosis is in this population, the typical length of the delay, and why women are more susceptible remains unknown. Research with a larger, more diverse sample is needed.

## SESSION 675 (POSTER)

### PERCEPTIONS OF AGING

#### ASSESSING PERCEPTIONS OF AGING: USING WORD CLOUDS AS A DATA VISUALIZATION TOOL

J.K. Chahal, E.A. Fenster, *Sociology & Gerontology, Miami University, Oxford, Ohio*

Research on undergraduate students' perceptions about aging note that current perceptions are influenced by past experiences and contact with older adults (Cottle & Glover, 2007; Van Dussen & Weaver, 2009). Data visualization strategies, such as word clouds, can help us explore existing and/or potentially changing perceptions regarding aging. Word clouds are created based on frequency of word use by participants; this technique creates discussion opportunities and is a different way to examine how ideas are understood or interpreted (Bandeem & Sawin, 2012; McNaught & Lam, 2010). This study utilized word clouds to analyze how students' perceptions of aging and gerontology change over the course of a semester. Undergraduate students in five sections of an introductory gerontology course were asked, at the beginning and end of the semester, to provide 3-5 words that they associated with "aging" and "gerontology." Pre- and post-semester word clouds were created for each section to see how perceptions changed. Analyses included frequencies of specific words and a content analysis. Across course sections, over the course of a semester, students' perceptions changed from general negative and/or ageist to open, positive, and/or realistic perceptions of aging. Individual instructors' preferences and specific course content resulted in variation in perceptions across course sections. The use of data visualization tools can aid in creating open interdisciplinary dialogues regarding the aging experience. Future implications associated with utilization of word clouds outside of the classroom should be considered in order to make research and interventions more accessible to the general public.

#### CORRELATES OF LIFE-EXTENSION ATTITUDES

N. Kogan<sup>1</sup>, S. Halpin<sup>2</sup>, *1. Psychology, New School for Social Research, New York, New York, 2. Veterans Affairs Medical Center, Atlanta, Georgia*

A previous publication by the present co-author described the development of a Life-Extension Questionnaire (LEQ) which was administered to two New York City samples (one of mixed age and the other homogeneously elderly). Exploratory factor analysis generated three

replicated factors labelled Utopian Vision, Personal-Emotional Rejection, and Socio-Economic Burden. In the present study, the LEQ was administered to a sample drawn from senior citizen centers in a large Texas city (N=203, 75% female, mean age= 59.4 years). A partial replication of the earlier factor structure was obtained—Socio-Economic Burden items merged with some of the Personal-Emotional Rejection items. Personality correlates of the LEQ—time perspective, death anxiety, and life-longings ("Sehnsucht")—were examined. A more limited time perspective was associated with a rejection of negative life-extension items. Those comforted by God and an after-life were more negative about life extension, whereas those fearful about death were more likely to endorse positive life-extension items. Life-longing focused on the meaning of life was significantly associated with a negative view of life extension. Those endorsing a pro-life cluster (against abortion, euthanasia, and suicide) were significantly more likely to endorse negative life-extension items. It is thus evident that the pro-life cluster cited above does not imply acceptance of experimental, biologically based efforts to extend the life span, even though the latter could be considered pro-life.

#### GERO-MODELLING: NEW WAYS OF LOOKING AT 'OLD' ISSUES

R. Woolrych, A. Sixsmith, P. Borwein, V. Dabbhagian, U. Glässer, P. Jackson, V. Mago, S. Namazi, *Simon Fraser University, Vancouver, British Columbia, Canada*

An increasingly ageing population presents immediate challenges to the discipline of gerontology, requiring the need to adopt innovative approaches and new ways of working to address them effectively. One potential area is the development of new collaborations, pooling expertise across applicable disciplines to forge new insights into issues impacting on older people. This paper discusses the emergence of approaches in mathematical modelling as an opportunity to operationalise complex areas of ageing and older people, through better visualising scenarios, designing appropriate solutions and modelling and testing real world interventions. This paper explores recent developments and potential applications in 'gero-modelling', presenting collaborative work between computer scientists and gerontologists at Simon Fraser University. We highlight ongoing work from three specific projects: a complex systems approach to understanding falls within long-term care; a modelling approach for monitoring activities of everyday living amongst those living with dementia; and modelling homelessness in old age. Through these projects, the paper highlights the potential benefits of adopting a modelling approach within gerontology, where modelling offers us 'new ways of looking' at 'old' issues. We also identify the challenges in bringing the two disciplines together, specifically highlighting the different skills that are required from both gerontologists and computer scientists to interpret what are complex problems within an aging society. Lastly, we identify a number of shared priorities for continuing development in the area of 'gero-modelling'.

#### NOVICE NURSING STUDENTS' ATTITUDES, KNOWLEDGE AND PERCEPTIONS ABOUT OLDER ADULTS

R.M. Phillips, *Nursing, Towson University, Towson, Maryland*

Novice nursing students enter nursing programs with varied experiences and perceptions about older adults. Many identify misconceptions about this population. In addition, many come to nursing education with experiences, both positive and negative, that potentially impacts individual attitude, knowledge and perception. This project uses Kogan's Attitudes toward Aging Scale and an adapted version of the Palmore's Facts on Aging quiz to evaluate entry level nursing students' attitudes toward the aged and basic knowledge about aging before their first clinical experiences in an extended care facility and at the end of the experience. Data will be presented from entry level nursing students in the first semester of a baccalaureate program. Understanding this information is important because nursing students' attitudes and perceptions

about older adults impacts the quality of patient care provided in all settings and the ability of graduate nurses to effectively advocate for this vulnerable group. This information is also helpful in developing education programs and experiences in nursing homes and other long term care settings to improve attitudes toward the elderly and enhance knowledge and perceptions about the aging process.

### **CHANGING NEEDS FOR AGING SERVICES: RESULTS FROM A COMMUNITY-DESIGNED AND COMMUNITY-IMPLEMENTED SURVEY**

L.L. Bryant<sup>1</sup>, C. Ledonne<sup>2,6</sup>, K.E. Lind<sup>1</sup>, S. Davis<sup>3,6</sup>, P. Gomez<sup>4,6</sup>, J. Lopez<sup>6</sup>, P. Morgan-Lloyd<sup>3,6</sup>, 1. *Community and Behavioral Health, Colorado School of Public Health, Aurora, Colorado*, 2. *San Luis Valley Area Health Education Center, Alamosa, Colorado*, 3. *San Luis Valley Citizen Corps, Alamosa, Colorado*, 4. *Casa De Oro, La Jara, Colorado*, 5. *National Senior Service Corps RSVP, Alamosa, Colorado*, 6. *San Luis Valley Healthy Aging Research Network Community Team, Alamosa, Colorado*

A community team (older adults and service providers) in Colorado's rural San Luis Valley (SLV), a partner with the Colorado member center of the Centers for Disease Control and Prevention Healthy Aging Research Network, envisions "a healthier and more active senior population, with an improved quality of life that includes remaining independent and being able to stay at home longer." Concerned that aging services as they now exist in the community will not meet the needs and desires of the growing aging population in the next 5-10 years, the team in 2010-2011 designed and implemented a 24-question survey about current and anticipated health status and perceived importance of available and desired community services that would allow them to stay in their homes as they age. The 242 respondents age 50 or older came from all 6 SLV counties. The greatest concerns for being able to stay in one's home included: income, physical health, and indoor and outdoor mobility. Respondents' preferences for services reflected those absolute needs (e.g., home healthcare, caregiving) as well as desired resources that support and improve quality of life: transportation (often an expressed desire in these rural communities), home-delivered and congregate meals, and home maintenance. Younger respondents reported less current and potential interest in senior centers as they currently exist than their older colleagues and expressed preferences for different senior center services and activities. These findings support the need for this review and creative responses. Next steps include comparisons with existing resources and development of policy recommendations.

### **PERCEPTION OF AGING IN FACES: THE TABOO OF TOUCH**

E. Covan, A.W. Belsler, B. Pavill, D.M. Monahand, K. Ricanek, *Gerontology, School of Health and Applied Human Sciences, UNC Wilmington, Wilmington, North Carolina*

Professors of Gerontology, Theater, Nursing, Film Studies, and Computer Science collaborated to study how people on a university campus perceive aging, especially with regard to the taboo of face aging. Subjects viewed cropped images of faces of younger and older adults, followed by images depicting adults of different ages touching each other's face. Subjects then provided written comments on what they perceived in those images. A content analysis of comments was conducted in consideration of the university status of subjects. All respondents commented on age differences of those photographed. When examining cropped images of faces, comments were primarily neutral or negative. An older woman was repeatedly described in terms of wrinkles and serious demeanor, while a younger woman's oily skin and lack of emotions were mentioned. Comments concerning facial touching were more positive. Although some noted people were hesitant about being touched, viewers commonly mentioned observations of happiness and smiling, as indicators of social engagement. Speculation about what prompted touching occurred regardless of the academic status of the viewer or

who touched whom in the photographs. Viewers wondered if those touching one another were kin, perhaps a grandparent and a grandchild. Other comments suggest that although observers find touching between persons of different age groups to be therapeutic, they also recognize facial touch between persons in different age groups is unusual. Authors employ transdisciplinary research findings to present implications for clinical practice and gerontological education.

### **WISDOM IN LIFE: AN EXTREME CASE ANALYSIS OF WISDOM NOMINEES, SUBJECTIVE PERCEPTIONS, AND WELL-BEING**

H. Oh, *Sociology, University of Florida, Gainesville, Florida*

This study sought to illustrate and clarify how and to what extent wisdom characteristics are understood differently between top-10 and bottom-10 wisdom-score groups in terms of their wisdom nominees in person and their own version of wisdom definition. The concurrent triangulation mixed-method design adopted a nonparametric, content, and social network analysis for a quantitative configuration and qualitative specification. The results indicated that the top scorers had higher life satisfaction and better health status than the bottom-10 group. The bottom group, on the other hand, identified more self-centered attributes as wisdom characteristics, whereas people in the top appreciated the virtue of perspective-taking, and learning from experiences and from others. The content analysis and network analysis confirmed these distinctions indicating the importance of altruistic, reciprocal attributes as prerequisites for wisdom development.

### **RV LIVING AND POSITIVE AGING: HOW DO OLDER RVERS CHALLENGE NEGATIVE STEREOTYPES ABOUT AGING?**

E. Sikorska-Simmons, S. Halbert, A. Gens, *UCF, Orlando, Florida*

Despite the increasing evidence suggesting that the large majority of older people are healthy and active into late old age, little is known about positive aspects of aging. In particular, there is a dearth of knowledge about well-being of older people who lead alternative lifestyles. This study examined how "RV living" (as an alternative lifestyle) challenges negative stereotypes about aging. Consistent with the model of successful/positive aging, the assessed dimensions of well-being included health, life satisfaction, and social support. The sample included 117 residents of an RV retirement park. Data were collected, using a self-administered questionnaire. Of the 117 participants, 48% were women, all were white, and 69% were married. The mean age was 76, and 59% residents were 75 or older. The majority of RVers (95% males and 88% females) assessed their health as "good" or better and the majority (72% males and 68% females) were "delighted" or "pleased" with their lives. Almost all reported having someone who provided them with emotional (97%), instrumental (80%), and companionship (97%) support. Spouses were the most common source of support, followed by children. Both males (88%) and females (95%) reported having confidants and an adequate contact with them. Clearly, older RVers experience good quality of life that is indicative of successful aging. More research is needed to better understand the effects of RV living on well-being. Such research could counter some of the negative stereotypes about older people and help reduce ageism in society.

## **SESSION 680 (POSTER)**

### **PERSONALITY**

#### **INDIVIDUAL DIFFERENCES IN OPENNESS TO EXPERIENCE AND RISK FOR MORTALITY**

E.S. Sharp<sup>1</sup>, C.A. Reynolds<sup>2</sup>, N.L. Pedersen<sup>3,1</sup>, M. Gatz<sup>1,3</sup>, 1. *University of Southern California, Los Angeles, California*, 2. *University of California, Riverside, Riverside, California*, 3. *Karolinska Institutet, Stockholm, Sweden*

Previous research has found that openness to experience exhibits small but significant declines in older adulthood. The purpose of this

study was to examine whether individual differences in level or change in openness were related to mortality. It was hypothesized that individuals with a lower level and greater rate of decline in openness would have an increased risk for death. Participants were 1947 individual twins from the Swedish Adoption/Twin Study of Aging (SATSA) with up to 6 measurements of openness. The first year in which participation was possible was 1984; the last year was 2007. Nearly 70% had more than 3 measurements of openness. By 2010, approximately 55% of the sample had died. This study combined a latent growth model with a survival model to examine the relationship between openness intercept (level) and slope (change) and mortality risk. Results of both a two-stage as well as a simultaneous growth and survival model indicated that a steeper decline in openness was associated with an increased risk of death, adjusting for age at study entry, sex, and education. Level of openness was unrelated to risk for death. Graphs of participant drop out as well as the statistical model results suggest that nearness to death accounted for a large part of the observation that openness declines in older adulthood. Overall, the relationship between decline and death may be best conceptualized by theories of terminal decline.

### PERSONALITY, SUBSTANCE USE, AND LONGEVITY: THE HEALTH BEHAVIOR MODEL OF PERSONALITY

N.A. Turiano<sup>1</sup>, T. Gruenewald<sup>2</sup>, D. Mroczek<sup>3</sup>, 1. *University of Rochester Medical Center, Rochester, New York*, 2. *University of Southern California, Los Angeles, California*, 3. *Human Development & Family Studies, Purdue University, West Lafayette, Indiana*

Personality traits predict both substance use and mortality risk across the life course. However, there are few investigations that have examined both of these effects in a single study. Utilizing 12-year mortality data from a national sample of over 6,000 adults from the Midlife in the United States Study (MIDUS), we tested whether alcohol use, smoking behavior, and drug use mediated the personality-mortality association. Higher levels of conscientiousness predicted a reduction in mortality risk over the follow-up (HR = 0.90; CI = 0.81-0.98;  $p < .05$ ). Mediation tested in a structural equation modeling framework (with censored outcome) provided evidence that the three substance-use behaviors significantly mediated the conscientiousness-mortality association (OR = 0.92; CI = 0.85-0.99;  $p < .05$ ). Smoking behavior had the strongest mediating effect of the three (OR = 0.98; CI = 0.97-0.99;  $p < .05$ ). The current study provides empirical support for the Health Behavior Model of Personality, which holds that personality influences health behaviors, which in turn affects health and longevity.

### PERSONALITY AS A PREDICTOR OF INTRAINDIVIDUAL VARIABILITY IN COGNITIVE FUNCTION ACROSS ADULTHOOD

J. Boron<sup>1</sup>, S.L. Willis<sup>2</sup>, K. Schaie<sup>2</sup>, 1. *Youngstown State University, Youngstown, Ohio*, 2. *University of Washington, Seattle, Washington*

Prior research examined the relationship between personality and various cognitive abilities. Results have been somewhat inconsistent regarding which personality factors show association with cognition, possibly due to the variety of cognitive abilities investigated. Rather than focus on level of cognition, the current study examined the association of personality with intraindividual variability (IIV) in cognition, as higher IIV may be indicative of cognitive decline. A series of regression analyses were employed to investigate the relationships between NEO personality factors in 2001 and a global measure of cognitive IIV from 2005 for participants aged 25-96 years ( $M=65.81$ ;  $SD=14.41$ ) from the Seattle Longitudinal Study ( $N=1172$ ). For the total sample, agreeableness ( $p < .05$ ), conscientiousness ( $p < .05$ ), and openness to experience ( $p < .07$ ) showed a negative relationship with cognitive IIV, while the association with age ( $p < .001$ ) was positive. Openness to experience was a significant predictor ( $p < .05$ ) for those aged 25-57 years; Agreeableness was significant ( $p < .001$ ) for individuals aged 58-73 years; Conscientiousness emerged as significant ( $p < .001$ )

for those aged 74-96 years. Age was significant in all models, and all associations with personality domains were negative, suggesting that higher levels of agreeableness, openness to experience, and/or conscientiousness were associated with less IIV in cognitive function. Only openness to experience was consistently, positively related to mean level of cognitive function (rather than IIV) in the total sample, and in all age groups, supporting prior research. Thus, if indicators of cognitive decline are of interest, consideration of NEO personality factors of agreeableness and conscientiousness, in addition to openness, may be warranted.

### CONSISTENCY IN DAILY GOAL PROGRESS: POSSIBLE SELVES IN ACTION

H. Ko, S. Mejia, K. Hooker, S. Choun, T. Pham, R. Metoyer, *Human Development and Family Sciences, Oregon State University, Corvallis, Oregon*

For older adults, managing social connections with friends and family in daily lives is essential for maintaining their health and well-being. Consistent with theory that possible selves are cognitive representations, motivating individuals to pursue their goals, our previous work found that having either hoped-for and/or feared possible selves in the social domain significantly predicted higher social goal progress over a 100-day study period. In the current study we further investigated older adults' within-person variation in the process of pursuing their social goals across the study period. The data were collected via the web-based survey, Personal Understanding of Life and Social Experiences (PULSE) project ( $n=99$ , mean age = 63.29,  $SD=7.98$ ). At baseline, participants provided two of their most important hoped-for and feared possible selves and a social goal, which they rated on a daily basis. We controlled for optimism as well as age and gender for all analyses. Those with lower variability had significantly higher daily social goal progress than those with higher variability ( $p < .001$ ), independent of the effect of having social possible selves ( $p < .05$ ). These results emphasized the importance of congruence between implicit motivation and explicit action, and enhance our understanding of how older adults pursue their goals on a daily basis. Having possible selves as an overarching goal-construct significantly guided participants working towards their social goals. In addition, those who were better able to stay on the course in pursuing their social goal also made more averaged goal progress.

### DOES PERSONALITY MODERATE PAIN AMONG OLDER AMERICANS WITH CHRONIC HEALTH CONDITIONS AND FUNCTIONAL LIMITATIONS?

A.D. Tiedt, *NORC at the University of Chicago, Chicago, Illinois*

This research examined personality traits as correlates of greater psychological resiliency and reduced pain in a representative sample of older Americans. Resilience to pain is a concern for elders who require help with activities of daily living and have chronic health problems, but have smaller social support networks due to reduced mobility. This study analyzed data from the 2010-2011 National Social Life Health and Aging Project (NSHAP). Results confirmed that traits from the Five Factor Personality Inventory correlated with reduced pain after adjusting for health. Respondents who scored low on traits capturing extraversion and high on neuroticism reported more pain than their counterparts. However, low scores on traits related to openness and agreeableness were associated with less pain overall. These results suggest the benefits of "having thick skin" since elders who were not open or agreeable seemed less distressed by poor physical and mental health. Overall, these findings contribute to an understanding of the mechanisms wielded by elders in coping with chronic and acute pain.



## DO FACETS OF CONSCIENTIOUSNESS AND EXTRAVERSION PREDICT FATIGUE AMONG OCTOGENARIANS AND CENTENARIANS?

J.B. Baenziger<sup>1</sup>, G.D. da Rosa<sup>1</sup>, P. Martin<sup>1</sup>, L. Poon<sup>2</sup>, 1. *Human Dev Fam Studies, Iowa State Univ, Ames, Iowa*, 2. *University of Georgia, Athens, Georgia*

This study investigated the effects of two personality facets (Conscientiousness and Extraversion) on two dimensions of fatigue (total fatigue and mental fatigue) using octogenarians and centenarians proxy reports. Three-hundred and twenty one community and long term care participants and their proxies from the Georgia Centenarian Study were interviewed. Hierarchical multiple regression results suggest, after controlling for demographics (gender, age, ethnicity, living situation, education) and depression, for Conscientiousness, age  $\beta = .15$ ,  $t(310) = 2.00$ ,  $p < .05$  and depression  $\beta = .44$ ,  $t(310) = 5.89$ ,  $p < .001$  were positively related to total fatigue. The trait of self-discipline was negatively related to both total fatigue,  $\beta = -.41$ ,  $t(310) = -3.13$ ,  $p < .01$  and mental fatigue,  $\beta = -.33$ ,  $t(310) = -2.28$ ,  $p < .05$ . For Extraversion, depression was positively related to total fatigue,  $\beta = .35$ ,  $t(310) = 4.75$ ,  $p < .001$  while physical health, activity and positive emotions were negatively related to total fatigue:  $\beta = -.03$ ,  $t(310) = -.48$ ,  $p < .001$ ;  $\beta = -.23$ ,  $t(310) = -2.61$ ,  $p < .01$ ; and  $\beta = -.27$ ,  $t(310) = -2.96$ ,  $p < .01$ , respectively. Participants in long term care  $\beta = .26$ ,  $t(310) = 2.65$ ,  $p < .01$  or with higher depression,  $\beta = .31$ ,  $t(310) = 3.21$ ,  $p < .01$ , had more mental fatigue. In conclusion, better physical health, activity, and positive emotions resulted in lower levels of total fatigue. Low self-discipline, long term care and higher depression resulted in higher total fatigue and mental fatigue.

## PSYCHOLOGICAL PROFILES OF MEN IN THE VA NORMATIVE AGING STUDY

L. Lee<sup>1,3</sup>, A. Spiro<sup>1,2,3</sup>, 1. *Department of Epidemiology, Boston University School of Public Health, Boston, Massachusetts*, 2. *Department of Psychiatry, Boston University School of Medicine, Boston, Massachusetts*, 3. *Behavioral Science Division, National Center for Posttraumatic Stress Disorder, VA Boston Healthcare System, Boston, Massachusetts*

Considerable research has examined separately the roles of personality, cognitive and social functioning on health. However, few have adopted a wholistic approach in examining psychological profiles underlying these predictors (Smith & Baltes, 1997). This study sought to extract and characterize patterns of psychological functioning. Data were collected 1965-67 from 1,189 healthy men aged 24-82 (mean age=43.6, SD=9.3) enrolled in the VA Normative Aging (Bossé, Ekerdt, & Silbert, 1984). Measures included: (1) intellectual performance (Generalized Aptitude Test Battery; Fozard & Nuttall, 1971); (2) personality (16 Personality Factor Questionnaire; Institute for Personality & Ability Testing, 1962); (3) value orientations (Study of Values; Allport, Vernon & Lindzey, 1960); and (4) occupational interests (Strong Vocational Interest Blank; Strong & Campbell, 1966). Latent profile analysis was used to identify subgroups with different patterns of psychological functioning. A 4-class solution optimally fit the data. Class distinctions were most apparent in personality and vocational measures. The largest class (31%) had near-average scores on most traits, and was best described as somewhat dependent and lacked interest in specialized occupations. One class (26%) was marked by leadership and extraversion, tended to be decisive and fact-oriented, and had lower neuroticism and anxiety. Another class (26%) was characterized by independence, creativity, and interests in specialized occupations. The smallest class (18%) was prone to higher levels of anxiety, neuroticism, and lower levels of extraversion and leadership. These results add to current knowledge of psychological profiles, and provide the basis for further research on the influence of psychological functioning on later life outcomes.

## INDIVIDUAL DIFFERENCES IN HEALTHY AGING CONTROLS SEEKING DIAGNOSTICS STATUS OF ALZHEIMER'S DISEASE

M. Szumska<sup>1</sup>, D.K. Johnson<sup>1,2</sup>, E. Vidoni<sup>2</sup>, R.J. Bothwell<sup>2</sup>, E. Cope<sup>2</sup>, J.K. Morris<sup>2</sup>, 1. *University of Kansas, Lawrence, Kansas*, 2. *University of Kansas Medical Center, Kansas City, Kansas*

Background: There exists a clear relationship between personality and the adoption of health behaviors (Mroczek, et al., 2012). In Young Older Adults, there also exists a relationship between the Transtheoretical Model of Behavior Change (TMBC) and health behaviors (Marcus, et al., 1992). However, health behavior research in Older Adults typically ignores the TMBC. This model may be an important factor for health behavior adoption in Older Adults. This study evaluates the extent to which intention to change health behavior is influenced by conscientiousness. We examine the individual differences and effect of level of conscientiousness on lifestyle change after disclosure of amyloid status. Methods: This report is from a pilot study of 30 individuals aged 65 and more was selected from volunteers enrolled in a neuroimaging study of cerebral amyloidosis among healthy older adults. The Clinical Dementia Rating (CDR) was used to determine the presence or absence of dementia. The personality trait level was assessed via the self-administered adjectival measures of the Big Five. Responders were asked how much each of 25 adjectives described themselves on a scale ranging from 1 (not at all) to 4 (a lot). The Transtheoretical Model of Behavior Change (TMBC) was used to test lifestyle change with baseline and 6-week and 6-month follow up after the disclosure of amyloid status. Results: Results indicated that conscientiousness was positively related to readiness to change. The results are consistent with the previous findings (Bogg, T.; Roberts, B., 2004). Key words: Alzheimer's Disease, conscientiousness, Transtheoretical Model of Behavior Change.

## SESSION 685 (POSTER)

### PHYSICAL ACTIVITY & EXERCISE

#### GENETIC INFLUENCES ON PHYSICAL ACTIVITY IN LATE LIFE

A. Aiken Morgan<sup>1</sup>, G. Bennett<sup>2</sup>, C.L. Edwards<sup>2</sup>, K.E. Whitfield<sup>2</sup>, 1. *Center for Aging, Duke University Medical Center, Durham, North Carolina*, 2. *Duke University, Durham, North Carolina*

Rates of physical inactivity tend to increase with age, and physical inactivity is related to higher rates of chronic disease. The purpose of this study was to examine individual variability in physical activity in African American twins. Data from the second wave of the Carolina African American Twin Study of Aging (CAATSA) was used and included a subset of 30 twins (14 identical and 16 fraternal pairs; age range 57-84 years, mean = 70, S.D. = 7.86). Physical activity was measured as average metabolic equivalent (MET) hours per week. There were no significant associations between physical activity and body mass index ( $r = -.20$ ,  $p > .09$ ) or age ( $r = .05$ ,  $p > .69$ ); however, there were significant associations between physical activity and activities of daily living (ADLs) ( $r = -.26$ ,  $p < .03$ ). After residualizing the effect of ADLs, twin correlations were higher for identical twins ( $r = .72$ ) than for fraternal twins ( $r = .37$ ). As a result, 70% of the individual variability was from genetic sources, and the remaining proportions of variance from shared environment (2%) and non-shared environment (28%). These

findings suggest that genetic influences account for a significant variability in physical activity in later life.

### THE INTERACTION OF HEALTH-RELATED SOCIAL CONTROL AND EXERCISE SELF-EFFICACY ON PHYSICAL ACTIVITY

K. Cotter, N.G. Lancaster, D.J. Rodda, C.R. Padilla, *Psychology, Sacramento State University, Sacramento, California*

Physical activity is important for healthy aging, and among older adults its frequency is strongly predicted by exercise self-efficacy. Health related social control, which is an effort by social partners to influence health behavior, was explored for its impact upon the relationship between exercise self-efficacy and physical activity to further our understanding of the social component that often accompanies physical activity. Based on a regression analysis examining cross-sectional data from 82 community-dwelling older adults (Mage = 74 years, 64% women), age, exercise self-efficacy, and positive social control explained 16% of the variance in physical activity,  $F(4, 77) = 3.76, p = .007$ . Consistent with predictions, younger age was associated with more frequent physical activity ( $\beta = -.06, p = .006$ ). Furthermore, while neither variable had a direct influence on physical activity, positive social control moderated the relationship of exercise self-efficacy to physical activity frequency ( $\beta = -.18, p = .04$ ), with the interaction explaining 4.6% of the variance in physical activity,  $F(1, 77) = 4.24, p = .04$ . Results revealed that participants reporting high positive social control were similarly active, while participants reporting low positive social control were more active when they perceived high exercise self-efficacy and less active when they perceived low exercise self-efficacy. Results suggest that without confidence in their abilities to be active, older adults might rely on positive social control messages for physical activity motivation. Thus, physical activity interventions for older adults should include supportive encouragement.

### DEVELOPING ACCELEROMETER CUT-POINTS TO MEASURE FUNCTIONAL EXERCISE CAPACITY IN OLDER ADULTS

K. Wasilenko, S. Marshall, J. Kerr, S. Godbole, K. Crist, J. Chen, K. Bolling, *University of California, San Diego, La Jolla, California*

Background. Accelerometry is recognized as a field-based criterion of physical activity (PA) but outcome variables are based on energy expenditure-referenced criteria which may be inappropriate for older adults or insensitive to important changes in their functional capacity as a result of intervention. Methods. Forty-eight older adults (mean age =  $82.8 \pm 6.4$ ; range = 70-98 yr; 69% female) completed a validated test of functional exercise capacity (the timed 400m walk test) while wearing a hip-mounted ActiGraph GT3X+ accelerometer. Mean accelerometer counts per minute (ct.min-1) were computed for participants able to complete the walk test in <15 min without resting. 400m walk time (s) was regressed on mean ct.min-1 with cut-points of functional walking capacity derived by solving the regression equation for ct.min-1 at the 25th and 75th percentile of 400m walk time. Results. Mean ct.min-1 during the 400m walk test was 2372 ( $\pm 749$ ), 1870 ( $\pm 1063$ ), and 1362 ( $\pm 525$ ) for 70-79 yr, 80-89, and  $\geq 90$  yr olds, respectively. The Pearson partial correlation (adjusting for age and cognitive function) between accelerometer ct.min-1 and 400m walk time was  $r = -0.67$ . Cut points associated with the 25th and 75th percentile of 400m walk time were 2854 and 1402 ct.min-1, respectively. Conclusion. Accelerometer ct.min-1 during the 400m walk test suggest that commonly used cut-points to measure PA among older adults may be inadequate for detecting meaningful changes in functional exercise capacity. Individualized ct.min-1 from a 400m test could also be used as a threshold to measure intervention-related changes in functional PA capacity among older adults.

### THE ROLE OF PAIN IN UNDERSTANDING RACIAL/ETHNIC DIFFERENCES IN FREQUENCY OF PHYSICAL ACTIVITY AMONG OLDER ADULTS

E. Grubert<sup>1</sup>, T. Baker<sup>2</sup>, K. McGeever<sup>3</sup>, B.A. Shaw<sup>4</sup>, 1. *University at Albany, SUNY, School of Public Health, Rensselaer, New York*, 2. *University of South Florida, South Florida, Florida*, 3. *University at Albany, SUNY, Department of Sociology and Center for Social and Demographic Analysis, Albany, New York*, 4. *University at Albany, SUNY, School of Public Health and Center for Social and Demographic Analysis, Rensselaer, New York*

Physical activity (PA) is a complex behavior that can help maintain and improve individuals' health, decrease disability, and delay the onset of functional limitations. Significant associations between pain and PA have been documented in the general population, however less is known about this association among racial and ethnically diverse older adults. This study aimed to evaluate racial/ethnic differences in PA among white, black and Hispanic adults >65 years of age, and to assess the potential role of pain as a mediator. Data were taken from the 2008 Health and Retirement Study. Logistic regression was used to evaluate associations between race/ethnicity and pain and the odds of regular PA participation. The odds of engaging in frequent light PA were about 49% lower among blacks (Odd ratio (OR) = 0.51; 95% Confidence interval (CI): 0.44, 0.60) and about 22% lower among Hispanics (OR = 0.78; 95% CI: 0.66, 0.92). Similarly, the odds of engaging in frequent moderate/vigorous PA were about 42% lower among blacks (OR = 0.58; 95% CI: 0.50, 0.67) and about 19% lower among Hispanics, compared to whites (OR = 0.81; 95% CI: 0.68, 0.95). A graded inverse association between levels of pain severity and the odds of PA was found, but pain did not mediate racial/ethnic differences in PA. When compared to whites, older blacks appear to have relatively low rates of PA with low rates of pain, while older Hispanics experience relatively high rates of pain, but are perhaps more resilient to the effects of pain on PA.

### SELF AND SPOUSAL EFFICACY AND PHYSICAL ACTIVITY: THE ROLE OF RELATIONSHIP SATISFACTION

B.J. Ayotte<sup>1</sup>, J. Margrett<sup>2</sup>, J.H. Patrick<sup>3</sup>, 1. *Psychology, University of Massachusetts Dartmouth, North Dartmouth, Massachusetts*, 2. *Iowa State University, Ames, Iowa*, 3. *West Virginia University, Morgantown, West Virginia*

Marriage is related to a number of positive health-related outcomes, including better overall health, more frequent health behaviors, and lower overall mortality rates. This study examined how self-efficacy, spousal self-efficacy, and marital satisfaction were related to physical activity in middle-aged and older married couples. A total of 116 couples (M=58.86 years, SD=7.16, Range 50-75) completed measures assessing physical health, self-efficacy for physical activity, marital satisfaction, and physical activity. Couples were categorized as mutually satisfied (both spouses scored above median on marital satisfaction) or not-mutually satisfied (one or both spouses scored below median). Hierarchical regression models were performed separately for husbands and wives. The first step of the models included age, health conditions, and self-efficacy. The second step added spousal self-efficacy. Results indicated that self-efficacy was positively related to physical activity in mutually satisfied and not-mutually satisfied husbands and wives. Spousal self-efficacy accounted for a significant amount of variance in physical activity after accounting for physical health, self-efficacy, and age only among husbands (R-squared change=11%) and wives (R-squared change=8%) in mutually satisfied couples. Overall, the models accounted for a significant amount of variance in physical activity in mutually satisfied husbands (R-squared=44%), mutually satisfied wives (R-squared=51%), non-mutually satisfied husbands (R-squared=37%), and non-mutually satisfied wives (R-squared=40%). These results provide evidence for the importance of considering individual, spousal, and relationship characteristics when investigating physical activity during middle and later life.

## THE INFLUENCE OF LEISURE SPORTS PARTICIPATION MOTIVATION ON CHINESE SENIORS' LIFE HAPPINESS

Y. Zheng, Y. Won, A. Sheard, *Yonsei University, Seoul, Republic of Korea*

The purpose of this study was to examine the influence of leisure sports participation motivation on the life happiness of Chinese seniors. Using the stratified cluster random sampling method, 550 participants 60 years and older who live in Beijing and Tianjin were analyzed in 2011. All resulting data was calculated with SPSS version 17.0 utilizing factor analysis, reliability analysis, one-way ANOVA, multiple regression and correlation analysis methods. The conclusion is as follows: First, the analysis of the correlation between leisure sports participation motivation and life happiness showed that there was a static correlation between them. Second, leisure sports participation motivations of Chinese elderly have a significant influence on life happiness, physical health, economic lifestyle, emotional health, family and outside-family relationships. Lastly, it was found that according to the frequency of Chinese elderly participation in leisure sports activities that there were differences in life happiness. In terms of emotional health: 66-70 year olds were found to have higher levels of emotional health than those who were 76 and older, upper class had higher levels than middle class, and finally those that graduated University had higher levels than those who graduated only high school, middle school and/or elementary school.

## PATTERNS OF LEISURE-TIME PHYSICAL ACTIVITY IN A BRITISH BIRTH COHORT AT EARLY OLD AGE

K.R. Martin<sup>1,2</sup>, R. Cooper<sup>2</sup>, T.B. Harris<sup>1</sup>, J.M. Guralnik<sup>3,1</sup>, R. Hardy<sup>2</sup>, D. Kuh<sup>2</sup>, *1. Laboratory of Epidemiology, Demography, and Biometry, National Institute on Aging, Bethesda, Maryland, 2. MRC Unit for Lifelong Health and Ageing, University College London, London, United Kingdom, 3. University of Maryland, Baltimore, Maryland*

Participation in leisure-time physical activity (LTPA) confers many health benefits yet population levels of physical activity often do not meet established guidelines (150+ minutes/week of moderate intensity activity), especially at older ages. Data from a nationally representative British birth cohort (1034 men, 1149 women) were used to examine sedentary activities and self-reported LTPA at age 60-64y in relation to gender, employment status, body mass index (BMI) and self-reported health. Participants had a mean of 24 ( $\pm 10$ ) hours/week of sedentary time from television and leisure-time computer use. Those not currently employed, with a BMI  $\geq 25$ kg/m<sup>2</sup>, or who reported worse self-reported health had higher mean sedentary times than those employed, with a lower BMI or with good self-reported health, by 3, 3.5, and 2 hours/week respectively. 52% of participants reported engaging in moderate-to-vigorous LTPA for 150+ minutes/week; only 6% reported 150+ min/week of vigorous LTPA. Men, those not currently employed, with a BMI  $< 25$ , or reporting good self-reported health engaged in more moderate-to-vigorous LTPA than others, by an average of 33, 25, 45, 105 minutes/week, respectively. While 16% of participants reported no LTPAs, 22% engaged in one, 20% in two, 15% in three and 29% in more than four. 71% reported walking for pleasure/recreation; other common activities were swimming (33%), floor-exercises (24%), conditioning exercises (15%), recreational cycling (15%), hill-walking (14%), dancing (14%), golfing (12%) and weight-bearing exercises (11%). Public health practitioners and clinicians should continue to encourage older adults to participate in a diverse range of LTPA and reduce time spent in sedentary behaviors.

## HEALTH SYMPTOMS AND PERCEIVED BARRIERS TO WALKING IN OLDER POPULATIONS

M. Kealey, W. Satariano, S.L. Ivey, E. Kurtovich, A. Hubbard, *University of California, Berkeley, Berkeley, California*

Background: Mobility is important to healthy aging. Walking, both for recreation and for transportation, has been suggested to be partic-

ularly accessible, affordable, and safe way to be physically active. It is important to understand the barriers to and supports for walking in one's neighborhood for older adults. Health symptoms may be important determinants of walking and physical activity for older adults. Objective: Determine the leading health symptoms reported by older people as causing difficulty when walking outdoors. Methods: The study titled "Environmental Correlates of Physical Activity among Older Adults: A Healthy Aging Research Network (HAN) Collaboration" ("HAN Walking Study") was designed to examine how the neighborhood environment may influence physical activity and walking behavior in older adults, and how this relationship may be modified by the functional capacity of older adults. Data were collected from 884 older adults at four sites across the country, from a diversity of physical environments. Data collection included in person interviews, lower-body functional capacity testing, accelerometers, walking diaries, and secondary GIS data. Results: Most participants report multiple barriers to walking outside. Overall, 95.5% report at least one health symptom or other barrier to walking, with a range of 0-37 and a mean of 7.9 barriers. Conclusions: Walking is engaged in by the majority of both older men and women in this study, however, they perceive multiple barriers to walking.

## EFFECT OF FALL-PREVENTION PROGRAM ON SUBJECTIVE HEALTH AND LIFE EXPECTANCY AMONG OLDER ADULTS

Y. Cho<sup>1</sup>, B.S. White<sup>2</sup>, K. House<sup>2</sup>, O. Mohamed<sup>2</sup>, S. Singh-Carlson<sup>2</sup>, *1. Psychology, California State University, Long Beach, Long Beach, California, 2. California State University, Long Beach, Long Beach, California*

Purpose: Past studies demonstrated the effectiveness of group exercise programs in reducing falls among older adults (Barnett et al, 2007). However, the psychological effects of these programs have not been thoroughly examined. The current study investigated whether a fall prevention program of exercise and education improves seniors' subjective estimation of health and life expectancy. Increased estimation of one's life expectancy is important because: (a) it is associated with increased actual life expectancy (van Doorn & Kasl, 1998) and (b) it represents the increased value that elders place on their life and thus has practical implications on daily life decision-making (Mirowsky, 1997). Methods: Participants (n = 42) were seniors, aged 65 or older, who attended an exercise class for eight weeks. The twice-weekly exercise program was designed to address the several systems that contribute to balance. Data were collected before and after the exercise program. Subjective health was measured by directly asking how they felt about their health using a Likert scale ranging from 1 (poor) to 5 (excellent), and subjective life expectancy by asking the age that participants thought that they would live. Results: The results of within-subjects ANOVA showed that the exercise intervention program marginally improved participants' view of their health ( $p = .051$ ) and marginally increased subjective estimation of life expectancy ( $p = .056$ ). These results imply the prevention program has a direct impact on psychological well-being of older adults and the appropriate intervention produces positive perception of improved health and increased will-to-live.

## BENEFITS BEYOND THE PHYSICAL: INTERGENERATIONAL WII® ACTIVITY PROGRAM AND AFFECTIVE WELL-BEING

J. Margrett, M.S. Heinz, S. Francis, K. Strand, W. Franke, M. Peterson, *Dept. of Human Development and Family Studies, Iowa State Univ, Ames, Iowa*

Prior research demonstrates synergistic effects between mental health, social context, physical activity, and physical health in adulthood. Negative affect in particular appears to be related to physical functioning and chronic disease and is strongly related to everyday well-being and quality of life. The purpose of the LIFE (Living [well though]

Intergenerational Fitness and Exercise) study was to improve whole-person wellness via an eight-week intergenerational Wii® physical activity program which also included social and cognitive stimulation, followed by a sixteen-week newsletter intervention. One hundred older adults were recruited to participate. Sixty-eight participants started the program and 46 participants completed the entire 25-week program, including a pre-test and two follow-up assessments at weeks 8 and 25. Of participants completing the program, 87% were female and 80% lived independently. The mean age of participants was 75.30 years old (range = 60-92). In addition to physical activity and fitness, analyses were conducted to examine the effect of the intervention on older adults' mental health (i.e., positive and negative affect, satisfaction with life, and depression) at 8 and 25 weeks post intervention. Analysis of variance tests revealed a significant effect of the intervention on negative affect. Participants who self-defined as physically inactive at baseline demonstrated a significant ( $p < .05$ ) decrease in negative affect at 8 and 25 weeks. These results suggest an intergenerational exergaming program is an effective strategy in improving negative affect among community-residing older adults. Discussion focuses on the benefits of a whole-person wellness approach to improving older adults' quality of life.

## SESSION 690 (POSTER)

### PROMOTING HEALTH

#### ACTIVITIES TO PREVENT ALZHEIMER'S DISEASE: WHO DOES THAT?

K.S. Page, B. Hayslip, D. Wadsworth, *Department of Psychology, University of North Texas, Denton, Texas*

Fear of developing Alzheimer's disease (AD) is common in middle to late adulthood. While research cannot make definitive statements regarding the prevention or reduction of the risk for AD, individuals may still engage in social, cognitive, or physical activities in hopes of reducing their chances of developing AD. In the context of a longitudinal study on fear of dementia, participants were surveyed regarding activities they engaged in to reduce their risk for developing AD ( $N = 638$ ). A binomial logistic regression examined the role of seven independent variables (age, gender, education, knowledge about AD, aging anxiety, memory self-efficacy, and fear of dementia) on the likelihood of persons reporting that they actively perform an activity to prevent onset of AD. The full model was statistically significant,  $\chi^2(7, N = 638) = 142.30, p < .001$ , and explained between 20% and 27% of the variance in prevention activity status, and 72% of the cases based upon activity status were correctly classified. Surprisingly, only fear of dementia and memory self-efficacy did not make significant contributions to the model predicting preventative activity status. The strongest predictor in this respect was gender; with females being almost three times as likely as men to report engaging in such activity. Qualitative findings among those who engaged in preventative activities suggested that such activities were quite diverse in nature. Implications for understanding how individuals view their ability to control the onset of dementia will be discussed.

#### THE ROLE OF AGE AND MINDFULNESS IN PAST AND FUTURE HEALTH PROMOTING BEHAVIORS

A.L. Bevan, M. Maxfield, *Psychology, University of Colorado at Colorado Springs, Colorado Springs, Colorado*

Mindfulness has long been associated with emotional health (Rejeski, 2008); however, research has only recently addressed the role of mindfulness in physical health. Based on previous findings that younger adults' level of mindfulness was predictive of greater physical activity and healthy eating (Gilbert & Waltz, 2010), a study of age differences in mindfulness and their impact on overall health promoting lifestyle behaviors was conducted. Younger adults and community-dwelling older

adults completed assessments of mindfulness (Cardaciotto et al., 2008), future and past health-promoting behaviors (Walker & Hill-Polerecky, 1996), and indicated their current level of self-perceived health. Mindfulness was characterized as awareness (continuous monitoring of current experiences; Kabat-Zinn, 1994), and acceptance (attitude of openness, curiosity, and non-judgment; Bishop et al., 2004). Results indicate that older adults' acceptance was significantly greater than younger adults; older and younger adults' awareness did not differ. Older adults reported greater frequency of health-promoting behaviors in the previous 6 months and intended for the next 6 months. Interestingly, self-reported mindfulness was not associated with older adults' future health-promoting behaviors; however, older adults' awareness was positively correlated with health-promoting behaviors in the previous 6 months. Among younger adults, acceptance was positively correlated with past and future health-promoting behaviors. Current self-perceived health was positively correlated with acceptance for both younger and older adults. Collectively this suggests that mindfulness training might have different health-related effects in older and younger populations.

#### META-ANALYSIS OF THE HEALTHY BRAIN STUDY: AN APPROACH FOR PROMOTING BRAIN HEALTH

J.N. Laditka<sup>1</sup>, S.B. Laditka<sup>1</sup>, D.B. Friedman<sup>2</sup>, *1. Public Health Sciences, University of North Carolina at Charlotte, Charlotte, North Carolina*, *2. University of South Carolina, Columbia, South Carolina*

Promoting brain health is on the national public health agenda. To identify an approach for promoting brain health, we conducted a meta-analysis of 20 published papers from the Healthy Brain Study, which conducted a large national survey of Americans, another of physicians, and 80 focus groups in nine U.S. states. We found that many older adults already believe that physical activity, healthy diets, social interaction, and community engagement promote brain health. They often do not know how much physical activity is needed, or how to overcome barriers including health problems, inconvenience, and environmental obstacles. Even physicians said they found it hard to keep current on brain health. We asked participants about concerns regarding memory or "ability to think," which includes judgment, problem solving, decision making, social conduct, visual and spatial abilities, and language. Their descriptions of others with dementia included loss of many of these cognitive functions, mood swings, and major behavioral disorders. Yet, their representations of their own future selves were similar to their present selves. The only change they typically envisioned should they develop dementia was memory loss, which many people considered manageable unless it is severe. If individuals see risks of dementia primarily for others, health messages on dementia may not trigger attention and behavior change. A more successful approach may lie in promoting brain health as a way to maintain or enhance the positive characteristics that most people already see in themselves. Based on our meta-analysis, we present an approach for doing so.

#### HEALTH FOCUSED POSSIBLE SELVES IN A SENIOR LIVING COMMUNITY

S. John, M. Kluge, M. Maxfield, *University of Colorado, Colorado Springs, Colorado Springs, Colorado*

Life within a senior living community provides its residents with a unique perspective on their relative health by allowing for direct comparison to other members of the same aged cohort. Neighbors become the measuring stick used to evaluate personal health and direct observation of others contributes to goals and fears of the future. Possible selves research encompasses future conceptualizations that entail self-examination related to what one hopes to become as well as avoid (Markus & Nurius, 1986). For an older adult cohort, chronic illness and present health concerns likely influence future perceptions (Frazier, Cotrell, & Hooker, 2003) and continued observation of similar others may precipitate this process further. In-person interviews with residents in independent living of The Palisades senior living community (Silva-

Smith, Feliciano, Kluge, Yochim, Anderson, Hiroto, & Qualls, 2011) were conducted upon resident transition into housing and provided insight about health focused possible selves. A grounded theory qualitative data analysis on responses (n = 40) revealed future hoped-for selves that included living without pain, maintaining cognitive functioning, and being resilient enough to care for one's partner. Feared future selves included dependency on others, loss of physical and mental functioning, and separation from one's partner for care. Residents' coping and preventative strategies were also evaluated. Research focused on the goals and motivations of residents will allow for a better understanding of the concerns faced by this population, as well as a better tailored program of interventions.

#### **DETERMINING AND INFORMING HEALTHY AGING AND HEALTHY PROMOTION AMONG AFRICAN AMERICAN ELDERS**

C.N. Marsack, C. Waites, *Social Work, Wayne State University, Detroit, Michigan*

**Background-** Despite considerable focus on health disparities (Centers for Disease Control, 2011; Smidley, Stith, & Nelson, 2003), very little information is available concerning the impact of the environmental context on the aging process for older African Americans. The purpose of this study was to use an ecological framework to obtain information from African American elders about their perceptions regarding "healthier aging", access to health promotion resources, and motivation to stay healthy. **Methods-** Drawing on the social ecological perspective, we conducted focus groups utilizing a purposive sample of community-dwelling African American elders (N=33), age 60 and over, from Metropolitan Detroit. Qualitative data analysis procedures were conducted on the three focus group transcripts. We utilized a grounded theory approach that involved focused coding, and constant comparison using ATLAS.ti V6.2 software. **Results-** Several themes were illustrated: desire to be independent, importance of healthy eating, necessity for activity and engagement with others, difficulties related to grocery shopping, and inadequate transportation. In addition, fear of injury and pain, as well as unsafe environments, and lack of access to resources were inhibitors to health promoting activity. **Implications-** Participants expressed interest in maintaining healthy lifestyles, but encountered challenges and environmental barriers. They desired self reliance, convenient transportation access, affordable nutrition and physical activity programs and amenities. This research suggest a critical role for social workers and other health care professionals in helping to promote community support services, including transportation, community programs and activities.

#### **SESSION 695 (POSTER)**

##### **SAFE DRIVING**

##### **RELATING ANT MEASURES TO COGNITIVE TEST SCORES FOR DRIVER SCREENING IN CANDRIVE STUDY PARTICIPANTS**

L. Morrison<sup>1</sup>, B. Weaver<sup>1,2</sup>, M. Bedard<sup>1,2,3</sup>, *1. Centre for Research on Safe Driving - Lakehead University, Thunder Bay, Ontario, Canada, 2. Northern Ontario School of Medicine - Lakehead University, Thunder Bay, Ontario, Canada, 3. St. Joseph's Care Group, Thunder Bay, Ontario, Canada*

We examined associations between Attention Network Test (ANT) measures and cognitive test scores for older drivers (aged >70) enrolled in the Candrive common cohort research study. A major goal of the 5-year Candrive study is to develop a screening tool for determining fitness to drive. Participant enrollment totals 927 across seven Canadian cities. Annual assessments of participants include various cognitive and physical tests, plus the ANT. The latter is a computerized reaction time test that measures three distinct functions of attention— alerting, ori-

enting and conflict (executive function)—and overall response time. Previous research has suggested the ANT may be associated with driving performance. Data were collected from 144 Candrive participants at the Ottawa, Victoria, and Thunder Bay sites (58 females; mean age=77yrs). Correlations were computed between ANT measures and these: Montreal Cognitive Assessment (MoCA), Mini Mental State Exam (MMSE), Motor-Free Visual Perception Test (MVPT-3), Trail Making Tests A and B (TMT), the Demtect, and the SIMARD-MD. Median response time for all correct trials from the ANT was significantly correlated with MVPT-3 (r=0.264), TMTB (r=0.346), MMSE (r=-0.240) scores (p<0.01), as well as TMTA (r=0.181) scores (p<0.05). Alerting efficiency, orienting efficiency, and conflict efficiency were not significantly correlated with any of the cognitive tests, including the SIMARD-MD (r=-0.121, p=0.15) and the Demtect (r=-0.059, p=0.48). Preliminary evidence relating the ANT to cognitive test scores demonstrates that it is reasonable to continue collecting data within the Candrive common cohort study and further explore its potential role in screening older drivers.

##### **THE IMPACTS OF STOPPING DRIVING: PROSPECTIVE AND RETROSPECTIVE VIEWS**

N.W. Mullen<sup>1</sup>, B. Parker<sup>1</sup>, E. Wiersma<sup>1</sup>, M. Bedard<sup>1,2</sup>, *1. Centre for Research on Safe Driving, Lakehead University, Thunder Bay, Ontario, Canada, 2. St. Joseph's Care Group, Thunder Bay, Ontario, Canada*

This project aimed to identify impacts of driving cessation from the perspective of older drivers and former drivers. Identifying discrepancies between anticipated impacts and those impacts actually experienced has the potential to affect how one prepares in advance for driving cessation or the experience itself of transitioning to former-driver status. Participants included 17 adults aged 65–88 years residing in a small city (approximately 120,000 people) in Ontario, Canada. Using a semi-structured interview guide, focus groups and interviews were held with 11 current drivers (5 men, 6 women) and 6 former drivers (1 man, 5 women). The guide included questions about their thoughts or experiences of stopping driving with respect to mobility, personal impact, impact on others, engagement with life, and finances. Impacts discussed fell into four categories: 1) lifestyle (e.g., difficulty attending leisure activities, learning to use the public transit system), 2) social (e.g., feeling dependent, isolated, or lonely), 3) identity (e.g., loss of self-esteem), and 4) emotional (e.g., sadness). Former drivers used several methods to cope with driving cessation, including: 1) resisting (e.g., attempting to have a revoked licence reinstated), 2) accepting, and adapting to, their non-driver status, and 3) adopting a positive perspective (e.g., identifying benefits of stopping driving such as relief from the stress of driving). Although the impacts of stopping driving were significant, there were few discrepancies between anticipated impacts and experienced impacts. This information could assist with developing interventions to ease the transition to former-driver status.

##### **FRONTOTEMPORAL DEMENTIA AND DRIVING: A LITERATURE REVIEW**

K.M. Turk, S. Wang, E. Dugan, *Gerontology, University of Massachusetts Boston, Boston, Massachusetts*

Frontotemporal dementia (FTD) is a progressive neurodegenerative condition affecting the frontal and temporal lobes. FTD may cause behavioral issues such as antisocial behavior, agitation, irritability, disinhibition, executive dysfunction, and poor social graces. There is a growing body of research on Alzheimer's disease and driving, but the less common dementias are not well studied. A literature search was undertaken to determine what is known about FTD and driving. A study was included if it met the following criteria: published from 1992-2012, published in English, research involving human subjects, included both FTD and driving data. The search strategy included searching the electronic databases: EBSCOhost, PubMed, Google Scholar, Proquest, Web

of Knowledge, and Publishing Connect. Search terms included: Frontotemporal dementia and driving, Frontotemporal dementia and driving accidents, Driving Cessation and Frontotemporal dementia, Frontotemporal dementia and automobile crashes, Frontotemporal dementia and crashes, Frontotemporal dementia and automobile, Frontotemporal dementia and car, and Neurodegenerative diseases and driving. Three hundred fifty-seven abstracts were reviewed, however only four articles satisfied the inclusion criteria. Results showed that drivers with FTD had more problems than control groups and fitness to drive should be questioned. Specific driving issues were related to antisocial behaviors common among people with FTD. Some examples included: hit and run car accidents, running red lights, speeding infractions, and lack of ability to recognize pedestrians at intersections. Medication to manage the behaviors may also impair driving in FTD patients. This literature review has identified a major gap in research and the need for research on FTD and driving.

### **DEPRESSIVE SYMPTOMS, ALCOHOL INTAKE, AND DRIVING: FINDINGS FROM THE HRS**

M. Devine, E. Dugan, *Gerontology, University of Massachusetts Boston, Boston, Massachusetts*

By 2030 the number of older drivers is expected to double making older driver safety a priority. Baby boomers are recognized to have more awareness of and openness to mental health treatment than previous generations. In addition, the consumption of alcohol and recreational drugs among this cohort is higher compared to previous cohorts. The aim of this research was to investigate if alcohol consumption or depressive symptoms had any association with current driving status of older adults. This paper used data from the 2010 wave of the Health and Retirement Study (HRS). The HRS is a nationally representative longitudinal survey of community dwelling adults in the United States. The analytic sample was restricted to adults age 65 and older who answered all of the questions regarding driving status in the 2010 wave of the HRS survey (N=1775). Descriptive, bi-variate, and logistic regression analysis were conducted. Expected demographic factors (age, gender, income, race/ethnicity, health status, vision, and marital status) were related to driving cessation. Older persons that do not drink had an increased risk for driving cessation compared to those that drink moderately ( $p=.06$ ). Research has shown that people who drink in moderation are different from non-drinkers or heavy drinkers in ways that could positively influence health and disease. These findings show that the benefits gained from moderate drinking may allow these persons to continue to drive longer than persons that do not drink at all. No association between driving status and depressive symptoms was observed.

### **STATE POLICIES TO ENHANCE OLDER DRIVER SAFETY: A SYSTEMATIC REVIEW**

E. Dugan, K. Barton, C. Coyle, C. Lee, *Gerontology Dept, University of Massachusetts Boston, Boston, Massachusetts*

The purpose of this study was to conduct a systematic review of the senior transportation literature on policies concerning older driver licensing/renewal and medical reporting procedures. A study was included in the systematic review if it met the following criteria: published in English; conducted in the United States; published between 1991-June 2011; included data on human subjects aged 65 and older; included information on at least one policy (license renewal/medical reporting) related to older drivers; included a transportation related outcome variable (e.g., crash, fatality, renewal). State reports and documentation were included. A total of 26 studies were included in the present analysis. The quality of articles was rated using a modified Downs & Black checklist. A data abstraction form was used to collect data from included articles. Results showed that in-person license renewal requirements, especially for the drivers age 85 and older, was associated with lower fatality rates (RR 0.83). Two studies found that vision screening resulted in motor vehicle accident risk reduction (0.83, 0.93). Medical reporting procedures,

generally aimed at identifying the most medically at-risk drivers, were effective at forcing reported drivers to cease driving. Restricted licenses (e.g., no night or highway driving) had mixed results. States have employed a variety of policies to maximize older driver safety. Policy-makers should note strong evidence supporting in-person license renewal requirements and medical reporting procedures. Restricted licensing may be another promising policy to consider. Research on the cost implications of different policy options is needed.

### **WHO KEEPS DRIVING & HOW COMMON ARE PSYCHIATRIC DISTURBANCES? FINDINGS FROM THE ADAMS STUDY**

S. Wang, C. Lee, K.M. Turk, L.M. Richardson, E. Dugan, *Gerontology, University of Massachusetts Boston, Boston, Massachusetts*

We investigated factors that are related with current driving status. In addition, we explored the extent to which psychiatric and behavioral disturbances were reported by current drivers. The Aging, Demographics, and Memory Study (ADAMS) is an ancillary study to the Health and Retirement Study. ADAMS data (Wave A) were merged with selected variables from the 2002 wave of HRS in this research. The analytic sample included N=847 adults age 70 or older. Descriptive, bivariate and multivariate statistics were conducted. Results showed that 44% were current drivers; mean age was 81.59(SD 7.10); more than half of the sample was female (58.5%). Results from the ADAMS neuropsychiatric inventory revealed several alarming symptoms present in current drivers: delusions (n=4), hallucinations (n=3), anxiety (n=22), disinhibition (n=22), emotional lability (n=29). Logistic regression to determine factors associated with current driving status (yes) identified: younger age, male gender, higher income, better vision, less ADL difficulties, excellent health, higher cognition, and fewer children (pseudo R-square =0.507,  $p=.001$ ). When older drivers cease driving the strong preference is for family and friends to provide rides. We found that those with fewer children kept on driving, perhaps due to this relative lack of alternatives. That any psychiatric disturbances were reported by current drivers is concerning.

### **THE EVIDENCE SUPPORTING THE USE OF CLINICAL ASSESSMENT AND PERFORMANCE-BASED ASSESSMENTS FOR DETERMINING DRIVING COMPETENCE AND DRIVING CESSATION FOR OLDER ADULTS**

A. Dickerson<sup>1</sup>, D. Lieberman<sup>2</sup>, M. Arbesman<sup>2</sup>, 1. *Occupational Therapy, East Carolina University, Greenville, North Carolina*, 2. *American Occupational Therapy Association, Bethesda, Maryland*

This poster will highlight the results of a comprehensive literature review for evidence of clinical assessments tools that include physical, visual, and cognitive function as well as the performance based assessments of on-road testing and simulation for determining fitness to drive for older adults. A complete search of all appropriate venues was done using older adults, driving, fitness-to-drive, and related terminology. Over 200 abstracts were reviewed with over 86 peer-reviewed manuscripts reviewed that met the initial criteria. The outcome of the study was identified as a behind-the-wheel assessment or driving cessation. Although descriptive studies were not included, cross sectional retrospective and prospective studies were analyzed. Fifty-six studies were described using a table format. This poster will highlight the themes identified in the comprehensive literature review: 1) no one assessment appears to have the adequate evidence to be used alone as the determinant of fitness to drive, 2) assessments tools must address the issues of sensitivity and specificity, 3) groups of assessment tools are showing promise for identifying criteria for fitness to drive, and 4) terminology of research in the area of driving and the use of the outcome of the driving evaluation need further research.

## SOCIAL SIDE OF HEALTH

## SOCIAL ISOLATION AND METABOLIC SYNDROME IN OLDER CAREGIVERS AND NON-CAREGIVERS

A. Hemmesch<sup>1</sup>, L. Fredman<sup>1</sup>, T. Heeren<sup>2,1</sup>, S.O. Stuver<sup>1</sup>, *1. Epidemiology, Boston Univ, Boston, Massachusetts, 2. Boston University, Department of Biostatistics, Boston, Massachusetts*

Social engagement is associated with reduced risk of cardiovascular disease (CVD) and mortality, and may buffer the adverse health effects of stress. We examined whether social isolation, measured by the 6-item Lubben Social Network Scale, was associated with having a greater number of metabolic syndrome components, which have been shown to precede CVD and diabetes. The sample included 229 older adults (mean age = 73.8 years); 14% were socially isolated, 69% were female, and 40% were caregivers to a relative or friend with Alzheimer's Disease or Parkinson's Disease. Number of metabolic syndrome components was calculated as the sum of five indicators that comprise the NCEP-ATP III criteria used to measure metabolic syndrome: high waist circumference; high levels of blood pressure, blood glucose, and triglycerides; and low HDL cholesterol (mean number of components = 1.79). In multivariate linear regression analyses controlling for age, marital status, caregiving status, and perceived stress, social isolation was associated with more metabolic syndrome components ( $b = 0.46$ ,  $p = 0.06$ ). Exploratory analyses, adjusting for covariates, revealed that social isolation was associated with significantly more metabolic syndrome components among caregivers ( $b = 1.34$ ,  $p = 0.04$ ), but not non-caregivers ( $b = 0.29$ ,  $p = 0.26$ ). These cross-sectional results suggest that social isolation may contribute to poorer health, and that this effect may be more pronounced for caregivers perhaps because it is an additional source of stress. Longitudinal analyses are needed to evaluate the impact of social isolation on metabolic syndrome over time, and whether this association continues to differ between caregivers and non-caregivers.

## THE INFLUENCE OF SOCIAL NETWORKS AND SOCIAL SUPPORT ON HEALTH: DIFFERENTIAL PATHWAYS FOR OLDER KOREAN-AMERICAN ADULTS AND NON-HISPANIC WHITES

H. Jeon, *Social Work, Boston College, Newton, Massachusetts*

The importance of social networks and social supports for maintaining health has been widely recognized by researchers over the past few decades. In addition, research has indicated that social networks and social supports are especially important for older adults, as they are more exposed to social loss than younger generations and as a result suffer increasingly from depression. Despite the well-documented importance of social networks and social supports on health, the process leading to positive outcomes on health is not yet well understood. This study will examine the pathways for different constellations of social networks (family networks vs. friend networks) and social supports (emotional supports vs. tangible supports) which lead to health outcomes. In addition, the study will examine whether these pathways differ between older Korean-American immigrants and white non-Hispanic populations. This analysis is based on the data from the "Korean-American Elderly: Social Supports and Long-Term Care" study conducted in 1994. The data ( $n = 424$ ) includes non-Hispanic White Americans ( $n = 201$ ) and Korean immigrant elders ( $n = 223$ ), aged 65 and older and residing in Southern California. Regression analysis revealed that the types of social networks and social supports effecting older adults' health were different between the two groups. The identification of these pathways that affect the health of older Korean immigrants and non-Hispanic White Americans will help design a much-needed and effective social intervention program for these populations.

## THE ASSOCIATION OF SOCIOECONOMIC STATUS AND LONELINESS AMONG OLDER ADULTS

B.R. Haimowitz, E. Dugan, *Gerontology, UMass Boston, Boston, Massachusetts*

This study examines the relationship between socioeconomic status (SES) and loneliness among older adults using multivariate analysis to identify the determinants of loneliness in a nationally representative sample of the United States population 50 years of age and older. A filtration model is used with 5856 respondents from the 2006 Health and Retirement data to test the relative impacts of socioeconomic factors (education, occupation, income and wealth) as predictors of loneliness after controlling for the mediating effects of demographics, health and social networks. The findings show that socioeconomic factors which are predictive of loneliness on a bivariate basis such as education and occupation still remain predictive of loneliness even when distal, stressor and proximate factors are taken into account. After controlling for the other variables in the logistic regression model, individuals with greater formal education and who worked in white-collar occupations have decreased odds of loneliness. The odds ratio for education ( $OR = 0.95$ ) suggests that for each additional year of education that a person has completed, the odds of loneliness decreased by 5%. Furthermore, an odds ratio for white-collar workers ( $OR = 0.80$ ) suggests that these type of workers have 80% the odds of loneliness compared to blue-collar workers. SES which is acquired earlier in the life course is associated with loneliness in later life.

## PATTERNS OF EMOTIONAL SUPPORT SOURCES AND RELATIONSHIP TO INADEQUATE SUPPORT AND DEPRESSIVE SYMPTOMS

T. Killian, M. Turner, *Human Development and Family Sciences, University of Arkansas, Fayetteville, Arkansas*

Research has found that emotional support promotes successful aging in mid and late life. It is likely that not all networks of emotional support are equally effective. This study captures the complexity of these networks by examining patterns in sources of emotional support. It is important to understand patterns in emotional support and how they are related to successful aging measured here as the level of depressive symptoms and perceptions of inadequate emotional support. Using data from 3,199 aged 40+ participants from the National Health and Nutrition Examination Study (NHANES), we used Latent Class Analysis to identify six patterns in sources of emotional support. Descriptive labels characterizing those patterns include: (1) Mostly Spouses, (2) Spouses/Children, (3) Mostly Parents, (4) Siblings, (5) Mostly Friends, and (6) Diverse. Controlling for socio-demographic characteristics, multinomial logistic regression examined how depressive symptomatology and perceptions of inadequate emotional support varied across latent classes. The highest probability of membership was "Mostly Spouses" so it was used as the reference class. Perceptions of needing more support were higher across all five classes compared to spousal support. Symptomatology was related to a higher probability of membership in the "Spouses/Children" and "Diverse" classes, a lower probability of membership in the "Siblings" and "Mostly Friends" classes, and not related to the "Mostly Parents" class. The findings suggest, when compared with spousal support, those whose major source of emotional support derives from spouses/children and diverse express higher levels of depressive symptomatology whereas those dependent on siblings and friends reported fewer depressive symptoms.

## AGE STEREOTYPES, DIABETES MYTHS, AND MARITAL RELATIONSHIPS: HOW POSITIVITY INFLUENCES MANAGEMENT OF A CHRONIC DISEASE

J.L. Atkinson, *Georgia State University, Atlanta, Georgia*

Age stereotypes have been found to have a significant impact on one's own health. Past research clearly shows a link between self-stereotyping and physiological health, such that negative stereotypes of age

may create cardiovascular stress and positive stereotypes of age may improve one's recovery from a health crisis. This interview project focuses on these issues within a married, diabetic population. Specifically, this project sought to understand the relationships among beliefs about aging, beliefs about diabetes, diabetes maintenance strategies, and marital social support. Ten couples were interviewed as a couple and then separately, resulting in 30 total interviews. Individuals with more positive beliefs about aging were either in better glycemic control or were more supportive of their spouse's maintenance strategies. Marriage longevity and participant age noticeably changed how the participants viewed the diagnosis of this chronic disease. Older participants who were married longer (i.e., 40+ years) saw the diagnosis as an important issue for both partners and reacted as a team. Younger participants, married for less time, were defensive about the diagnosis and blamed the non-diabetic partner for creating a non-supportive environment. Results are discussed in terms of age stereotypes about health, locus of control, and social support networks.

### THE EFFECT OF SOCIAL STRESS ON HEALTH AND HAPPINESS AMONG KOREAN BABY BOOMERS: A FOCUS ON GENDER DIFFERENCES

G. Han<sup>1</sup>, J. Son<sup>2</sup>, 1. *Seoul National University, Seoul, Republic of Korea*, 2. *Institute on Aging, Seoul National University, Seoul, Republic of Korea*

Social stress has been identified as a critical factor associated with health and happiness. Although many researchers have recently tried to prove whether this assumption is still tenable or not, they have failed to reach an agreement about the effect of social stress on men's and women's health and happiness. This study examines how social stress is associated with health and happiness of Korean baby boomers focused on gender differences. The data were collected from 3182 adults (1839 men and 1343 women) at the age of 50 to 58. In this survey, social stress were evaluated in two dimensions: job stress and marital conflict. The major findings are as follows. First, there are gender differences in social stress, health and happiness. Second, both job stress and marital conflict have negative effects on health and happiness. Third, the effect of marital conflict on health turned out to be different depending on gender. For men, marital conflict has more important impact on health than women. But there were not significant differences in the effect of social stress on happiness according to the gender. The result of this study suggest that it is important to recognize both gender differences and gender similarities in order to integrate theory and research into a coherent picture of "gendered" reality. Implications of these findings are discussed further.

## SESSION 705 (POSTER)

### ASSESSMENT 2

#### IS THE FIVE-TIMES-SIT-TO-STAND TEST A MEASURE OF BALANCE OR STRENGTH IN OLDER ADULTS?

A. Goldberg<sup>1,2</sup>, S. Talley<sup>1</sup>, 1. *Department of Health Care Sciences, Program in Physical Therapy, Mobility Research Laboratory, Wayne State University, Detroit, Michigan*, 2. *Wayne State University, Institute of Gerontology, Detroit, Michigan*

Introduction The five-times-sit-to-stand test (FTSST) is used to evaluate physical performance in older adults. Some studies have shown that FTSST is a measure of lower extremity strength, while others have suggested that FTSST is a measure of balance capabilities in older adults. The objective of this study was to determine if the FTSST is a valid measure of strength or balance in older adults. Methods Forty-one adults (mean age 68 years) underwent balance and lower extremity strength assessments. Balance tests included the 4-square step test and the maximum step length (MSL) test, valid balance measures in older adults. Hand-held dynamometry was used to assess strength of hip, knee and

ankle musculature. FTSST was the time to raise and lower oneself from a chair rapidly 5 times. Pearson's correlation coefficient and stepwise multiple regression determined associations between FTSST and strength and balance. Statistical significance was set at  $p < 0.05$ . Results FTSST was associated with the 4-square step test ( $r = 0.49$ ) and MSL ( $r = -0.46$ ), both  $p < 0.01$ . FTSST and strength associations were: right hip flexors  $r = -0.33$  ( $p = 0.04$ ); right knee extensors  $r = -0.09$  ( $p = 0.58$ ); right ankle dorsiflexors  $r = -0.22$  ( $p = 0.18$ ). Four-square step test explained 24% and MSL 7.7% of the variance in FTSST performance. Strength values did not explain any added variance in FTSST performance. Conclusion Balance tests explained 31.7% of the variance in FTSST performance, while none of the strength measures explained a significant portion of the variance in FTSST performance. The FTSST appears to be a valid measure of balance in older adults.

#### GENDER DIFFERENCES IN TRAJECTORIES OF LOWER-EXTREMITY PERFORMANCE IN OLDER ADULTS: RESULTS FROM A 12-YEAR LONGITUDINAL STUDY

A. Botoseneanu, H. Allore, E.A. Gahbauer, T.M. Gill, *Yale University, New Haven, Connecticut*

Background. Despite the importance of maintaining independent functioning among older adults, little is known about the gender-specific natural course of lower-extremity performance (LEP) in this age group. Methods. We evaluated longitudinal data from 754 initially non-disabled adults age 70 or older from the Precipitating Events Project (PEP). LEP was assessed every 18 months for 12 years using a modified version of the Short Physical Performance Battery (SPPB). Hierarchical linear models estimated the intra-individual trajectory of LEP and differences in trajectory intercept and slope between women and men. Results. LEP declined over 12 years following a non-linear trajectory. The rate of decline in LEP was slower in women than men, with no differences observed in LEP scores at baseline. When gender differences in trajectories were evaluated according to baseline LEP status, similar slope differences favorable to women were observed, with no differences in intercept in the high (SPPB 10-12) and intermediate (SPPB 7-9) LEP groups. Among participants with low LEP at baseline (SPPB 6 or less), no gender differences in the rate of decline over time were observed, but men had a higher starting LEP score than women. Analysis by length-of-survival showed similar LEP trajectory differences between men and women. However, men and women who died during the study had lower starting LEP scores and faster rates of decline, respectively, compared with those alive after 12 years. Conclusions. Female disadvantage in old-age mobility limitations and disability notwithstanding, older women seem to preserve lower-extremity functioning better than men.

#### COMPREHENSIVE PREOPERATIVE ASSESSMENT FOR OLDER ADULTS: DEVELOPING A CLINICAL PATHWAY

R.S. Browne, J. Mohler, K. D'Huyvetter, M. Fain, *University of Arizona, Arizona Center on Aging, Tucson, Arizona*

As the world population continues to age, older adults are facing surgical disease later in life, and with greater co-morbidity. Over time, minimally invasive surgical and anesthetic approaches have improved surgical outcomes, so that currently more than one-third of all US surgical patients are over the age of 65 years. Despite these advances in techniques, older adults remain with higher perioperative morbidity and mortality when compared to younger cohorts. In addition to optimizing the treatment of known medical morbidities, older adults facing surgery also require comprehensive geriatric assessment, to identify and manage previously unrecognized geriatric syndromes which could complicate recovery (e.g., depression, dementia, polypharmacy, malnutrition). Further, older adults need an assessment of functional status, as low function is associated with poor postoperative outcomes. Lastly, social support systems need to be reviewed and in place for the recovery and rehabilitative periods. The optimization strategies outlined above



require both interprofessional coordination-of-care and adequate lead time. Key elements of a protocol-driven geriatric surgical clinical pathway include: 1. Evaluate existing preoperative system; Perform a needs assessment; Review geriatric surgical data. 2. Identify stakeholders; Determine their drivers; Gain their “buy-in”; Meet regularly. 3. Develop a communication flow – EHR, paper charting, operative passport. 4. Select or Develop an evidence-based Comprehensive Geriatric Assessment tool and strategy (e.g., functional status, frailty, dementia, depression screening, polypharmacy, etc). 5. Identify a clinical model and Create a business plan for reimbursement. 6. Identify clinic space. 7. Confirm model and Acquire administrative approval. 8. Launch. 9. Measure outcomes and Refine model.

### IN-HOME ACCELEROMETRY IN ELDERLY: A NEW MEASURE OF FUNCTION

J. Mohler<sup>1</sup>, K. D’Huyvetter<sup>1</sup>, B. Najafi<sup>2</sup>, M. Fain<sup>1</sup>, *1. University of Arizona, Center on Aging, Tucson, Arizona, 2. University of Arizona, College of Medicine, Tucson, Arizona*

**Background/Rationale:** As life span increases, the number of U.S. elders will rise, producing unprecedented need for effective and low cost monitoring of home-dwelling elders. Remote blood pressure, glucose, peak-flow, pulse-oximetry and weight monitoring have become increasingly common, but we do not yet have a widely-used measure of activity with which to accurately and sensitively measure physical activity/functioning. New clinical and research tools are needed to accurately quantify gross activity patterns, and postural components and transitions predictive of risk of frailty, thus translating into earlier diagnosis, better targeted interventions, and more precise measurement of change in functional parameters. **Objectives:** To test the efficacy of tri-axial accelerometric activity monitoring in identifying precise early indicators of physical activity/functioning as related to frailty. **Methods:** We have begun a pilot study to monitor three equal groups (n=21) of aged 65+ non-frail, pre-frail, and frail (stratified using Fried’s phenotypic criteria) measuring physical performance and accelerometry for 24 consecutive hours in the home environment. We believe that pre-frail/frail subjects will demonstrate: 1) shorter standing duration, walking duration, limited total number of steps, and high inter-cycle gait variability; 2) greater postural transition duration of chair sit-to-stand; and 3) less organized activity as compared to non-frail controls. Therefore the fluctuation of day to day activity will be high, and its time series like a random noise pattern rather than fractal, compared to normal controls. **Conclusion:** In-home accelerometry may prove a valuable and unobtrusive tool in measuring frailty-related function. Study recruitment is underway, and results will be available Summer 2012.

### EVALUATION OF LOWER-LIMB MUSCLE FUNCTION USING A SPECIALIZED WEIGHT SCALE

T. Tsuji<sup>1</sup>, N. Kitano<sup>1</sup>, Y. Soma<sup>1</sup>, K. Tsunoda<sup>1</sup>, T. Miyama<sup>2</sup>, T. Shiokawa<sup>2</sup>, T. Okura<sup>3</sup>, *1. Doctoral Program in Physical Education, Health and Sport Sciences, University of Tsukuba, Tsukuba, Ibaraki, Japan, 2. Tanita Corporation, Itabashi, Tokyo, Japan, 3. Faculty of Health and Sport Sciences, University of Tsukuba, Tsukuba, Ibaraki, Japan*

The vertical ground reaction force (GRF) parameters in a sit-to-stand (STS) movement are useful for measuring lower-limb muscle function in older adults. We developed a specialized weight scale (BM-101, TANITA, Japan) for evaluating the peak GRF in a STS movement. In this study, we examined the relationship between the parameter obtained from the weight scale and participants’ mobility and history of falls. We performed cross-sectional analyses on 290 community-dwelling older adults, which included 143 men and 147 women aged 65-86 years (73.7 ± 5.0 years). Each participant was asked to stand up quickly from a sitting position while we measured the peak GRF per body weight parameter (kgf/kg). This parameter was lower in subjects reporting falls (1.34 ± 0.12), compared with those reporting no falls (1.40 ± 0.13) (P = 0.02, Cohen’s d = 0.52). Participants with limited mobility (difficulty walk-

ing one-quarter mile and/or climbing 10 steps) displayed a lower peak (1.29 ± 0.09) than those with no mobility limitation (1.42 ± 0.12) (P < 0.01, d = 1.20). We analyzed the data by ANCOVA, adjusting for age, gender, medication use and pain in the legs and/or lower back. These results suggest that the peak GRF in a STS movement measured by the weight scale can reflect a decline in lower-limb muscle function in older adults with a history of falls or mobility limitation. Use of these scales incorporating this measurement system may help simplify evaluation of lower-limb muscle function in a clinical setting of nursing-care prevention.

### PREOPERATIVE AMERICAN SOCIETY OF ANESTHESIOLOGISTS (ASA) SCORE PREDICTS FUNCTIONAL RECOVERY FOLLOWING HIP-FRACTURE SURGERY

L. Chen<sup>1,2</sup>, Y. Huang<sup>1,3</sup>, M. Tseng<sup>1,4</sup>, J. Liang<sup>5</sup>, M. Chen<sup>1</sup>, H. Cheng<sup>6</sup>, C. Wu<sup>6</sup>, Y.L. Shyu<sup>1</sup>, *1. Chang Gung University, Taoyuan, Taiwan, 2. Yuanpei University, Hsinchu, Taiwan, 3. Chang Gung University of Science and Technology, Taoyuan, Taiwan, 4. Meiho University, Pingtung, Taiwan, 5. University of Michigan, Ann Arbor, Michigan, 6. Chang Gung Memorial Hospital, Taoyuan, Taiwan*

**Introduction and Hypothesis.** Little is known about the predictive ability of ASA on patient outcomes following hip fracture in Asian countries. Therefore, this study explored the influence of preoperative ASA score on trajectories of recovery in physical functioning and health outcomes for elderly hip-fractured patients in Taiwan during the first year following postoperative discharge. **Methods.** Mortality, service utilization, activities of daily living (ADL) measured by the Chinese Barthel Index and health related quality of life measured by Medical Outcomes Study Short Form-36 were compared between hip fractured patients with ASA III (n=111, 48.3%) and ASA I-II (n=119, 51.7%). Generalized estimating equations (GEE) approach was used to analyze the data obtained from 230 elderly patients with hip fracture. **Results.** During the first year following hip-fracture surgery, patients with ASA I-II had significantly fewer emergency room visits and rehospitalization, better ADL (beta=4.90, p=.045) and better physical health (beta=5.78, p=.02) than patients with ASA scores III. **Conclusion.** ASA score can predict recovery and service utilization for hip fractured patients during first year following surgery. Interventions for hip fractured patients with high ASA can be developed.

### HEARING LOSS AND GAIT SPEED AMONG OLDER ADULTS IN THE UNITED STATES

L. Li<sup>1,2</sup>, E.M. Simonsick<sup>3</sup>, L. Ferrucci<sup>3</sup>, F.R. Lin<sup>1,2,4</sup>, *1. Johns Hopkins Medical Institutions, Baltimore, Maryland, 2. Johns Hopkins School of Medicine, Baltimore, Maryland, 3. National Institute on Aging, Baltimore, Maryland, 4. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland*

**Background:** Gait speed is an important predictor of health outcomes and survival in older adults. We investigated whether hearing loss is independently associated with gait speed in a nationally-representative sample of older adults. **Methods:** We analyzed cross-sectional data from the 1999-2002 cycles of the National Health and Nutritional Examination Survey during which participants 50-69 years (n = 1180) underwent assessment of hearing and gait speed. Hearing was defined by a pure tone average of hearing thresholds at 0.5-4 kHz tones in the better-hearing ear. Gait speed was obtained in a timed 20-foot walk. Linear and logistic regression models were used to examine the association between hearing loss and gait speed while adjusting for demographic and cardiovascular risk factors. Analyses incorporated sampling weights to yield results generalizable to the U.S. population. **Results:** In a model adjusted for demographic and cardiovascular risk factors, a 25 dB hearing loss was associated with slower gait speed (-0.04 m/s per 25 dB HL [95% CI: -0.07 – -0.01]) and a nearly two-fold increased odds of having a gait speed < 1.0 m/s (OR = 1.9, 95% CI: 1.3 – 2.8). The reduction

in gait speed associated with a 25 dB hearing loss was equivalent to that associated with an age difference of nearly 10 years. Conclusions: Greater hearing loss is independently associated with slower gait speed. Further studies are needed to examine the basis of this observed association.

#### **FRAILTY ASSESSMENT IN THE GERIATRIC CLINIC**

T. Hornick<sup>1,2</sup>, H. Kim<sup>2</sup>, D.H. Canaday<sup>2,1</sup>, C.J. Burant<sup>2,1</sup>, P. Higgins<sup>2,1</sup>, *1. LSCVAMC, Cleveland, Ohio, 2. CWRU, Cleveland, Ohio*

**Background/Purpose:** Frailty is a common phenomenon in the geriatric clinic. This study: (1) assessed the feasibility of administering two frailty indices in an outpatient clinic (Fried, 2001; Gill, 2002); (2) compared classifications of frailty screening; and (3) created parsimonious indices from 2-criteria combinations and analyzed agreement with Fried, the more comprehensive and established frailty index. **Methodology:** Assessment was completed on 164 veterans (mean age = 83.7, 57% black) enrolled in a geriatric clinic. Each participant completed both indices during the same clinic visit. The indices' component criteria, which are well known to gerontological clinicians, were administered in a standard order and scoring was identical to original indices. **Results:** The 5-item Fried required 15-20 minutes to complete, the 2-item Gill less than two minutes. Of the 164 participants assessed, 74 were determined to be frail by one of the frailty indices. Of the 74, Fried index identified 57, the Gill index 51, and 34 participants were determined to be frail by both indices. Correlations between the indices were Spearman=0.58 ( $p < 0.001$ ), and kappa =0.25, ( $p < 0.001$ ). There was no relationship between race and frailty. Twenty 2-criteria indices were created. Grip strength + 15-ft gait speed had the strongest agreement with Fried (kappa=.60,  $p=.001$ ). **Conclusion:** The different results from the frailty indices are likely due to differences in component tests and methods. In the clinical setting, a simple assessment of patient's grip strength and gait speed may be a practical and rapid assessment to determine if further investigation of frailty is warranted.

#### **THE IDENTIFICATION OF FRAIL OLDER ADULTS IN PRIMARY CARE: COMPARING THE ACCURACY OF 5 SIMPLE INSTRUMENTS**

E.O. Hoogendijk<sup>1</sup>, H. van der Horst<sup>1</sup>, D.J. Deeg<sup>2</sup>, D. Frijters<sup>1</sup>, D. Jansen<sup>1</sup>, G. Nijpels<sup>1</sup>, H. van Hout<sup>1</sup>, *1. Department of General Practice & Elderly Care Medicine, EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, Netherlands, 2. Department of Epidemiology & Biostatistics, EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, Netherlands*

Many identification instruments exist to identify frail older adults who may benefit from geriatric interventions. Most of those instruments are time-consuming and difficult to use in primary care. To select a simple, but valid instrument to identify frail older adults in primary care, we compared: the opinion of the general practitioner, prescription of multiple medications, the Groningen Frailty Indicator (GFI), PRISMA-7, and a subjective general health estimate by the older adult. Fried's frailty criteria and a clinical judgment by a multidisciplinary expert panel were used as reference standards. Data were used from the cross-sectional Dutch Identification of Frail Elderly Study and consisted of 102 people aged 65 and over from a primary care practice in Amsterdam. Accuracy of the different instruments was estimated by the area under the ROC curve. The agreement between the instruments and the reference standards was determined by kappa. The accuracy of the instruments ranged from poor (AUC = 0.64) to good (AUC = 0.85), irrespective of the reference standard used. The results showed that PRISMA-7 was the best of the five instruments with good accuracy and substantial agreement.

#### **AN INTEGRATIVE MODEL OF FRAILTY: METHODOLOGICAL PERSPECTIVES AND CHALLENGES**

O. Zaslavsky<sup>1</sup>, B.B. Cochrane<sup>1</sup>, H.J. Thompson<sup>1</sup>, N.F. Woods<sup>1</sup>, J.R. Herting<sup>1</sup>, A.Z. LaCroix<sup>2</sup>, *1. University of Washington, Seattle, Washington, 2. Fred Hutchinson Cancer Reserach Institute, Seattle, Washington*

Frailty is an emerging geriatric syndrome that refers to a state of increased vulnerability to adverse events. Despite its long history in research and publications, mechanisms of frailty development are still poorly understood. In this presentation we will describe a number of conceptual models that have been used to explain the dynamic nature of frailty. We also illustrate an integrative pathophysiological model of frailty, taking into consideration the large body of studies regarding predictors, indicators, and outcomes of frailty. The model addresses cellular (e.g., oxidative damage, telomere length) and systemic (e.g., endocrine, inflammatory, coagulatory and metabolic deficiencies) mechanisms of frailty, moderating factors (e.g., ethnicity, life style, co-morbidities) and outcomes (e.g., morbidity, disability). Of note, based on a synthesis of studies to date and in addition to the "conventional" Fried et al. (2001) criteria, we suggest including indicators of neurosensory loss (i.e., cognition and sensory decline) in the operational definition of frailty. Finally, we will identify the weaknesses of traditional epidemiological approaches for studying frailty and propose areas of inquiry for physiologic research. Specifically, we claim that to better understand etiologic processes in the development of frailty, it is important to extend uni-level analyses to more comprehensive multilevel models. Using this approach, we can explicitly model the complex structural and longitudinal dynamics involved in the pathophysiology of frailty. In summary, the results of such analyses are likely to elucidate the heterogeneous nature of frailty and its development and identify directions for future intervention.

#### **DEVELOPMENT OF A WORD RECOGNITION INSTRUMENT TO ASSESS HEALTH LITERACY IN DENTISTRY AMONG THE ELDERLY**

A.R. Mohammad, *Geriatric Dentistry Program, The Ohio State University, Columbus, Ohio*

According to the American Dental Association, health literacy in dentistry is defined as the "degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate oral health decisions." Nearly 9 out of 10 adults have difficulty using the basic health information that is routinely available in our health care facilities. Health literacy is therefore necessary for patients adherence to medical instruments including consent forms, verbal instructions on drug labels, and for increased potential in positive health outcome. Health literacy in dentistry has received little attention beyond the readability of dental education materials. Furthermore, the growing geriatric population has focused the attention on the need for more efforts in health literacy in dentistry. The purpose of this study is to develop and assess an oral health literacy instrument among the elderly. **Method:** The instrument developed was based on the rapid estimate of adult literacy in medicine (REALM - SF), which is a word recognition instrument used to test health literacy in medicine. The new instrument, Rapid Estimate of Adult Literacy in Dentistry (REALD - SF), consist of 30 common dental words with varying degrees of difficulty (easy, moderate, difficult). A test was administered to 182 english-speaking elderly residing in a local nursing home in the Columbus, Ohio area. **Results:** 98% +/- 0.07 of the participating residents read the easy level correctly, 83% +/- 0.23 read the moderate level correctly and finally 74% +/-0.37 read the difficult level correctly. **Conclusion:** This study presented an effective instrument to measure health literacy among the elderly. Furthermore, the results indicate a significantly higher level of understanding of oral health literacy among this sample population.

## **INTEGRATION OF GERIATRIC MENTAL HEALTH SCREENING INTO A PRIMARY CARE PRACTICE: A PATIENT SATISFACTION SURVEY**

S. Samuels, R. Breckman, C. Snow, E. Woods, R. Goralewicz, A. Stern, C. Reid, R. Adelman, *Division of Geriatrics and Gerontology, Weill Cornell Medical College, New York, New York*

**BACKGROUND:** Depression and anxiety can have serious ramifications in older adults. Co-location of mental health screening, assessment, and treatment in the primary care physician's office has been shown to reduce stigma, improve access, and increase coordination of care between mental health and primary care teams. **PURPOSE:** To evaluate older patients' acceptance of and satisfaction with screening for depression and anxiety in a primary care geriatrics setting. **Methods:** The study was conducted at a geriatric primary care practice affiliated with a large teaching hospital in NYC from July 2009 to January 2010. Nine attending physicians screened eligible patients for depression and anxiety in specified practice sessions as part of usual care. Eligible patients (N=106) were asked to participate in a post-screening survey and interview to assess their perceptions on the screening experience. The responses were quantitatively and qualitatively analyzed. **RESULTS:** Most patients (88.6%) assessed the length of the mental health screening to be appropriate. A majority of patients thought the screening questions were acceptable (73.4%) and not at all difficult (81.9%). Most participants did not find the questions to be stressful (84.9%) or intrusive (91.5%); a majority of patients were not at all embarrassed (93.4%), upset (93.4%), or uncomfortable (89.6%) during the screening process. When asked about their opinions regarding frequency of screening, most patients (72.4%) desired screening for depression and anxiety at least as often as yearly visits. **CONCLUSIONS:** Results demonstrate strong patient support for the integration of depression and anxiety screening in a primary care geriatrics practice.

## **RELIABILITY AND SPECIFICITY OF SWEAT MEASUREMENT IN OLDER ADULTS**

B.J. Holtzclaw, *University of Oklahoma HSC, Oklahoma City, Oklahoma*

Precision of instruments to measure sweating activity as a variable in studies of fever, exercise, hyperhidrosis, or night sweats, depends on requirements to determine body sweat distribution, circadianicity, amount, consistency, or contents. In older adults, factors dictating selection of measurement method include mechanisms underlying sweat production/secretion, adrenergic and cholinergic processes, and possible inferential relationships to research questions. Mechanisms underlying sweat production and secretion and specific relationships of sweat to the research question are relevant when inferential questions or correlates are proposed. **Purpose:** This systematic survey of sweat measurement methods was designed to select measurement approaches for a planned study. **Study aims were to:** 1) Categorize capabilities of extant techniques to measure sweating activity. 2) Compare/contrast usability, indications for, and limitations of sweat measurement techniques. **Method(s):** Investigators examined existing or historically documented sweat measurement techniques from scientific literature, instrument vendors, and reports. **Results:** Measurements included sweating intensity, amount, ion concentrations, and excitation frequency. Data on specifications, capacities, and appropriate indications for use are shown. **Discussion:** Galvanic responses; electrodermal conductance measurements, and starch-iodine mapping of distribution lack needed precision and reliability for planned study. Influence of configuration, excitation frequency, type of electrodes and signal extraction, create measurement error. Skin conductance levels vary with filling of sweat ducts and reabsorption not sweat production or evaporation. Despite, advances in electrodermal measurement, relationships of electrical measurements to sweat activity lack full validation. Selected final study instrument uses parameters from skin conductance curves, calibrated to measure the sweat quantity or levels of sweat activity.

## **RELOCATION TRANSITION: A MIXED RESEARCH INTEGRATIVE REVIEW**

S.M. Gilbert, *Medical University of South Carolina, Charleston, South Carolina*

The purpose of this review is to determine how relocation transitions of older adults are measured in the literature. PubMed, CINAHL, and PsycInfo databases were queried using the key words relocation, transitions, and older adults. Fourteen articles were retained for this assessment. Two quantitative studies measured relocation from the older adult's perspective. The remaining studies, qualitative in design, revealed autonomy, decision making, social support, and physical health declines as persistent themes in older adults' relocation transition experiences. While qualitative studies describe the processes of these experiences, there remains only one measurement instrument, Rossen and Gruber's (2007) Relocation Self-Efficacy Scale that provides health care professionals with a means to determine an older adult's ability to transition to a new living environment.

## **CORRELATION BETWEEN SEVERITY OF HEARING LOSS AND SELF-REPORTED PARTICIPATION RESTRICTIONS (HEARING HANDICAP) IN LONG TERM INSTITUTIONALIZED OLDER PEOPLE**

S. Ribeiro<sup>1,2</sup>, A.G. Bó s<sup>1</sup>, C.C. Soldera<sup>1,2</sup>, M. Cardoso<sup>2</sup>, I.H. Menegotto<sup>2</sup>, I. PUCRS, *Porto Alegre, RS, Brazil*, 2. UFCSPA, *Porto Alegre, RS, Brazil*

Hearing loss due to aging (presbycusis) is often present in the elderly population, accompanied by restrictions on social participation (auditory handicap). **Objectives:** to verify the possible correlation between the responses obtained using "The Hearing Handicap Inventory for the Elderly – HHIE" questionnaire and the hearing thresholds measured in a group of institutionalized elderly. **Methodology:** the sample consisted of people resident of a long-term institution for the elderly. We analyzed the results from the HHIE questionnaire and an audiometric evaluation. The study included 41 individuals, of which 30 were females, aged between 63 and 92 years old. All participants presented some degree of hearing loss, 34.2 % presented hearing handicap. The correlation between handicap and hearing level (dB) as 0.17 (p=0.14). Therefore, the higher the hearing loss higher was the HHIE, but it was not significant. We hypothesize that nursing home residents with mild hearing loss perceive more intensely their hearing handicap than those with more severe loss. Nursing home residents with severe hearing loss would restrict their daily life activities and social participation, not perceiving the hearing handicap.

## **ASSESSMENT OF OVERNIGHT CHANGES IN HYDRATION STATUS AND ORTHOSTATIC BLOOD PRESSURE IN OLDER ADULTS**

M.C. Schlairet, M.J. Benton, *College of Nursing, Valdosta State University, Valdosta, Georgia*

Overnight changes in hydration may be linked to fall risk in the elderly due to blood volume and orthostatic blood pressure changes. Bio-electrical impedance analysis (BIA) is an accurate measure of hydration that can assess changes in extracellular fluid that contributes to blood volume. This study evaluated overnight changes in hydration and blood pressure in 17 older (73.8 ± 1.5 years) community-dwelling adults who completed two BIA measurement sessions: (Day 1) between 10:00 am – 4:00 pm in a euhydrated state, and (Day 2) the following morning within 30 minutes of waking after an overnight fast (no food/fluids for 8 hours). Significant overnight decreases in body mass (-0.8 ± 0.1 kg, P < 0.001) were accompanied by losses of total body water (-0.7 ± 0.2 L, P = 0.001), extracellular water (-0.2 ± 0.1 L, P < 0.05), and intracellular (intramuscular) water (-0.3 ± 0.1 L, P < 0.001). Commensurate overnight decreases in systolic blood pressure sitting (-9.4 ± 3.8 mmHg, P < 0.05) and standing (-13.6 ± 3.7 mmHg, P < 0.01) were observed. Orthostatic changes from lying to sitting were significantly greater on

Day 2 ( $-6.9 \pm 3.2$  mmHg,  $P < 0.05$ ), while there was a trend for changes from sitting to standing ( $-6.3 \pm 3.4$  mmHg,  $P = 0.08$ ). Older adults are at increased risk for falls due to orthostatic blood pressure changes that accompany overnight changes in hydration. Muscle, which is a repository for body fluids, may contribute fluid stores overnight to minimize losses of extracellular fluids.

#### ASSESSMENT OF OVERNIGHT INTRAMUSCULAR FLUID LOSS AND STRENGTH IN COMMUNITY-DWELLING OLDER ADULTS

M.J. Benton, M.C. Schlairet, *College of Nursing, Valdosta State University, Valdosta, Georgia*

Muscle is approximately 70% water. It provides a reservoir for body fluids to maintain fluid volume overnight when transient changes in hydration status occur. The effect of nocturnal intracellular (intramuscular) fluid shifts on muscle strength has not been evaluated, although this may contribute to early morning fall risks. The current study used bioelectrical impedance analysis (BIA) to evaluate overnight changes in body composition and fluid status in 17 older ( $73.8 \pm 1.5$  years) community-dwelling adults. Measurements were taken between 10:00 am – 4:00 pm in a euhydrated state and again the following morning after an overnight fast (no food/fluids for 8 hours). Immediately following BIA, muscle strength was assessed using 30-second Arm Curl (upper body) and Chair Stand (lower body) tests. Participants were overweight (BMI  $27.16 \pm 1.2$  kg/m<sup>2</sup>), with an average of  $44.1 \pm 2.6$  kg lean mass and  $40.8 \pm 2.1\%$  body fat. The overnight fast resulted in a significant loss of intracellular (intramuscular) fluid ( $-0.3 \pm 0.1$  L,  $P = 0.01$ ) that manifested as a significant decrease in lean (muscle) mass ( $-0.8 \pm 0.2$  kg,  $P < 0.001$ ) and increase in body fat ( $0.5 \pm 0.2\%$ ,  $P = 0.02$ ). Loss of lean mass was accompanied by a significant loss of upper body strength ( $-9.1 \pm 5.6\%$ ,  $P = 0.01$ ) and a trend for loss of lower body strength ( $-5.6 \pm 10.6\%$ ,  $P = 0.10$ ). In these older adults, overnight fluid shifts resulted in loss of both muscle and strength that may pose an unappreciated risk for early morning injury.

#### ROLE OF COMPREHENSIVE GERIATRIC ASSESSMENT IN THE PREDICTION OF THE OUTCOME AMONG THE ELDERLY PATIENTS WHO UNDERGOING ELECTIVE SURGERY

K. Kim, C. Kim, *Internal Medicine, Seoul National Bundang Hospital, Seongnam-si, Republic of Korea*

Background: The proportion of elderly patients who undergoing surgery has been rapidly increased, however, the clinical indicator predicting the outcomes have been limited. We aimed to evaluate the significance of comprehensive geriatric assessment (CGA) in the elderly patients who undergoing elective surgery. Methods: We studied 141 elderly patients (age:  $78.0 \pm 6.5$ , male: 41.1%) who referred to the geriatrician for the surgical risk evaluation. CGA was performed to evaluate physical health, functional status, psychological health, and social support. The primary composite outcome of this study was in-hospital death or post-discharge institutionalization. In-hospital adverse events, such as delirium, pressure ulcer, pneumonia, and urinary tract infection, were also evaluated. The associations between CGA and in-hospital adverse events, in-hospital death, and post-discharge institutionalization were investigated. Results: There were 32 adverse outcomes (6 in-hospital deaths and 26 post-discharge institutionalizations). Compared with patients who discharged to home, patients with adverse outcome were characterized with poor nutritional status and previous stroke. However, there was no significant difference in surgical risk or anesthesia type. CGA results showed that patients with adverse outcome were associated with functional dependency and poor nutrition. Cumulative number of impairment in CGA domain was significantly associated with adverse outcome, in-hospital events, and prolonged hospital stay. In multiple logistic regression analysis, cumulative impairment in CGA was independently associated with surgical outcome in elderly patients

undergoing elective surgery (Fully-adjusted odd ratios (95% CI); 1.892 (1.318 – 2.716)). Conclusions: Preoperative CGA can identify elderly patients at greater risk for mortality, prolonged length of hospital stay, and post-discharge institutionalization.

### SESSION 710 (POSTER)

#### DISABILITY AND MOBILITY

##### THE ROLE OF GENDER IN THE RELATIONSHIP BETWEEN MOTOR FUNCTIONING AND MORTALITY

M. Ernsth-Bravell<sup>1</sup>, D. Finkel<sup>2</sup>, A.K. Dahl<sup>1,3</sup>, 1. *School of Health Sciences, Jönköping University, Institute of gerontology, Jönköping, Sweden*, 2. *Indiana University Southeast, New Albany, Indiana*, 3. *Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden*

Basic motor functioning is not only an indicator of general physical functioning but it may also predict mortality. Motor function is however complex and different functions may play different roles in mortality. The aim of this study is to analyze relations among different types of motor function and mortality and also to examine possible gender interactions. As a part of the longitudinal Swedish Adoption/Twin Study of Aging (SATSA) twenty different assessments of motor functioning have been collected six times over a 19-year period. At baseline motor function data were available from 859 twins ranging in age from 50 to 88 years. Given the skew evident in motor functioning measured in seconds (most individuals perform well into their mid60s), performance on the 20 motor functioning tasks was categorized as without difficulty, with difficulty, or impossible. Factor analysis was used to create 3 motor factors: balance, flexibility, and fine motor skills. For the analyzes data from wave 2 was used (age from 50 – 91) due to larger variance in function than at wave 1. Cox regression survival analysis was performed with mortality (event = 1) as the outcome variable and the three motor factors as independent variables together with age and gender. In the first model age and balance turned out significant related to mortality; however, when sex was included in the model age and the interaction of gender and fine motor skills demonstrated significant relations with mortality. The analysis demonstrates that relationship between motor functioning and mortality differs significantly by gender.

##### PATTERNS OF ACTIVITY AND REST IN OLDER ADULTS AS MEASURED BY A HOME MONITORING SYSTEM

H. Lach<sup>1</sup>, R.A. Lorenz<sup>1</sup>, K. Rose<sup>2</sup>, M. Hanson<sup>3</sup>, A. Barth<sup>3</sup>, 1. *Saint Louis University, St. Louis, Missouri*, 2. *University of Virginia, Charlottesville, Virginia*, 3. *BeClose, Vienna, Virginia*

Older adults are at risk for accidents and injuries in the home environment, particularly people with dementia. Potential safety problems include falls, fires, medication mismanagement, and wandering. Home monitoring technology has the potential for increasing safety and keeping older adults independent in the community through identifying potentially unsafe behaviors before an incident occurs. This descriptive study examined pilot data collected through a wireless home monitoring system on 5 community-dwelling older adults (mean age 77.8, female =4). People had wireless sensors installed in the home to collect data on motion in the kitchen and living room, sensors to identify when the person was in bed or in a primary chair, time spent in the bathroom, and detection of opening the front and back doors. Participants were tracked over one month. Variables collected on some if not all of the participants included time in bed, getting out of bed, active and sedentary time, time in the bathroom, opening the door, and leaving the home. Computer algorithms were used to generate activity graphs for each of the participants for each type of behavior. Patterns of activity during both the day and at night emerged with ability to identify alterations in participant's regular patterns and unusual events, such as opening the door in the middle of the night, or getting up frequently at night. Implied

cations for exploring older adults' behaviors related to safety are discussed.

### **EXAMINING GENDER DIFFERENCES IN CONTRIBUTIONS OF RISK FACTORS TO DEPRESSION AMONG ELDERLY WITH STROKE-RELATED DISABILITIES DWELLING IN A COMMUNITY**

S. Moon, *social welfare, daejin university, Pocheon, Republic of Korea*

The purpose of this study was to analyze gender differences in depression for elderly who are disabled by stroke dwelling in a community. The result of this study will be a meaningful exploration that would be helpful for policy makers and social workers in developing appropriate preventive strategies, as well as in providing knowledge about the depression treatment for elderly with disabilities. This study was developed based on biological, psychosocial theory to examine gender differences in contributions of risk factors to depression among elderly with stroke-related disabilities. The results of this study showed that risk factors to depression were sociodemographics; religion, education level, economic level, activities of daily living. Daily hassles such as internal conflict, family conflict, and services provided in a community such as medical rehabilitation services and collective social activities were also risk factors to depression. The differences between men and women were level of education and economy, family conflict, and collective social activities. Therefore, effective and strategic development of social activities and programs provided by a community for different sex is necessary in order to reduce depression.

### **TRENDS IN FUNCTIONAL MOBILITY BEFORE, DURING AND AFTER DISMISSAL FROM CLINICAL-GERIATRIC SETTING**

S. Strupeit, K. Wolf-Ostermann, C. Deneke, *Life Sciences, Hamburg University of Applied Science, Hamburg, Germany*

**Introduction:** In the health sciences it seems to be indisputable that mobility refers to physical dimensions, to the movement of the human sciences as basis of the life. In medicine, nursing and other therapeutic occupations of health, there is often a lack of understanding functional mobility. **Material/Methods:** In a timeline of 6 month after the hospitalization the Barthel Index was assessed as status quo before transfer to the hospital (t1), at the time of dismissal from the clinical geriatric setting (t2) and after 6 month (t3). The survey took place in Hamburg (Germany) with 123 patients. **Results:** There is an improving of functional mobility during the clinical stay. After 6 month there is a decrease of the clinical status quo. Partly worsened than before the hospitalization. **Discussion:** There are different stages of functional mobility at different stages of the course of disease. To improve and achieve the functional mobility special interventions must take place.

### **THE PREVALENCE OF LOW CONFIDENCE WITH USING A WHEELCHAIR AND ITS RELATIONSHIP TO WHEELCHAIR SKILLS**

W.C. Miller<sup>1,2</sup>, B.M. Sakakibara<sup>1,2</sup>, P.W. Rushton<sup>3</sup>, *1. University of British Columbia, Vancouver, British Columbia, Canada, 2. Vancouver Coastal Health Research Institute, Vancouver, British Columbia, Canada, 3. Centre de recherche de l'institut universitaire de gériatrie de Montréal, Montreal, Quebec, Canada*

**Objectives:** Social Cognitive Theory suggests that confidence (self-efficacy) is an important covariate along with skill or ability in determining behavior. To date no studies have looked at confidence with wheelchair use. Here we estimate the prevalence of low confidence with using a wheelchair and examine its relationship with wheelchair skills. **Methods:** Using a cross-sectional design 96 community-living, mostly male (69%), manual wheelchair users who were 50 years or

older (mean=60 years) and used their wheelchair on a daily basis were recruited. Variables collected included the 65 item Wheelchair Use Confidence Scale (WheelCon), the 32 item performance-based Wheelchair Skills Test (WST), the 14 item Hospital Anxiety and Depression Scale (HADS) and a number of demographic and clinical variables. **Results:** The prevalence of low confidence with wheelchair use was 39% (95% CI=29-49%). Using cut-scores of 80% for both the WheelCon and WST, crosstab analyses suggest that 27% of the sample have a disproportionate balance of skill and confidence (e.g., low skill high confidence or vice versa). There is a moderately high shared variance ( $r^2=49%$ ) between confidence and skill. Having higher confidence remains significant when regressing wheelchair skill on wheelchair confidence and other important covariates. **Conclusion:** Confidence with using a manual wheelchair is a newly determined construct and its relationship with wheelchair skill has yet to be examined. Low confidence is evident in a relatively large proportion of older wheelchair users. Given our findings, in concert with existing published evidence, interventions to address wheelchair confidence and skill may lead to better mobility outcomes.

### **COMBINED PELVIC FLOOR AND VIRTUAL REALITY DANCE TRAINING CAN IMPROVE DUAL-TASK GAIT IN WOMEN WITH MIXED URINARY INCONTINENCE**

S. Fraser<sup>1,2</sup>, V. Elliot<sup>3,1</sup>, J. Chaumillon<sup>3,1</sup>, M. Lussier<sup>2,1</sup>, E.D. de Bruin<sup>4</sup>, L. Bherer<sup>1,2</sup>, C. Dumoulin<sup>3,1</sup>, *1. Centre de recherche de l'Institut de gériatrie de Montréal, Montreal, Quebec, Canada, 2. Université du Québec à Montréal, Montreal, Quebec, Canada, 3. University of Montreal, Montreal, Quebec, Canada, 4. Institute of Human Movement Sciences and Sport, Zurich, Switzerland*

Recent research suggests that women with mixed urinary incontinence demonstrate poorer executive functioning (EF) than women with stress urinary incontinence or continent women. Poorer EF has been associated with dual-task walking deficits and an increase in fall risk. While pelvic floor training has been successful in reducing involuntary leaks, we questioned if dance training that included executive control would improve outcomes in women with mixed urinary incontinence. Twenty-three women (Mage = 70.5 yrs) completed 12 weeks of combined pelvic floor and virtual reality dance training. Participants were measured on their ability to walk and complete a 2-back task on three separate occasions (Pre1, Pre2, Post-test). To assess test-retest improvements we included a two week 'no training' period (from Pre1 to Pre2). The combined training occurred between Pre2 and Post. We computed dual-task cost scores (DTCs) for each participant (i.e., 2back alone - 2back+walking). For all participants, walking DTCs were unchanged overtime but 2-back DTCs diminished significantly from Pre2 to Post ( $p = .022$ ). When we examined those who benefited from training and improved their pad test from Pre2 to Post ( $n = 13$ ) and those who did not improve ( $n = 10$ ), we found that improvers had poorer scores at Pre1 in the executive Stroop task than the non-improvers ( $p = .019$ ). Interestingly, only those that improved on their pad test demonstrated improvements in 2-back performance over time ( $p = .026$ ). Overall, results suggest that combined training can benefit individuals with mixed urinary incontinence and improve cognitive performance during dual-task walking.

### **TOILETING DISABILITIES IN OLDER PEOPLE LIVING IN RESIDENTIAL CARE FACILITIES**

K.M. Talley, J. Wyman, *School of Nursing, University of Minnesota, Minneapolis, Minnesota*

Understanding risk factors for toileting disabilities in older adults living in residential care facilities will help design prevention programs

to delay nursing home relocation. The purpose of this study was to identify risk factors associated with toileting disabilities in this population. A subsample of 2,395 adults age 65 years or older, without dementia, and with the potential to benefit from behavioral interventions for urinary incontinence, and physical activity was created from the 2010 National Survey of Residential Care Facilities (a nationally representative cross-sectional sample of 8094 participants). The disablement process model provided the conceptual framework and predictors were classified as pathologies, impairments, disabilities, intra- and extra-individual factors. Toileting disability was measured as “does the resident currently receive any assistance using the bathroom?” Logistic regression was used to identify independent predictors of toileting disabilities. Variables with  $p < .05$  in univariate models were included in the final multivariate model. Residents were mostly white women age 85 years and older. Sixteen percent had toileting disabilities. Independent predictors (odds ratio, 95% confidence intervals reported) of toileting disabilities included; living in a for profit facility (1.54, 1.07-2.22); having kidney disease (1.99, 1.06-3.70), bowel incontinence (3.21, 1.91-5.39), urinary incontinence (2.33, 1.63-3.33); an increased number of physical impairments (.82, .71-.95); not going outside (.29, .16-.52); needing assistance with bathing (2.13, 1.11-4.08), dressing (6.26, 4.20-9.34), and transferring (8.41, 5.56-12.71). Prevention efforts should include treatments for incontinence, physical activity programs targeting impairments with walking, standing, sitting, stooping, reaching, and grasping, and therapy to improve dressing and transferring skills.

#### PREVALENCE OF METABOLIC SYNDROME AND ITS ASSOCIATION WITH PHYSICAL PERFORMANCE, DISABILITY AND SUBJECTIVE WELL-BEING AMONG LIFESTYLE INTERVENTIONS AND INDEPENDENCE FOR ELDERLY (LIFE) STUDY PARTICIPANTS

A. Botosaneanu<sup>1</sup>, W.T. Ambrosius<sup>2</sup>, N. de Rekeneire<sup>1</sup>, B. Goodpaster<sup>4</sup>, B. Nicklas<sup>2</sup>, T. Church<sup>3</sup>, T.M. Gill<sup>1</sup>, 1. *Yale University, New Haven, Connecticut*, 2. *Wake Forest University, Winston-Salem, North Carolina*, 3. *Pennington Biomedical Research Center, Baton Rouge, Louisiana*, 4. *University of Pittsburgh, Pittsburgh, Pennsylvania*

**Background.** Maintaining physical independence and reducing disability among older adults is of great clinical and public health importance. Despite the increase in obesity and related metabolic dysfunction in this age group, the association between metabolic syndrome (MetS) and physical performance, disability, and subjective well-being in older adults with functional limitations has not been evaluated. **Methods.** We used data from 1,635 adults aged 70-89 years old with functional limitations [summary score  $< 10$  on the short physical performance battery (SPPB)] from the LIFE Study, to assess differences in physical performance (400m walk time, grip strength, and SPPB score), disability (composite 19-item score), and self-rated health (SRH), between those with and without MetS at baseline. MetS was defined according to 2009 IDF/NHLBI criteria. Analyses were performed for the overall sample and subsequently stratified according to diabetes status. **Results.** The prevalence of MetS was 29.9% in the overall sample, and 48.8% and 23.5% among diabetics and non-diabetics, respectively. In the overall sample and the diabetic and non-diabetic subgroups, no significant differences were found in 400m walk time, grip strength, SPPB score, or disability score between participants with and without MetS. In contrast, self-reported ratings of overall health status were better (lower) in participants without MetS compared with those with MetS (adjusted means 2.73 and 2.82;  $p$ -value = 0.033); the ratings did not differ significantly in the two diabetes subgroups. **Conclusion.** In older adults with functional limitations, MetS status is associated with higher ratings of subjective well-being, but not with physical performance or disability.

#### USUAL GAIT SPEED, SELF-RATED HEALTH, AND FUNCTIONAL DEPENDENCE IN OLDER JAPANESE WOMEN

S. Seino<sup>1,2</sup>, N. Yabushita<sup>1</sup>, M. Kim<sup>3</sup>, M. Nemoto<sup>1</sup>, S. Jung<sup>1</sup>, Y. Osuka<sup>1</sup>, Y. Okubo<sup>1</sup>, K. Tanaka<sup>1</sup>, 1. *Graduate School of Comprehensive Human Sciences, University of Tsukuba, Tsukuba, Japan*, 2. *The Japan Society for the Promotion of Science, Chiyoda, Japan*, 3. *The Research Team for Promotion Independence of the Elderly, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Itabashi, Japan*

**Background:** Although usual gait speed (UGS) and self-rated health (SRH) are considered useful indicators of overall well-being, it is unclear whether slow-UGS and poor-SRH have an additive effect on functional dependence. The purpose of this study was to evaluate an additive effect of a slow-UGS and poor-SRH on functional dependence. **Methods:** We conducted a cross-sectional analysis on data from 736 older Japanese women, aged 65-95 years ( $74.3 \pm 5.9$  yr). Trained testers measured participants' UGS. Participants were categorized their UGS as fast or slow using the established 1.0 m/s cut-off point. SRH and functional dependence were assessed using commonly used questionnaires. We classified participants into four groups: fast-UGS/good-SRH, fast-UGS/poor-SRH, slow-UGS/good-SRH, and slow-UGS/poor-SRH. Using multiple logistic regression analyses and adjusting for potential confounders, we analyzed whether slow-UGS/poor-SRH had an additive effect on functional dependence. **Results:** There were 60 (8.2%) functionally-dependent participants. The crude prevalence of functional dependence were 3.8%, 7.4%, 18.7%, and 25.0% in the fast-UGS/good-SRH, fast-UGS/poor-SRH, slow-UGS/good-SRH, and slow-UGS/poor-SRH groups, respectively. Compared with the fast-UGS/good-SRH group, the adjusted odds ratios (95% confidence intervals) for functional dependence were 1.7 (0.6-4.4) in the fast-UGS/poor-SRH group, 3.2 (1.6-6.7) in the slow-UGS/good-SRH, and 4.4 (1.8-10.8) in the slow-UGS/poor-SRH group. A significant slow-UGS  $\times$  poor-SRH interaction was detected ( $P < 0.001$ ). **Conclusion:** The concomitant presence of a UGS  $< 1.0$  m/s and poor-SRH had a significant additive effect on functional dependence in older Japanese women. These two measures may capture different information in terms of functional dependence.

#### THE INFLUENCES OF COMORBIDITIES TO THE ELDERLY WITH HIP FRACTURE IN TAIWAN

Y. Huang<sup>1,2</sup>, H. Cheng<sup>1</sup>, Y.L. Shyu<sup>1</sup>, 1. *Chang-Gung University of Science and Technology, Taoyuan, Taiwan*, 2. *Chang-Gung University, Taoyuan, Taiwan*

**Objectives.** Hip fracture impacts functional abilities of the elderly with high morbidity and mortality, and comorbidities usually derogated their recovery. The aim of this study is to examine the influences of comorbidities to the recovery of elderly with hip fracture in Taiwan. **Data and Methods** The secondary data of 291 elders with hip fracture from three previous longitudinal observational studies (99, 110, 82, respectively) in Taiwan was analyzed by generalized estimating equation approach. Outcomes were measured by the Chinese Barthel Index (as activities of daily life; ADLs) and Short Form-36 Taiwan version (as quality of life; QoL). Data was examined if the comorbidities influenced the mortality, readmission rate, ADLs and QoL during the first 12 months after their discharge. **Results** After controlling the covariates, hip-fractured elders with dementia ( $N = 7$ , 2.4%), diabetes ( $N = 76$ , 26.1%) or stroke ( $N = 33$ , 11.3%) had significantly worse ADLs and QoL than those without. Elders who with cardiovascular disease ( $N = 160$ , 55%), parkinsonism ( $N = 10$ , 3.4%), renal disease ( $N = 28$ , 9.6%), liver disease ( $N = 11$ , 3.8%) or respiratory disease ( $N = 25$ , 8.6%), were slightly worse in outcomes but not significantly different. Moreover, elders with dementia had significantly higher mortality in the first three months; and elders with respiratory disease, stroke or diabetes had significantly higher readmission rates in the first three months. **Conclusions** Comorbidities negatively influenced the outcomes of elderly.

erly with hip fracture. The results could be the references for developing interventions for hip-fractured elders with comorbidities.

### **EFFECTS OF HOME-BASED PHYSICAL REHABILITATION PROGRAM ON PHYSICAL DISABILITY AFTER HIP FRACTURE**

J. Edgren<sup>1</sup>, A. Salpakoski<sup>1</sup>, T. Rantanen<sup>1</sup>, A. Heinonen<sup>2</sup>, M. Kallinen<sup>3</sup>, S. Sipilä<sup>1</sup>, *1. Gerontology Research Center, Department of Health Sciences, University of Jyväskylä, Jyväskylä, Finland, 2. Department of Health Sciences, University of Jyväskylä, Jyväskylä, Finland, 3. Department of Physical and Rehabilitation Medicine, Central Finland Central Hospital, Jyväskylä, Finland*

Only half of the hip fracture patients will regain the pre fracture level of their physical functional capacity. This secondary analysis investigated the effects of multifaceted home-based rehabilitation program on physical disability among older hip fracture patients. Population-based sample of over 60-year-old community-dwelling men and women operated for hip fracture (n=81, mean age 79 years, 78 % were women) participated in this study (ISRCTN53680197) and were randomly assigned into control (Standard Care) and intervention groups on average 6 weeks after discharged to home. The year-long intervention included modification of environmental hazards, guidance for safe walking, non-pharmacological pain management, progressive home exercise program, physical activity counseling and Standard Care. Assessment took place at baseline, and three, six and 12 months thereafter. Physical disability was assessed by a questionnaire containing 14 questions on perceived difficulty in basic (ADL) and instrumental activities of daily living (IADL). Two sum scores were composed: ADL score (range 0–6) and IADL score (range 0–8). A higher score indicated more difficulties. At the baseline the mean ADL score was 2.7(SD=1.9) in the intervention group and 2.7(2.1) in control group. Respective values for IADL were 4.1(2.5) and 3.8(2.2). After one year physical disability had reduced in both groups but the change did not differ between groups (group\*time p=0.898 for ADL and 0.764 for IADL). The intervention was equally effective for rehabilitation of ADL and IADL disabilities as the Standard Care. There is need for more sensitive disability scales to conquer the floor/ceiling effect.

### **THE ASSOCIATION OF AN AMBULATORY SYMPTOM INVENTORY WITH COMMUNITY MOBILITY IN LATE LIFE**

R.M. Allman<sup>1,2</sup>, R. Kennedy<sup>2</sup>, C.J. Brown<sup>2</sup>, R. Hearld<sup>2</sup>, Y. Yuan<sup>2</sup>, P. Sawyer<sup>2</sup>, *1. UAB Center for Aging, Birmingham/Atlanta GRECC, Birmingham, Alabama, 2. University of Alabama at Birmingham (UAB), Birmingham, Alabama*

Purpose: To develop a measure of symptoms hypothesized to impact ambulation, the Ambulatory Symptom Inventory (ASI), and evaluate the association of ASI with life-space mobility in late life. Methods: We recruited community-dwelling older adults aged 75 years and older between 2010 and 2011 for the UAB Study of Aging II. Baseline assessments included age, sex, race, symptoms, life-space mobility, and an in-home gait speed. Ten symptoms (problems with balance, lack of energy, pain, shortness of breath when walking, stiffness, tired/fatigued, swelling, tingling/burning, numbness, or weakness in legs or feet) were each associated with life-space mobility (p≤0.10) and summed to develop the ASI. Multivariate linear regression was used to evaluate the association of ASI with life-space. Results: Participants (N=404; mean (SD) age = 80.1(5.3); 57% female; 35% African American) had a mean life-space = 64.9 (24.9). The mean ASI=3.9 (2.8); mean gait speed=0.5 m/sec (0.3). The symptom prevalences ranged from 23.5% for shortness of breath with walking to 65.1% for pain. The ASI correlated with both life-space mobility and gait speed (r=-0.326 and r=-0.323, respectively, p< 0.001). ASI was significantly and independently associated

with life-space in a multivariate model adjusting for age, sex, race, and gait speed. The association of ASI with life-space was stronger with life-space <60. Conclusions: Symptoms hypothesized to impact ambulation were common among community-dwelling older adults in late life, and the ASI was significantly and independently with life-space mobility.

### **ARE WOMEN MORE AT RISK FOR FALLS RELATED TO CHRONIC MUSCULOSKELETAL PAIN THAN MEN? FINDINGS FROM THE MOBILIZE BOSTON STUDY**

S.G. Leveille<sup>1,2,3</sup>, L. Shi<sup>1</sup>, R. Jones<sup>3,4</sup>, J. Hausdorff<sup>2,3,7</sup>, R.H. Shmerling<sup>2,3</sup>, J.M. Guralnik<sup>5</sup>, J.F. Bean<sup>3,6</sup>, *1. Nursing, CNHS, Univ Mass Boston, Dorchester, Massachusetts, 2. Beth Israel Deaconess Medical Center, Boston, Massachusetts, 3. Harvard Medical School, Boston, Massachusetts, 4. Hebrew SeniorLife, Boston, Massachusetts, 5. University of Maryland, Baltimore, Maryland, 6. Spaulding Rehabilitation Hospital, Boston, Massachusetts, 7. Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel*

We previously reported that chronic pain contributes to falls in older adults. Women are more likely than men to have chronic pain and older women are also more at risk for injuries from falls. The purpose of this study is to determine whether women are more at risk for falls related to chronic musculoskeletal pain. We studied 276 men and 473 women aged >70y in the population-based MOBILIZE Boston Study. Participants returned monthly fall calendars over 18 months. Baseline visits collected information on fall risk factors, joint pain (hands/wrists, shoulders, back, hips, knees and feet), pain severity and pain interference with activities (Brief Pain Inventory). We used multivariable negative binomial models to determine rate ratios (RR) for falls in women and men; covariates included sociodemographics, fall risk factors, medications, gait speed, physical activity and chronic conditions. 45% of women and 32% of men reported pain in >1 joint sites. Women who had >1 pain sites had a nearly two-fold increased risk for falls (adj. RR=1.82, 95%CI 1.34-2.47) compared to their peers with no pain. In men, there was no increase in fall risk related to having >1 pain sites (adj. RR=1.18, 95%CI 0.73-1.91). Similar sex differences in fall risk were observed according to all pain measures (location, severity and interference with activities). In conclusion, women who have chronic pain have an increased risk for falls that is not observed in men. Greater attention to prevention and management of chronic pain especially in women could have important benefits for fall prevention.

### **ASIAN EXERCISES FOR AGING AMERICANS: ACTIVE LIFESTYLE LEADS TO ACTUALIZED LIFESPAN**

S.L. Loftus, *Neurology, Beth Israel NY, New York, New York*

Avoiding falls and maintaining activity are essential to successful aging. Qi Gong (exercise from China) and Yoga (exercise from India) have been investigated to improve postural stability/balance and decrease falls in a population aging with disability. Qi Gong is energy exercise, the cultivation of balanced energy. Yoga is an attitude toward being, an attitude adjustment for personal order. Preventing falls requires ethereal and empirical exercise experiences to ameliorate falling and fear of falling. The Berg Balance Scale, Pull Test, Fall Risk Profile, Mini-Mental State Exam and Quality of Life Scores were documented pre and post intervention with Asian exercises. Pre and post results were compared in this 55 year old and older population, with progressive disability. Initial findings indicate Qi Gong is beneficial for compensating to environmental perturbations while Yoga may be less so. Statistical analysis suggests clinical usefulness of Qi Gong, while further study of Yoga is recommended.

## DISABILITY AND MOBILITY 2

## SYNCOPE IN YOUTH AS A MODERATOR OF THE RELATIONSHIPS BETWEEN RECENT SYNCOPE AND HEALTH OUTCOMES

B. King-Kallimanis<sup>1</sup>, R.R. Romero-Ortuno<sup>2</sup>, D. O'Shea<sup>3</sup>, R. Kenny<sup>1,2</sup>, 1. *The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland*, 2. *St James Hospital, Dublin, Ireland*, 3. *St Vincent's University Hospital, Dublin, Ireland*

Syncope is a common condition which peaks in prevalence during mid-teenage years, with another peak around the age of 65. Vasovagal syncope is considered a benign condition with respect to mortality; however, less is known about the effect of vasovagal syncope on other health outcomes. The main purpose of this study was to examine whether syncope in youth affects the relationship between recent syncope and health outcomes including quality-of-life (QoL), depression, anxiety, fear of falling, self-reported health and disabilities. Data are from a population based sample (the Irish Longitudinal Study on Ageing) of community dwelling adults aged 50 and older (N=5,654). Participants were asked whether they had ever fainted, and those who had were asked to recall whether they had fainted in their youth and to report the number of faints in the past 12 months. The results suggested that syncope in youth moderated the relationships between recent syncope and QoL, depression, anxiety, fear of falling, self-reported health and activities of daily living. Participants who had fainted in youth, and fainted multiple times recently did not report significantly worse depression than participants who had never fainted. However, those who did not faint in youth, and had fainted multiple times recently and those who had fainted in youth and had only one faint recently had significantly worse depression. These results suggest that the effects of life time syncope may not be benign. When designing interventions to improve health outcomes, syncope history and number of recent faints need to be considered.

## TRANSPORTATION OPTION USE AMONG OLDER ACTIVE DRIVERS

R. Marottoli<sup>1,2</sup>, K. Araujo<sup>1</sup>, P. Peduzzi<sup>1</sup>, 1. *Internal Medicine, Yale University School of Medicine, New Haven, Connecticut*, 2. *VA Connecticut, West Haven, Connecticut*

Background: Much of the focus on transportation option use has been among people who no longer drive. However, the use of these options by active drivers is less well known. Methods: Participants were active drivers age 70 years and older recruited from medical clinics and community sources who were followed prospectively for two years. Participants were contacted every six months with questions on driving status and use of transportation options, including option type and frequency. Results: The 615 drivers had a mean age of 78.8 (SD=4.9) years, 12% were women, mean MMSE score was 27.4 (±2.1) points, drove an average of 129.2 (± 108.6) miles per week, and 72% drove daily. Over the course of two years of follow-up, 96% used some form of transportation besides driving. The most common types were: car passenger 95%, plane 43%, train 31%, bus 26%, limousine 13%, and taxi 13%. The most common providers of these services were transportation companies, spouse, children, and friends. Conclusion: In a high functioning cohort of older active drivers followed prospectively for 2 years, use of transportations option other than driving was common with a wide array of choices reflecting a variety of trip purposes, including distant travel. While driving remains the primary mode of transportation, many older drivers use other means to provide out-of-home mobility.

## A STIFF PRICE TO PAY: DOES JOINT STIFFNESS PREDICT DISABILITY IN AN OLDER POPULATION?

M. Thakral<sup>1</sup>, L. Shi<sup>1</sup>, R.H. Shmerling<sup>2,3</sup>, J.F. Bean<sup>2,4</sup>, S.G. Leveille<sup>1,2,3</sup>, 1. *College of Nursing and Health Sciences, University of MA, Boston, Boston, Massachusetts*, 2. *Harvard Medical School, Boston, Massachusetts*, 3. *Beth Israel Deaconess Medical Center, Boston, Massachusetts*, 4. *Spaulding Rehabilitation Hospital, Boston, Massachusetts*

The purpose of this study is to determine whether joint stiffness contributes to incident or worsening disability in community-living older adults. In the population-based MOBILIZE Boston Study, 681 persons aged ≥70 years were assessed at baseline and 18 months for joint stiffness, physical function, and a number of health measures. Morning joint stiffness (on most days in the past month) in the arms, back, hips and knees was categorized according to no sites, 1 site, and 2 or more sites. Self-reported mobility difficulty was defined as difficulty walking ¼ mile or climbing stairs without assistance. Multivariable Poisson regression was used to determine the relationship between baseline stiffness and development of mobility difficulty at 18 months. Joint stiffness in 1 site was reported by 26% of participants, and ≥2 sites, by 27% at baseline. Factors associated with stiffness at baseline included obesity, low income, female gender, mobility aids, depression, peripheral arterial disease, spinal stenosis or disc disease, and pain severity. Multisite stiffness predicted onset of mobility difficulty among those without mobility difficulty initially (for ≥2 sites, adj.RR=1.86, CI 1.05-3.28). After further adjustment for pain severity, neither stiffness nor pain was associated with incident difficulty, and there was no significant interaction between stiffness and pain. Among those who had mild difficulty at baseline, stiffness was not associated with worsening mobility at 18 months. These findings suggest that multisite stiffness is an important health indicator. Further research is needed to understand the influence of stiffness and pain on risk for disability in older adults.

## SESSION 720 (POSTER)

## EDUCATION AND EVALUATION

## VENOUS THROMBOEMBOLISM KNOWLEDGE AND SATISFACTION OF OLDER HIP FRACTURE PATIENTS AND CAREGIVERS

J. Lee<sup>1</sup>, D. Drake<sup>2,1</sup>, J. Donaldson<sup>2</sup>, V. Kennedy<sup>1</sup>, 1. *Nursing Science, University of California Irvine, Irvine, California*, 2. *Mission Hospital, Mission Viejo, California*

Background: The risk of venous thromboembolism (VTE) is highest in older adult patients undergoing hip fracture surgery. These patients are expected to receive extended VTE prophylaxis using anticoagulants after hospital discharge. The purpose of the study was to identify older adult patients and family caregivers' knowledge of VTE prevention and satisfaction with education on anticoagulation during hospitalization. Methods: We conducted surveys on older adult hip-fractured patients (≥65 years) and their family caregivers immediately before discharge from a community hospital over one year. Results: A total of 24 patients and 15 caregivers participated in the study. The VTE knowledge score was 62.1% for patients and 64.8% for caregivers. The satisfaction with care and education was 3.6 out of 5 among patients and 3.5 out of 5 among caregivers. Both patients and family caregivers reported that they need to know more about the medication (e.g. anticoagulants) and the side effects. Overall satisfaction among patients/caregivers who scored 80% or higher on VTE risk factor questions was significantly higher than among those who scored lower than 80% (p<0.05). Most hip-fractured patients (73%) reported being discharged to a skilled nursing home for rehabilitation. Conclusions/Implications: The results of the study show that hip-fractured older adult patients and family caregivers needed more education about the prevention of VTE in the transition period. Focused discharge education including during transition



from acute care to home or long-term care should be considered in the development of a hip fracture program for older adults.

### **MULTIPLE TEACHING METHODS ACTIVATE GERIATRICS TEACHERS' & FAMILY MEDICINE RESIDENTS' LEARNING**

D.L. Brown, S. Denson, K. Denson, D. Lillich, D. Simpson, Y. Thaker, E.H. Duthie, *Educational Services, Medical College of Wisconsin, Milwaukee, Wisconsin*

Background Medical education and residency programs face two major paradigm shifts: the transition to "active learning" consistent with lifelong learning per health care professions accreditation standards, and changing faculty behavior to provide this instruction based on science of learning principles. Methods Academic half-day sessions for Family Medicine residents (n=59) or "Coordinated/Core Units in Residency Education" (CURE) build evidence-based clinical skills within a classroom environment. In 2011-12 CURE curricula combined geriatrics with patient-centered medical home (PCMH). A multi-disciplinary collaborative (e.g., MD, PhD, MSW, trainees) labeled Geriatrics Education Team (GET) designed the curriculum. Session #1 was lecture-dominated resulting in disheartening results for GET members regarding overall learning (5.4) despite strong overall effectiveness of teachers (6.1) [Likert scale 7=Excellent to 1=Poor]. Review of results generated opportunity to activate teachers to use teaching methods associated with deep and sustained learning in subsequent sessions (e.g., functional assessment, housing, palliative care, dementia). New teaching methods were incorporated with coaching from educational experts. Results Teaching methods included standardized patients, vision impaired glasses, activities using assistive devices, role plays, video triggers and team quizzes. Teaching sessions resulted in increased overall learning (5.9) while retaining overall teaching effectiveness (6.1). Research tells us that immediately after a change in behavior performance ratings decline, adjust and then peak once again. Results here immediately increased and/or remained constant. Conclusion Use of disheartening baseline resident evaluation data can be used to change Geriatrics teachers' behaviors resulting in use of methods associated with activating deep learning while retaining overall teaching effectiveness ratings.

### **EFFECT OF A 1-WEEK REQUIRED CLINICAL ROTATION IN GERIATRIC MEDICINE ON MEDICAL STUDENTS' ATTITUDE**

K.L. Young<sup>1</sup>, J.A. Larson<sup>1</sup>, S.K. Ostwald<sup>2</sup>, K. Murphy<sup>2</sup>, C. Dyer<sup>1</sup>, 1. *Internal Medicine, Division of Geriatric and Palliative Medicine, UT Health-Medical School, Houston, Texas, 2. UT Health-School of Nursing, Houston, Texas*

Background: The U.S. Census Bureau asserts that during the period from 2010 to 2020, there will be rapid increases in the elderly population due to the aging of the Baby Boom Population. With this increase, it is important that medical students complete geriatric rotations. Existing research demonstrates that attitudes and stereotypes held by students can influence educational and clinical outcomes. The purpose of this study is to assess the impact of a 1-week required clinical rotation on third-year medical students' attitudes towards older adults. Methods: A pre-post design was used in which 520 third-year medical students completed the UCLA Geriatric Attitudes Scale as part of a geriatrics rotation at the University of Texas Houston Medical School through the D.W. Reynolds Foundation. Key components of the clerkship included orientation, a vignette, journaling, one-on-one training and observed learning. Results: Descriptive statistics and a paired T-test procedure were performed. Results indicate significant positive effects on students' attitude from pre(M=3.467, SD=0.384) to post test (M=3.501, SD=0.435). The paired t test demonstrated significantly more positive attitudes on the posttest t(321)= -2.330, p<0.021. Conclusion: Medical students had improved, more positive attitudes regarding the

elderly patient. An intense 1-week clerkship can provide enough learning to alter attitudes and influence care.

### **INTEGRATING GERONTOLOGY IN A NURSING FUNDAMENTALS CURRICULUM**

D. Mize, C. Hagen, *Nursing, George Fox University, Newberg, Oregon*

New nurses will care for older adults more than any other patient population. Curriculum in pre-licensure nursing education does not always provide a clear synthesis of gerontological content related to topics of basic care and comfort for older adults. The primary purpose of this study was to examine whether the intentional integration of gerontological topics into the foundational nursing courses would impact assessment of the student's basic mastery of the fundamental principles for nursing practice. A descriptive approach included the comparison of standardized testing results from a 60-item RN Fundamentals proctored assessment that measuring concepts of foundations of practice, basic nursing care, support of psychosocial needs, support of physiological needs, and health assessment) between two groups of nursing students. One group completed their first semester nursing courses designed with basic foundational concepts of nursing in the curriculum. Another group completed their first semester nursing courses with integrated gerontological nursing content into the same first semester nursing courses. The competencies are aligned with the Recommended Baccalaureate Competencies and Curricular Guidelines for the Nursing care of Older Adults (AACN, 2010) and QSEN - Quality & Safety Education for Nurses (2007). Students completing integrated gerontological nursing content (N=39) scored significantly higher on the RN Fundamentals assessment than students completing basic foundational concepts (N=38) at p<. 01. For the subcategory of basic care and comfort, students completing integrated gerontological nursing content scored significantly higher on 14 test questions at p<. 01. The findings suggest intentionally integrating gerontological nursing content improves mastery of fundamental principles.

### **A TOOL FOR AUDIT OF HOSPITAL CHARTING OF FUNCTIONAL AND COGNITIVE STATUS BY YEAR 4 (Y4) MEDICAL STUDENTS-A PILOT STUDY**

J.E. Agens<sup>1</sup>, J.S. Appelbaum<sup>3</sup>, S. Baker<sup>1</sup>, K. Brummel-Smith<sup>1</sup>, E. Friedman<sup>4</sup>, M.A. Kutner<sup>1</sup>, S.L. Harrison<sup>2</sup>, 1. *Geriatrics, Florida State University College of Medicine, Tallahassee, Florida, 2. Florida State University College of Medicine Department of Family Medicine and Rural Health, Tallahassee, Florida, 3. Florida State University College of Medicine Department of Clinical Sciences, Tallahassee, Florida, 4. Florida State University, Tallahassee, Florida*

Background and Methods: At Florida State University College of Medicine, fourth year medical students (Y4) demonstrate competency in functional and cognitive assessment of patients in the required Primary Care Geriatrics Clerkship (PCG) using shadow chart written exercises and case presentations. We found little on clinical hospital charting outcomes in geriatric patients in the medical student education literature. We wished to measure charting of cognitive (level of consciousness, cognition) and functional (ADL and IADL) assessment on Y4 required rotations that occur both before and after PCG. We designed a tool to abstract charts targeting any mention of functional or cognitive evaluation. Subjects were consenting students on other required Y4 clerkships. Trained assistants have abstracted, on average, five charts per student in patients over 65 years old. The chart tool has questions asking if there was any functional or cognitive evaluation and examples to circle as well as the source(s). Only students who have not yet had PCG have had chart abstracting at the time of this abstract. Results: 30% of the charts were scored by both assistants yielding concurrence on 85%. Six percent of the charts had no mention of cognitive evaluation by the student. Most (90%) had some mention of cognitive status by both the student and others writing in the chart. Frequently (52%), these were just cursory statements like 'alert and oriented X3' (40%).

Many charts (47%) made no mention of functional evaluation. Conclusion: Baseline charting performance was low for Y4 students. This indicates need for the PCG clerkship.

### **PREVENTING FALLS: AN EDUCATIONAL WORKSHOP TAUGHT BY GERIATRIC FELLOWS**

J. Culbertson<sup>1</sup>, S. Ahmed<sup>1</sup>, K. Agarwal<sup>1</sup>, Z. Tan<sup>2</sup>, L. Granville<sup>3</sup>, H. Atkinson<sup>4</sup>,  
1. *Baylor College of Medicine, Houston, Texas*, 2. *University of California at Los Angeles, Los Angeles, California*, 3. *Florida State University, Tallahassee, Florida*, 4. *Wake Forest University, Winston-Salem, North Carolina*

Medical students often receive didactic material in lecture form despite recent emphasis on a competency-based curriculum. Additionally, the training of Geriatric Fellows requires curricular elements related to teaching and interaction with learners in an academic setting. Medical students assigned to the Core Internal Medicine Clerkship were randomized into groups based on clerkship site. The experimental group participated in an interactive, competency-based falls workshop taught by geriatrics fellows, designed to give students a hands-on experience in the assessment and interventions of falls. Control students attended a lecture by a faculty teacher based on identical goals and objectives. Both groups completed a knowledge and attitudes assessment survey immediately after the 50-minute workshop or lecture, and then again during the tenth week of the Core Clerkship. Workshop participants (n=15) self-reported knowledge of the components of the falls assessment, ability to administer a Get-Up-and-Go Test, and confidence in their ability to describe the components of gait disorders was increased to a greater extent than in students receiving the control lecture (n=13). Students rated the impact of the workshop highly, and subjective comments suggest that students enjoyed the interaction with Geriatric Fellows. The workshop group were more likely to report that they used a falls assessment during their clinical clerkship. When measured by objective testing, workshop students demonstrated greater knowledge retention at 10-weeks compared with students who received a standard lecture. Geriatric Fellows reported positive experiences and increased confidence in teaching in the small group setting.

### **THE AZ-GEC GOES INTERPROFESSIONAL: OUR FRAMEWORK, STRATEGIES & CHALLENGES**

J. Mohler<sup>1</sup>, K. D'Huyvetter<sup>1</sup>, L. O'Neill<sup>1</sup>, J.K. Lee<sup>2</sup>, T. Kennedy<sup>3</sup>, C. Keller<sup>4</sup>, C. Howe<sup>1</sup>, M. Fain<sup>1</sup>,  
1. *University of Arizona, Arizona Center on Aging, Tucson, Arizona*, 2. *University of Arizona College of Pharmacy, Tucson, Arizona*, 3. *Arizona State University School of Social Work, Phoenix, Arizona*, 4. *Arizona State University Harford Center of Geriatric Nursing Excellence and the Center for Healthy Outcomes in Aging, Comprehensive Geriatric Nursing Education Center, Phoenix, Arizona*

Background/Rationale: The Arizona Geriatric Education Center (AZ-GEC) is a HRSA-funded statewide consortium, providing geriatric education and training since 2007. HRSA recently mandated that all newly funded GECs (2010) adopt interprofessional (IP) models of education, training, and clinical care. Objectives: We sought to systematically "inter-professionalize" Arizona GEC faculty and projects, using a collaborative team process involving a faculty core consisting of pharmacists, nurses, public health professionals, physicians, naturopaths, gerontologists, social workers, and health informationist and communication experts. Methods: Explicit and deliberate faculty communication and team building processes and IP didactic content expertise were developed. We built a cohesive faculty, who could then integrate both IP methods and geriatric content. Working together we: 1) Developed curricula and educational products; 2) Coordinated and planned practical experiences; and 3) Team taught IP health trainees and practitioners to provide quality geriatric care. Additionally, an IP Advisory Board was formed to engage and disseminate AZ-GEC programs and products throughout the communities statewide. Conclusions: Collaboratively,

our AZ-GEC faculty has overcome barriers to teamwork; integrated professional roles and responsibilities. Because we are committed to building IP clinical training sites that incorporate innovative models of team-based geriatric care, we have developed a new: Acute Care of Elders (ACE) Unit, Primary Care at Home Program, Geriatric ED Unit, and a Gero-Ortho Hip Fracture service. Our new IP editorial board reviews all AZ-GEC products, including our statewide Arizona Geriatrics Society Journal. Since 2010 our IP AZ-GEC faculty team has successfully provided IP geriatric education to over 4200 learners across our state.

### **USE OF A CLINICAL VIGNETTE TO BRIDGE EXPERIENTIAL DIFFERENCES ON A GERIATRIC AND PALLIATIVE CLINICAL ROTATION**

J.A. Larson, K.L. Young, S. Pearce, G. Varas, S.K. Ostwald, K. Murphy, C. Dyer, *The University of Texas Health Science Center at Houston (UTHealth), Houston, Texas*

Background: In 2009, a geriatric and palliative clinical rotation was established at The University of Texas Health Science Center at Houston Medical School through the D.W. Reynolds Foundation. The rotation's clinical sites include outpatient geriatric clinics, inpatient geriatric care through an ACE unit, inpatient palliative care, geriatric house calls and palliative house calls. Focus group data suggested the need to standardize the rotation experience across sites. To accomplish this goal, a clinical vignette originally developed by Amy L Holthouser, MD was revised with permission. The revised version contains both geriatric and palliative core principles. Methods: During 2010, the standardized clinical vignette was introduced into the clerkship. A brief vignette quiz was developed to assess the impact of the vignette on students' knowledge of core geriatric and palliative principles. A total of 150 third year students completed the vignette quiz. A simple pretest-posttest design was used. Results: A dependent T-test procedure was performed. Results indicate significant improvement on students' score from pre to post  $t(149) = (-10.98, p < .0001)$ . Conclusion: The vignette quiz demonstrated significant improvement from pre to post. The progressive clinical vignette is an valuable component that can assist standardizing a mixed geriatric and palliative rotation ensuring all students receive core principles regardless of site location.

### **INNOVATIVE INTERACTIVE GERIATRIC CURRICULUM IN FAMILY MEDICINE**

J. Kuester, S. Denson, N. Havas, K. Denson, E.H. Duthie, D. Lillich, D.L. Brown, *Medicine, Medical College of Wisconsin, Milwaukee, Wisconsin*

Background: Increasingly integrated geriatrics healthcare delivery requires proficiency in a multidisciplinary team approach not normally stressed in physician training. To meet this urgent need, MCW's Family and Community Medicine Residency Program sought to design a new geriatrics curriculum aligned with key Patient Centered Medical Home (PCMH) principles. However, specialty specific teachers often lack depth of expertise in geriatrics and/or education. To bridge these curriculum design gaps we formed a multidisciplinary Geriatric Education Team (GET) and sought to identify key parameters that support team-based curriculum design. Methods: Multidisciplinary GET curriculum design members were selected to provide complementary expertise areas: Geriatricians, Family Medicine teachers, social workers, medical educators, and trainees. GET members met monthly to identify topics based on curricular and practice deficits identified by the Family Medicine faculty and residents with Geriatricians, nursing, social work providing content expertise and cross-discipline training in integrated healthcare. Results: GET members identified key features associated with design success including ability to: designate leaders; respect/value each member's unique expertise; bridge discipline specific language gaps; maintain focus on trainee audience and their role (family medicine residents); take educational risks. 36 residents completed a 15 hour Geriatrics/PCMH curriculum during AY 2011-12, uti-

lizing interactive modalities including standardized patients, role playing, and small group discussions. Learner ratings showed that core educational competencies were met (average 3.37 on 4 point scale, 4=strongly agree) and that session quality was high, averaging 6.1 (7 point Likert, 7=excellent). Conclusions: A multidisciplinary GET approach yields a tailored, active, and integrative curriculum with high learner satisfaction.

#### **AN INNOVATIVE APPROACH TO TEACHING HEALTH LITERACY USING STANDARDIZED PATIENTS**

C.L. Clarke<sup>1</sup>, S.G. Lowman<sup>3</sup>, D.A. DeWalt<sup>2</sup>, J. Busby-Whitehead<sup>1</sup>, E. Roberts<sup>1</sup>, 1. *University of North Carolina Division of Geriatrics Center for Aging and Health/Carolina Geriatric Education Center, Chapel Hill, North Carolina*, 2. *University of North Carolina Internal Medicine and Epidemiology, Chapel Hill, North Carolina*, 3. *Duke University Center for Palliative Care, Durham, North Carolina*

**BACKGROUND:** Research documents older adults as especially vulnerable to low health literacy leading to poor health outcomes. Authentic training can ameliorate low literacy and improve quality of care. **PURPOSE:** To develop an interactive health literacy curriculum for interdisciplinary teams of health professionals using standardized patients. **METHODS:** The Teach Back method addresses low health literacy by limiting patient education to 3 salient points at most. The patient must then teach-back, or repeat to demonstrate understanding. Physicians, nurses, physical therapists, and pharmacists practiced Teach Back in a 6-hour session during the Faculty Development Program in Health Literacy, Practice Improvement and Aging program. Background on the Teach Back method included video demonstrations, and research evidence showing the correlation between low health literacy and poor outcomes. Small groups of Learners were videotaped as rotating through three case scenarios. Specially trained older adult volunteer actors (Standardized Patients) demonstrated incomplete understanding during the encounter prompting Teach Back. Learners received feedback from Health Literacy experts, classmates and the standardized patient. **OUTCOMES:** Pre-test post-test analysis showed growth in Learners' knowledge and application of health literacy concepts. Learners acquired new assessment and intervention strategies. These skills will be applied in clinical and teaching encounters as well as being used as a means to systemic practice improvement. **CONCLUSION:** This curriculum provides a fully interactive learning environment wherein standardized patients simulate clinical encounters to teach faculty learners about health literacy, in particular, the "Teach Back" method. These sessions may be replicated in other settings and with other disciplines.

#### **COMPARISON OF MODELS FOR INTERPROFESSIONAL EDUCATION (IPE) IN GERIATRICS**

G.A. Hudgins, *Pharmacy Practice, University of Montana, Missoula, Montana*

Upon the recommendation of the Institute of Medicine and many other organizations, interprofessional education (IPE) is a goal for health professions educators in all disciplines. Many educational accrediting agencies are now requiring activity in this area. Perhaps more easily accomplished in some environments than others, those programs located in largely rural areas without an academic medical center have more difficulty in achieving IPE for their students. With the support of the Montana Geriatric Education Center at the University of Montana, interdisciplinary student training around the activity of geriatric health screening is providing IPE opportunities for pharmacy, nursing, medicine, physical therapy, social work, speech pathology, and audiology students from four individual academic institutions in Montana. In a typical year, approximately 40 pharmacy students, 20 nursing students, 10 social work students, and smaller numbers of students from other disciplines are involved in over 50 screening events throughout the state. Under faculty supervision, teams of students work together to provide a variety of screenings for older individuals in rural communities, including

counseling on the results of the tests and follow up of abnormal results. Since each discipline utilizes a different format and schedule for clinical training, no one approach to IPE works for all the disciplines involved. Various approaches utilized by pharmacy, two different nursing programs, physical therapy, and social work will be described and compared. Evaluation results from surveys of faculty and students will be included.

### **SESSION 725 (POSTER)**

#### **ENDOCRINOLOGY AND METABOLISM**

##### **EXPECTED LIFE-YEARS SAVED BY PREVENTING END-STAGE RENAL DISEASE IN THE ELDERLY WITH DIABETES**

D. Yang<sup>1,2</sup>, L. Lee<sup>3,4</sup>, C. Hsu<sup>5</sup>, Y. Chang<sup>3</sup>, M. Wang<sup>6</sup>, W. Lin<sup>6,7</sup>, C. Chang<sup>1,2</sup>, J. Wang<sup>4,6,8</sup>, 1. *Division of Geriatrics and Gerontology, Department of Internal Medicine, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan*, 2. *Institute of Gerontology, College of Medicine, National Cheng Kung University, Tainan, Taiwan*, 3. *Division of Environmental Health and Occupational Medicine, National Health Research Institutes, Zhunan, Taiwan*, 4. *Institute of Occupational Medicine and Industrial Hygiene, College of Public Health, National Taiwan University, Taipei, Taiwan*, 5. *Institute of Population Health Sciences, National Health Research Institutes, Zhunan, Taiwan*, 6. *Department of Internal Medicine, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan*, 7. *Institute of Clinical Medicine, College of Medicine, National Cheng Kung University, Tainan, Taiwan*, 8. *Department of Public Health, College of Medicine, National Cheng Kung University, Tainan, Taiwan*

**BACKGROUND-** The incidence and prevalence of diabetes in the elderly keep increasing, and diabetes-related complications contributed to high morbidity and mortality. We estimated the expected life-years (LY) saved from successful prevention of end-stage renal disease (ESRD) in the elderly with diabetes. **METHODS-** We used the National Health Insurance Research Database to conduct a population-based cohort study in Taiwan. We identified all new ESRD cases aged over 65 receiving maintenance hemodialysis (N=24,243) from the registry files of catastrophic illnesses from July 1, 1997 to December 31, 2005. We then retrospectively searched the database if there was a diagnosis of diabetes in these new cases. Incidence rates and cumulative incidence rates of ESRD were calculated. After excluding cases with malignancy (N=3,423), we followed the survival of new cases through the end of 2006. The survival function for an age- and sex-matched reference population was generated using the Monte Carlo method from the life table of the general population. We further estimated the expected LY saved from successful prevention of ESRD in the elderly with diabetes. **RESULTS-** The cumulative incidence rates of requiring hemodialysis were 0.078 and 0.099 for the elderly males and females with diabetes, respectively. There were 5,430.1 LY and 10,177 LY could be saved by successful prevention of ESRD in the elderly males and females with diabetes in a year, respectively. **CONCLUSIONS-** The LY saved by successful prevention of ESRD in the elderly with diabetes in a year are substantial and deserve special attention, especially in the elderly females.

## THE ASSOCIATION BETWEEN BODY COMPOSITION AND 24-HOUR GLUCOSE RHYTHMS IN AN AGING POPULATION WITHOUT DIABETES

C. Wijsman<sup>1</sup>, A.J. de Craen<sup>1</sup>, R. Westendorp<sup>1</sup>, F. Van der Ouderaa<sup>1</sup>, E. Verhagen<sup>2</sup>, S. Mooijaart<sup>1</sup>, *1. Leiden University Medical Center, Leiden, Netherlands, 2. VU Medical Center, Amsterdam, Netherlands*

**Background.** The metabolic consequences of sedentary lifestyle are increased body weight, metabolic syndrome and increased prevalence of diabetes. Increasing age is associated with higher blood glucose levels and glucose variability. We now are performing a randomized controlled trial to study the effects of a lifestyle intervention on physical activity and metabolic health in sedentary older adults without diabetes. **Methods.** From this ongoing trial, we report baseline characteristics of 190 participants. We have studied the association between body composition and parameters of 24-hour glucose rhythms obtained by continuous glucose monitoring. **Results.** Sixty percent of participants was male. Mean age of participants was  $64.9 \pm 2.8$  years. Mean body mass index was  $29.2 \pm 3.5$  kg/m<sup>2</sup> in males, and  $28.7 \pm 5.0$  kg/m<sup>2</sup> in females. Mean capillary fasting glucose levels were  $5.6 \pm 0.8$  mmol/L in males, and  $5.0 \pm 0.6$  mmol/L in females. Overall mean glucose levels were higher in males than females (mean + standard error:  $5.7 \pm 0.06$  vs  $5.3 \pm 0.06$  mmol/L,  $p < 0.001$ ), as were all other measures of continuous glucose monitoring (all  $p < 0.05$ ). Body mass index, waist circumference and fat percentage were highly significantly associated with overall mean glucose levels, both diurnal and nocturnal (all  $p < 0.05$ ), but less outspoken with parameters of glucose variability. **Conclusions.** In these preliminary data in older sedentary adults without diabetes, body composition is strongly associated with parameters of 24-hour glucose rhythms.

## SESSION 730 (POSTER)

### EPIDEMIOLOGY

#### PREDICTORS OF AGE AT ONSET OF DEMENTIA AMONG OLDEST OLD AMERICANS

R. Basu, *Scott & White Healthcare, Temple, Texas*

**Background:** Trajectory of Alzheimer's disease in the U.S. population imposes a substantial burden on the country's health care system. The primary objective of this study is to examine socioeconomic and lifestyle related factors across lifespan on the age at onset of dementia, including Alzheimer's disease (AD) in the U.S. population. **Method:** The Aging Demographics and Memory Study (ADAMS) data were used to examine factors associated with the age of onset of AD and other dementia. The ADAMS is a cross-sectional supplemental sample of individuals age 70 or older selected from the Health and Retirement Study. The age at onset of dementia was estimated if respondents meet DSM criteria based on review of the chronological history of cognitive and functional symptoms. A list of lifestyle, socioeconomic, and health related factors including birth year, education, physical exercise, and childhood socioeconomic status was regressed on the outcome variable of onset age of dementia. **Results:** An earlier year of birth, being women, having stroke, and Apolipoprotein-E4 gene were associated with lower onset age, while regular exercise, being Hispanic have positive impact on delaying the age of onset. Low paternal education had a significant impact on the earlier age of dementia onset. **Conclusion:** Modifiable lifestyle factors can delay the onset of dementia, however, Americans with less educated fathers have the lower age of onset. Public health impact of delaying the onset is tremendous as it would lower the prevalence rate and consequently social and economic burdens of the disease

#### IMPACT OF CAREGIVING TRANSITIONS ON PERCEIVED STRESS IN 990 OLDER WOMEN IN CAREGIVER-SOF

J. Lyons<sup>1</sup>, K. Ensrud<sup>2</sup>, T.A. Hillier<sup>3</sup>, L. Fredman<sup>1</sup>, *1. Epidemiology, Boston Univ, Boston, Massachusetts, 2. University of Minnesota, Minneapolis, Minnesota, 3. Kaiser Permanente Center for Health Research, Portland, Oregon*

While caregiving can be stressful and can vary in intensity over time, the relationship between transitions in caregiving intensity and stress remains unclear. We evaluated the effect of transitions into and out of caregiving, and between caregiving intensity levels, on Perceived Stress Scale (PSS) scores following the transition among 990 women from the Caregiver-Study of Osteoporotic Fractures who participated in up to five interviews over nine years. Caregivers were defined as those who assisted someone with one or more basic or instrumental activities of daily living (ADL/IADLs). Caregivers were categorized as high- or low-intensity based on the sample-based median number of ADL/IADL tasks caregivers provided (1 and 4, respectively). Analyses were performed on participants with data on caregiving and PSS at two consecutive interviews, resulting in a total of 2673 transitions. At baseline, participants were aged 81.2 years (sd=3.7), 66% were non-caregivers, 17% were high-intensity caregivers, and 17% were low-intensity caregivers. Among participants whose caregiving intensity level remained constant over two interviews, high-intensity caregivers reported the highest stress, adjusted for confounders (m=19.06, sd=0.50), followed by low-intensity caregivers (m=16.83, sd=0.56) and non-caregivers (m=15.80, sd=0.21) ( $p < 0.01$ ). Those who ceased caregiving reported similar stress levels as continuous non-caregivers, except for non-caregivers who provided care for a brief period during the interval ( $p = 0.06$ ). Non-caregivers who transitioned into either high- or low-intensity caregiving reported similar stress levels as each continuous caregiving group, respectively. Results suggest that caregiving intensity, rather than caregiving itself, influences caregivers' stress level and that high stress persists among high-intensity caregivers.

#### ASSOCIATION OF SUBCLINICAL CEREBROVASCULAR DISEASE WITH RATE OF DECLINE IN GAIT PERFORMANCE

S. Wu<sup>1</sup>, C. Hirsch<sup>1</sup>, B. Durbin-Johnson<sup>1</sup>, P. Buzkova<sup>3</sup>, K. Patel<sup>2</sup>, J. Xia<sup>1</sup>, *1. Internal Medicine, University of California Davis Health System, Sacramento, California, 2. National Institute on Aging, Bethesda, Maryland, 3. University of Washington, Seattle, Washington*

**Background:** Data from the Cardiovascular Health Study (CHS), a population-based cohort study of persons  $\geq$  age 65, have shown that faster rate of decline in gait performance predicts higher risk of mortality and disability. Little is known about how age-related factors contribute to the rate of decline in gait performance. **Methods:** Using data from the CHS, subjects without a history of stroke comprised a primary analysis population of 3038 subjects (mean age 74). We used sequential directed acyclic graphs and multivariable analyses to examine the independent contributions of subclinical cardiovascular disease (SCVD), CVD risk factors, and other subject characteristics to the rate of decline in gait speed and stride length assessed over 6 years. Scores on the Digit Symbol Substitution test (DSST), which have been correlated with cerebral white matter ischemia, were included as a proxy for subclinical cerebrovascular disease. Subset analyses were conducted on 1579 subjects with data on MRI white matter grade (WMG), and compared to results using the DSST. **Results:** In addition to age, sex, and baseline gait performance, DSST and composite SCVD were independently associated in the expected directions with the rate of decline of gait speed and stride length ( $p < 0.001$  and  $p = 0.029$  respectively). In subset analyses, substituting WMG for DSST yielded similar results ( $p < 0.001$ ). **Conclusion:** Subclinical cerebrovascular disease is associated with performance decline in gait speed and stride length in older persons.

## **SABE STUDY: HEALTH, WELLNESS AND AGING. COMPARATIVE STUDY OF JALISCO AND COLIMA STATE, MEXICO**

E. Arlas-Merino, J. Cueva Contreras, N.M. Mendoza-Ruvalcaba, M.J. Arias-Merino, R. Meda Lara, G. Martinez Saldaña, *Salud Pública, Universidad de Guadalajara, Zapopan, Jalisco, Mexico*

**Introduction:** In Mexico for meeting the challenges of aging on health SABE Study is proposed as an interinstitutional project by PHAO and the Federal Ministry of Health. The SABE Study was carried on in Colima through the CASOENAC project sponsored by FONCICYT-92076, and in Jalisco through the funding of COETCYJAL-University of Guadalajara, Jalisco Health Secretariat COESAEN. The following analysis compares data from Jalisco and Colima, both located at western in Mexico. **Methods:** Both were cross-sectional studies, participants: n=1562 in Jalisco n=1222 in Colima, community-dwelling elders 60 and older. Using SABE-survey data were analyzed: socio-demographic characteristics, cognitive and physical function, depression, chronic diseases, nutritional status, and access to health services. Data were captured simultaneously by using minicomputers. Analysis was performed on SPSS program. **Results:** Data compares Jalisco/Colima states. Mean ages were 72.5±8.41/72.1±8.52, women 63.7%/62%, for both 16.3% were illiterate. Living alone 11.5%/15.2% (p=0.000). Most (93.5% / 94.3%) have been married in his life, were married only 56.8% /61.1% (p=0.009). Most were Catholic (94.4%/92.5%). Cognitive impairment was found in 16.5%/17.5% and depression symptoms 25%/28.3%. The perception of health was good to excellent in 36.9%/32.7%. The most frequent diseases were: hypertension 51.2%/49.2%, diabetes mellitus 27.6%/28.3%, and arthritis 20.1%/17.2%. It was found urinary incontinence in 22.0%/20.6%, during the last year 35.0% has suffered falls. **Conclusion** Data from the two States are very similar in both socio-demographic as health, except for living alone and marital status. The results show health problems that represent several challenges at health services and, family and personal care.

## **THE RELATIONSHIP BETWEEN PROTON PUMP INHIBITOR ADHERENCE AND FRACTURE RISK IN THE ELDERLY**

J. Ding<sup>1</sup>, D.A. Heller<sup>1,2</sup>, F. Ahern<sup>2</sup>, T. Brown<sup>3</sup>, *1. Magellan Health Services, Harrisburg, Pennsylvania, 2. Penn State University, University Park, Pennsylvania, 3. Pennsylvania Department of Aging, Harrisburg, Pennsylvania*

Results of several recent studies suggest that long-term use of proton pump inhibitors (PPIs) may be associated with an increased risk of fracture. However, no prior studies have examined the role of medication adherence in this association. The goal of this study was to examine the relationship between medication adherence and fracture risk among elderly PPI users. The study cohort included 6,833 community-dwelling new PPI users, without history of fracture, who were enrolled in Pennsylvania's Pharmaceutical Assistance Contract for the Elderly (PACE) Program. Proportion of Days Covered (PDC) was computed to measure adherence based on prescription refill patterns. Time-dependent Cox proportional hazards models were used to examine the relationship between PPI adherence and hospitalization for fracture while controlling for demographics, comorbidity, and average adherence across other drug classes. During 20,291 person-years of follow-up, 571 fracture-related hospitalizations occurred. Relative to the lowest PPI adherence level (PDC<0.4), the fracture hazard ratios (HRs) associated with higher adherence (PDC: >0.9, 0.8-0.9, 0.6-0.8, and 0.4-0.6) were 1.15 (P=0.33), 1.50 (P=0.0009), 1.46 (P=0.0025), and 1.41 (P=0.015), respectively. In addition, PPI therapy discontinuation appeared to be protective (HR=0.63, P<0.0001), and among non-persistent users, resuming therapy was associated with increased risk (HR=2.63, P=0.002). These results provide further evidence that long-term PPI use is associated with increased fracture risk in the elderly, and that risk varies by adherence level. The findings highlight the need for clinicians to periodically

re-assess their elderly patients' individualized needs for ongoing PPI therapy, while weighing the potential risks and benefits of long-term PPI use.

## **PHYSICAL ACTIVITY AND BONE HEALTH IN US OLDER ADULTS: NHANES 2007-2008**

E. Grubert<sup>1</sup>, L. Gensburg<sup>1</sup>, L.N. Borrell<sup>2</sup>, *1. University at Albany, SUNY, School of Public Health, Rensselaer, New York, 2. Department of Health Sciences Graduate Program in Public Health Lehman College, CUNY, Bronx, New York*

**Objective:** As the US older adult population increases, the need to identify factors contributing to racial/ethnic difference in bone mineral density (BMD) is imperative. Thus, this study aims to determine whether current physical activity (PA) is related to BMD before and after controlling for age, race/ethnicity, gender, body mass index, poverty-income ratio, smoking, and current osteoporosis treatment. **Methods:** We used data from the National Health and Nutrition Examination Survey 2007-2008 (NHANES) for this study. Out of 1656 NHANES participants with femoral BMD using x-ray bone densitometer, participants ≥60 years old who self-reported their race/ethnicity as black, white or Hispanics and without missing data on selected covariates were included in the analyses (n=1353). Current levels of PA were obtained by self-report and metabolic equivalents (METs) categories were calculated using the Global Physical Activity Questionnaire Analysis Guide. Linear regression models were used to examine the strength of the association between PA and BMD. **Results:** On average, there was a 0.05 kcal/kg difference in BMD between those in the high MET PA category and those in the low MET category (b=0.049, p=0.002). However, after adjusting for age, race/ethnicity, gender, body mass index, poverty-income ratio, smoking, and current osteoporosis treatment, this association was no longer statistically significant. **Conclusions:** Most studies evaluating current PA and BMD have been done among younger adults with the few among older adults yielding mixed findings. Thus, more studies, especially longitudinal, are needed to further our understanding of the effect of PA on BMD among older adults.

## **GERONTOLOGICAL ASSESSMENT IN OLDER ADULTS IN A DAY CENTER. TECOMAN, COLIMA, MEXICO**

M.J. Arias-Merino<sup>1</sup>, E. Arias Merino<sup>1</sup>, N.M. Mendoza-Ruvalcaba<sup>1</sup>, J. Cueva Contreras<sup>1</sup>, M. Vazquez Arias<sup>1</sup>, R. Meda Lara<sup>1</sup>, G. Ramí rez Patiñ o<sup>2</sup>, *1. Salud Pública, Universidad de Guadalajara, Zapopan, Jalisco, Mexico, 2. Secretaría de Salud Colima, Colima, Colima, Mexico*

In the framework of the Socio-demographic Change and Active Ageing (CASOENAC, FONCICYT 94670) and in order to achieve better strategies and procedures for providing care to the elderly within the Day Center located in Tecoman, Colima, we performed an analysis of the situation of the quality of life of the beneficiaries of the Centre, identification of risk groups and health care needs. **Method:** Gerontological assessment of all center beneficiaries, including Self-report of sociodemographic and health characteristics and cognitive, emotional, functional, nutritional, social areas and quality of life. **Results:** Participants 197 persons, age 71.1 ± 8.3 years (Rank=60 - 98), women 59.4%, married 41.3%, education 2.9 ± 3.2 years, 87.3% catholic, economic pension 25.8%. Depression 46%, anxiety 52%, low dependence for Basic Activities of Daily Living (3.6%), high dependence for Instrumental Activities of Daily Living (62.9%). Cognitive intact state 80.1%, risk of falls 67.7%, high risk of falls 13.1%. Chronic - degenerative diseases: musculoskeletal 63.7%, hypertension 47.5%; diabetes 34 %, obesity 26 %. The key components of their quality of life are mainly health, good social and family relationships and to tend for themselves. **Conclusions:** The elderly present potentials recounted to having a cognitive intact condition, being autonomous in activities of self-care and in labors that allow them to live in community, in general they have functional families that serve as a support to continue with a process of aging with

well-being. In spite of their problems, they have a satisfactory perception of their health and of the life in general.

#### **ADHERENCE TO ICU BEST PRACTICE GUIDELINES IN OLDER ADULTS**

N. Capogna<sup>1</sup>, I.H. Zuckerman<sup>1</sup>, C.S. Franey<sup>1</sup>, C.M. Lilly<sup>2</sup>, O. Badawi<sup>3</sup>, S.K. Dutcher<sup>1</sup>, M. Al-Jawadi<sup>1</sup>, G.B. Rattinger<sup>1</sup>, *1. University of Maryland School of Pharmacy-Pharmaceutical Health Services Research, Baltimore, Maryland, 2. University of Massachusetts Medical School, Worcester, Massachusetts, 3. Phillips Healthcare, Baltimore, Maryland*

Intensive Care Unit (ICU) best practice guidelines are currently implemented to prevent ICU acquired conditions. Reports have suggested variability in adherence, but relationships between adherence rates and age has yet to be determined. Our objective was to describe the relationship between age and adherence to ICU guidelines for stress ulcer prophylaxis (SUP), venous thromboembolism prevention (VTEP) and beta blocker utilization (BBU) after myocardial infarction. This retrospective cross-sectional study examined patients' electronic medical records representing 271 ICUs in 188 hospitals during 2008. Using specific criteria for each guideline, adherence rates were calculated overall and stratified by age: <65, 65-74, 75-84 and ≥85 years. Bivariable and multivariable analyses determined the relationship between age and receipt of ICU best practice guidelines, adjusted for potential confounders. Among the 169,321 admissions, mean age was 62.9 years with females comprising 45.7%. Overall adherence to the three treatment guidelines was high (92.6% SUP, 88.2% VTEP and 76.2% BBU). In the bivariable analyses, compared to ICU patients ≥85 years old, patients <65 years were more likely to receive SUP (91.1% vs. 93.1%,  $p < 0.01$ ) and BBU (74.3% vs. 78.6%,  $p < 0.01$ ), and less likely to receive VTEP (89.6% vs. 87.4%,  $p < 0.01$ ). Multivariable models revealed small differences in adherence by age. There is little variability in adherence to these guidelines by age, suggesting older adults are receiving best practice treatments at similar rates as younger patients. Understanding patterns between age and guideline adherence is an initial step in determining whether outcomes associated with ICU guidelines vary by age.

#### **THE INTERFACE BETWEEN THE SOCIOECONOMIC AND THE EFFECTS OF STRUCTURAL FACTORS ON THE BRAZILIAN ELDERLY HEALTH**

D. Mori<sup>1</sup>, H. Sumii<sup>1</sup>, K. Hamaguchi<sup>2</sup>, C. Rim<sup>3</sup>, S. Hyeon-Kyu<sup>4</sup>, *1. Human Welfare, Prefectural University of Hiroshima, Mihara, Hiroshima, Japan, 2. Mogi das Cruzes University, Mogi das Cruzes, SP, Brazil, 3. HanNam University, Daejeon, Democratic People's Republic of Korea, 4. Kyoei University, Kasurake, Saitama, Japan*

The Brazilian elderly population will expect to increase from 11.3% (2011) to 49% (2050) and, according to the World Bank (2011), life expectancy is highly correlated with an important social inequality in terms of income, even reporting acceleration in poverty reduction by inclusion of public policies. Evidences shows that life expectancy in developed countries is dramatically improved where income differences are smaller and societies are more socially equable. The purpose of this study is to estimate the association between the socioeconomic situation of Brazilian Elderly and Health Conditions Indicators, Access and Transference of Income from Social Programs, Socioeconomic Indicators and Cover Indicators. The main source of data was the 2008 National Sample Household Survey from the database of the Brazilian Institute of Geography and Statistics (IBGE) and Informatics Department of Unified Health System (SUS). The results demonstrated that Brazil is moving into a fundamentally different demographic context, within increasingly mature population and extra burden on the Public Health System. In order to revise for the future of the National Health Policy for the Elderly implemented in 1999 and respond appropriately to the demands of the sharply aging society within all healthcare service available nowadays, it is essential to estimate the influential factors of the parameters

and use all the possible strategies for more healthy, egalitarian and cohesive society.

#### **TIME-TREND UTILIZATION OF STATINS IN COMMUNITY-DWELLING OLDER ADULTS**

W. Lo-Ciganic<sup>1</sup>, R. Boudreau<sup>1</sup>, J.C. Zgibor<sup>1</sup>, J.M. Donohue<sup>1</sup>, S. Gray<sup>3</sup>, A.B. Newman<sup>1</sup>, E.M. Simonsick<sup>4</sup>, J.T. Hanlon<sup>1,2</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. VA, Pittsburgh, Pennsylvania, 3. University of Washington, Seattle, Washington, 4. NIA Intramural Research Program, Baltimore, Maryland*

This study describes the temporal patterns of statin use from 1997 to 2008 and examines whether statin use changed after the release of the National Cholesterol Education Program Adult Treatment Panel (NCEP ATP) III guidelines and results from the Prospective Study of Pravastatin in the Elderly at Risk (PROSPER) in 2002. We used data from 3055 participants (41% black, 51% female; age 70+) in the 1997 Health, Aging and Body Composition Study interview and categorized them into four exclusive subgroups: 1) any coronary heart disease (CHD); 2) diabetes only (CHD risk equivalent); 3) without CHD or diabetes and with ≥ 2 CHD risk factors; or 4) without CHD or diabetes and with < 2 CHD risk factors. Statin use increased from 12.9% in 1997 to 24.8% in 2002 with the greatest use (47.4%) in those with CHD. Between 2003 and 2008 statin use continued to increase from 27.6% to 39.1% with the greatest use (64.5%) in those with CHD. Using an interrupted time series analysis with generalized estimating equations to examine yearly level and trend changes in statin use adjusting for demographic, socioeconomic health status, and access to health care, we found that publication of the NCEP ATP III guidelines and PROSPER findings did not appear to increase statin utilization patterns among elders (increase in use per-year after/before 2002: adjusted ratio of odds ratio 0.90; 95% C.I. 0.87-0.93). The guidelines/evidence-based data may influence statin use gradually over time among elders. Potential underuse of statins was observed among those with CHD/diabetes.

#### **UP-TO-DATE LONG-TERM SURVIVAL OF OLDER ADULT PATIENTS WITH LUNG CANCER: PERIOD ANALYSIS OF 2000-2008**

Y. Tang, G.S. Smith, *University of Maryland Baltimore, Baltimore, Maryland*

Objective: Up-to-date estimates of long-term survival are important for the evaluation of lung cancer treatment programs. This study aims to estimate current relative survival ratios (RSS) and to identify most recent trend in long-term relative survival of geriatric lung cancer patients, using period analysis. Methods: SEER cancer registry data were used to identify newly diagnosed lung cancer patients between 1973 and 2008. Patient's vital status (dead or alive) and follow-up time between diagnosis and death or censoring date of December 31, 2008, were recorded. Period analysis was employed to calculate observed long-term survival proportion for three 3-year intervals during 2000-2008. Population mortality data in the United States was applied to the cancer population to calculate the expected number of deaths from all causes. RSR was calculated as the ratio of the observed to the expected survival proportions. Results: During 2000-2008, 5-year RSR increased from 28.2% (95%CI, 27.6%-28.8%) to 38.6% (95%CI, 38.0%-39.2%) among those 65+, compared to a much larger increase from 29.8% (95%CI: 27.1%-32.5%) to 51.2% (95%CI, 42.6%-48.2%) among those 44 years of age or younger. Similarly, 10-year RSR increased from 20.7% to 29.5%, 26.7% to 45.8%, and 22.8% to 34.8% among those 65+, <=44, and 45-64, respectively. 15-year RSR increased from 14.5% to 22.0%, 24.9% to 44.1%, and 18.3% to 29.6% among those 65+, <=44, and 45-64, respectively. Conclusion: Despite improvements in long-term survival of lung cancer during 2000-2008, survival is much reduced in the elderly compared to younger patients, even when adjusting for other causes of death.

## NEIGHBORHOOD PSYCHOSOCIAL HAZARDS AND FUNCTIONAL IMPAIRMENT: THE BALTIMORE MEMORY STUDY

A. Kress, T. Glass, B.S. Schwartz, *Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland*

Population aging will produce an epidemic of functional disability this century in the US and worldwide. The identification of modifiable risk factors for functional limitations is essential given the increasing number of older adults. This study examined the association between neighborhood psychosocial hazards (NPH) and functional impairment in the Baltimore Memory Study (BMS), a cohort of 1140 community-dwelling adults aged 50-70 years from 65 contiguous neighborhoods in Baltimore, MD. Data collected during the baseline visit, 2001-2002, were used to evaluate the hypothesis that residents of neighborhoods high in psychosocial hazards would have increased odds of functional limitations. Functional impairment was measured with a standard index of ability to perform instrumental activities of daily living (IADL). Multilevel logistic regression models were used to evaluate neighborhood and individual risk factors while taking account of the clustering of persons within neighborhoods. Eleven percent of the cohort reported 1 or more IADL limitations at baseline. The prevalence of disability increased with increasing NPH from 4.7% among residents of neighborhoods in the lowest NPH quartile to 17% among residents of neighborhoods in the highest quartile of NPH. After adjusting for individual-level confounders, NPH was associated with functional impairment. Residence in a neighborhood in the highest quartile of NPH was associated with a 2-fold increased odds of IADL disability after controlling for individual-level risk factors. Residential neighborhoods represent an understudied and potentially important target of interventions that may play a role in late-life disability risk.

## PREVALENCE OF CHRONIC HEALTH CONDITIONS IN THE US SENIORS: A POPULATION-BASED STUDY

J. Finkelstein, E. Cha, *Johns Hopkins University, Baltimore, Maryland*

**Background:** Due to increased life expectancy, seniors are the fastest growing segment of the population. Seniors often suffer from a wide range of chronic conditions however limited data exist on the population-based prevalence of chronic conditions in the US seniors. **Methods:** Based on the National Health Interview Survey (NHIS) for the year 2010, the distribution of chronic conditions and morbidity was analyzed. Morbidity included emergency room (ER) visits and number of sick days in bed. The results were stratified for each condition by gender and race. Each disease was defined by the following question: 'Have you ever been told by a doctor or other health professional that you had \_\_\_\_?' Subjects who answered "Yes" to these questions were included, and those who "Refused" or answered "Not ascertained" or "Don't know" were excluded from the analyses. **Results:** The Sample Adult File from the year 2010 consisted of 5,450 subjects who were 65 or older. The conditions with highest prevalence in this population were: hypertension (61.7%), arthritis (51.3%), heart diseases (30.0%), cancer (23.5%), diabetes (23.5%), lung disease (17.2%), ulcer (10.3%), stroke (8.2%), and kidney disease (4.0%). Common comorbid conditions included: hypertension and diabetes (18.6%); hypertension and heart diseases (15.8%); hypertension and stroke (6.4%); and kidney disease (KD) and hypertension (3.3%). The highest number of ER visits and sick days in bed were observed in subjects with KD. During the past 12 months, 36.3% of subjects with KD visited ER 1-3 times and 8.6% visited more than 3 times. Patients with KD spent 26.5 days in bed during the past year compared to 14.1 days for heart diseases and 7.6 days for hypertension. Among the KD patients, males spent about 4 more days in bed than females, and the Hispanics visited ER most frequently than White, African Americans and Asians. **Conclusion:** Chronic conditions are highly preva-

lent in the US seniors. Seniors with chronic kidney disease demonstrated the highest morbidity.

## PREVALENCE AND PATTERNS OF MULTIMORBIDITY IN THE ONTARIO HOME CARE SYSTEM

J.J. Armstrong, M. Zhu, J. Hirdes, P. Stolee, *Health Studies and Gerontology, University of Waterloo, Waterloo, Ontario, Canada*

Driven by the high prevalence of multiple chronic diseases, the aging population, and the rise of health care costs, there is a mounting interest in the study of multimorbidity. Multimorbidity is the coexistence of multiple chronic diseases and has been shown to be associated with negative health outcomes and increased health care service utilization. The prevalence of multimorbidity has been reported to range between 55 to 98% yet little research has focused on developing our understanding of concurrent multiple chronic diseases in aging bodies and the resulting common patterns. With clinical and administrative data growing rapidly through the everyday use of information systems, investigations into frequent patterns of chronic diseases can be conducted through the application of novel data mining techniques. Association rule mining (ARM) can be applied to health information from older adults to discover the prevalence of multimorbidity and the most common patterns of chronic diseases within an aging patient population. **METHODS:** ARM was performed using the *arules* package in R on clinical assessment data from long-stay (>60 days) homecare clients in Ontario using the provincially mandated RAI-HC data system (N=1.6 million; year range = 2005-2010). **RESULTS:** The prevalence of multimorbidity (2 or more concurrent diseases) for those over the age of 65 was 86%. The ARM analysis resulted in identifying the top 10 combinations of chronic diseases. **CONCLUSION:** Our findings illustrate that multimorbidity is prevalent in the Ontario home care population and that common patterns of chronic diseases can be identified through the application of novel quantitative techniques.

## TWO MEASURES OF CHANGE IN SELF-RATED HEALTH AND THEIR PREDICTIVE VALUE FOR MORTALITY IN OLDER ADULTS

H. Galenkamp<sup>1</sup>, A.W. Braam<sup>2,1</sup>, M. Huisman<sup>1,3</sup>, D.J. Deeg<sup>1</sup>, *1. VU University Medical Center, Amsterdam, Netherlands, 2. Altrecht Mental Health Care, Utrecht, Netherlands, 3. VU University, Amsterdam, Netherlands*

**Introduction:** Studies have shown improved predictive value of self-rated health (SRH) for mortality after taking into account the dynamics of SRH. A prospective change measure of SRH (i.e. the difference between subsequent waves) is relatively expensive and may not take into account possible response shifts between waves. Therefore, the current study examines whether it is preferable to use a retrospective change measure (i.e. based on a then-test). **Methods:** Data come from two waves of the Longitudinal Aging Study Amsterdam (T1: 2001-2003 and T2: 2005-2006, N=1894). Self-rated health was assessed at T2 and mortality was followed until September 1st, 2011. SRH change between T1 and T2 was defined as prospective change; the difference between SRH measured with the then-test at T2 (asking for a renewed judgement of one's health at T1) and SRH at T2 as retrospective change. Mortality was predicted using Cox Proportional Hazards analyses. **Results:** Having poor SRH at T2 (adjusted OR=2.72) and prospectively declined SRH (adjusted OR=1.38) significantly predicted five-year mortality in the total sample. Further analysis revealed that prospectively declined SRH was associated with higher mortality risk only in respondents with good health (no depression, good SRH, few diseases or functional limitations), but not in those with poorer health. **Discussion:** This study confirmed that taking into account changes in SRH may add to the predictive value of baseline SRH for mortality in older

adults; in particular declined SRH in otherwise healthy subgroups was associated with higher mortality risk. Contrary to our hypothesis, the prospective measure performed better than the retrospective measure of change in SRH.

#### **INEQUALITY IN OSTEOPOROSIS DRUG TREATMENT IN SWEDEN – A NATIONWIDE STUDY OF OVER 600,000 MEN AND WOMEN AGED 75 TO 89 YEARS OLD**

J.W. Wastesson<sup>1</sup>, G. Ringbäck Weitoft<sup>2</sup>, M.G. Parker<sup>1</sup>, K. Johnell<sup>1</sup>, *1. Aging Research Center, Karolinska Institutet & Stockholm University, Stockholm, Sweden, 2. National Board of Health and Welfare, Stockholm, Sweden*

Osteoporosis and osteoporotic fractures are major geriatric public health problems. Drug treatment for osteoporosis has been found to be effective for fracture prevention. However, there are indications that osteoporosis drug treatment is unequally distributed in the population. We aimed to investigate educational differences in osteoporosis drug treatment in Swedish men and women aged 75-89 year old. By record-linkage of The Swedish Prescribed Drug Register, The Swedish Patient Register and The Swedish Education Register, we obtained information on filling of prescriptions for osteoporosis drugs (bisphosphonates, calcium/vitamin D combinations and selective estrogen receptor modulators (SERMs)) from July to October 2005, osteoporotic fractures from 1998 to 2004 and educational level for 645,429 people aged 75-89 years. Higher education was associated with use of osteoporosis drugs in both men and women, after adjustment for age, osteoporotic fractures and number of other drugs (used as a proxy for overall co-morbidity). Among those who had sustained a fracture (n=57,613), educational differences in osteoporosis drug treatment were larger for women than for men. Further, men were less likely to receive osteoporosis drug treatment after fractures. In Sweden, a country with presumably equal access to health care, the uptake of osteoporosis drug therapy seems to be unequally distributed in the elderly population.

#### **AN ACTIVE LIFESTYLE POSTPONES DEMENTIA ONSET BY MORE THAN ONE YEAR IN VERY OLD ADULTS**

H. Wang, S. Paillardborg, W. Xu, B. Winblad, L. Fratiglioni, *Karolinska Institutet, Stockholm, Sweden*

**OBJECTIVE:** To test the hypothesis that an active lifestyle delays age at dementia onset. **METHODS:** This study included 388 incident dementia cases (DSM-III-R criteria) that developed over a 9-year follow-up period among 1375 baseline dementia-free community dwellers with good cognitive function (MMSE>23) (mean age=81.2). An active lifestyle was defined as participation in mental, physical, or social activity. We used linear regression models to estimate influence of baseline active lifestyle on age at onset of incident dementia and general linear models to estimate mean age at dementia onset. **RESULTS:** Age at onset of dementia was significantly older in persons who had higher levels of participation in mental, physical, or social activity ( $\beta$ : 0.18, 0.29 and 0.23 respectively,  $p < 0.001$  for all the activities) independent of education, medical condition, functional status, and other confounders. When the three types of activities were integrated into an index, we found that the broader the spectrum of participation in the activities, the later the onset of disease ( $\beta=0.93$ ,  $p=0.01$  for participating in 2 activities, and  $\beta=1.42$ ,  $p<0.001$  for 3 activities). There were 17 months difference in mean age at dementia onset between the inactive group and the most active group. **CONCLUSION:** An active lifestyle operates as a protective factor for dementia by delaying the clinical onset of the disease. These findings highlight the relevance of encouraging old adults to have active lifestyles, which could have a great impact on public health.

## **SESSION 735 (POSTER)**

### **FALLS AND FALL PREVENTION**

#### **THE IMPACT OF APPLYING A SUSTAINABILITY MODEL TO FALL GUIDELINE IMPLEMENTATION: A LONGITUDINAL STUDY**

J. Ploeg<sup>1</sup>, S. Ireland<sup>1</sup>, K. Cziraki<sup>2</sup>, B. Davies<sup>3</sup>, K. Higuchi<sup>3</sup>, M. Murray<sup>3</sup>, N. Fram<sup>1</sup>, H. Kirkpatrick<sup>1</sup>, *1. School of Nursing, McMaster University, Hamilton, Ontario, Canada, 2. Grand River Hospital, Cambridge, Ontario, Canada, 3. University of Ottawa, Ottawa, Ontario, Canada*

**Background:** The challenges in reducing falls rates and serious falls in acute care settings are well known. The challenges of sustaining the implementation of practice guidelines such as falls prevention are also acknowledged. The purpose of this study was to examine the impact of an implementation process guided by the National Health Services Sustainability Model to support sustainability of a falls prevention practice guideline in acute care community hospitals. **Methods:** A longitudinal mixed methods study was conducted in three acute care hospitals in Ontario, Canada. Quantitative data on number of falls and serious injurious falls were collected quarterly over two years pre and post guideline implementation. Qualitative data on staff perceptions about facilitators and barriers to sustaining the falls guideline were collected using 22 in-depth face-to-face individual interviews and 14 focus groups. A total of 82 participants included administrators, managers, clinical leaders, point of care providers and support staff and volunteers. **Results:** At the three study sites, overall mean quarterly fall rates per 1000 patient days were reduced by 3% and the number of quarterly serious injurious falls was reduced by 26%. The reduction in serious injurious falls produced an estimated annual savings of \$73,668 per site. Qualitative data analysis revealed that sustainability factors such as leadership, processes of care and organizational factors acted as facilitators or barriers to sustained guideline use. **Conclusion:** Findings suggest that the application of a sustainability model to the implementation of a falls prevention practice guideline may have value in impacting falls related outcomes.

#### **PSYCHOLOGICAL IMPAIRMENTS AS RISK FACTORS FOR FALLS**

M. Davalos-Bichara, J.P. Carey, Y. Agrawal, *Johns Hopkins University School of Medicine, Baltimore, Maryland*

**Background** Fear of falling has been associated with fall risk; however, little is known about the genesis or pathologic underpinning of this psychological impairment. Our objective is to determine how psychological factors such as fear of falling, depression, and executive function impairment play a role in influencing fall risk. We aim to determine if these psychological measures reflect objective physical deficits that increase fall risk or if they are independent risk factors for falls. **Methods** Community-dwelling participants age  $\geq 70$  years of age gave demographic data, a clinical history, physical activity level and history of falls. Fear of falling was measured with the Falls Efficacy Scale-International (FES-I), depression with the 15-item Geriatric Depression Scale (GDS-15), and executive function with the Trail Making Test (TMT). Physical exam included comprehensive vision, balance and gait (including inner ear balance or vestibular) testing, and sensorimotor testing (lower extremity sensation with 10-g monofilament, and grip strength with dynamometer). **Results** Mean FES-I score was 5.3, indicating high fear-of-falling, and GDS-15 was 10.5 indicating severe depression. High fear-of-falling was significantly associated with a greater risk of depression ( $p < 0.01$ ). Associations between physical measures (balance function, visual acuity, sensorimotor function) and FES-I, GDS-15 and TMT scores will be assessed in bivariate and multivariate analyses. The role of physical activity as a mediating variable between psychological impairment and fall risk will be explored. **Conclusions** Psychological



impairments may be important contributors to fall risk that need to be addressed in fall risk reduction interventions.

### ASSESSING EFFECTIVENESS OF EXERGAMES ON FALL PREVENTION IN ELDERLY ADULTS IN LOS ANGELES COUNTY PUBLIC HOUSING SITES

J. Ma, *UCLA, Los Angeles, California*

Beginning in January 2012, UCLA students initiated a fall prevention program at public housing sites of the Los Angeles County Community Development Commission. The Palms Apartments in West Hollywood have 127 housing sites, with over 80% of residents over the age of 60. 65% of the residents are Russian speaking, 29% are English speaking, and 6% are Spanish speaking. The Fall Prevention curriculum, based on CDC and NCOA materials, is broken down into three sections: 1) Medical Assessment of Fall Risk, 2) Strengthening Exercises, 3) Home Modifications to Reduce Fall Risk. Following the seminar, residents are invited to participate in Xbox Kinect Exergames. Among older adults, exercise adherence is perceived as a challenge, yet video-game playing is increasingly popular among this group. The Microsoft Xbox 360 Kinect is an Exergaming system that utilizes infrared real-time depth sensing cameras and skeletal tracking, such that it does not require any controllers to use. It has been suggested that Kinect participation can enhance physical and cognitive abilities of older adults. The goal of the intervention is to reduce fall risk and to increase balance confidence in at risk elderly. The intervention is evaluated based on pre and post program surveys with both qualitative and quantitative assessments. This study measures whether Exergames are a viable tool to encourage older adults to engage in physical activity. Additionally, it assesses whether regular participation in Exergames is an effective supplement to fall prevention presentations in increasing balance confidence.

### CLINICAL AND BUSINESS IMPLICATIONS OF A FALL SCREENING AND EXERCISE PROGRAM IN ASSISTED LIVING

G. Sloves, *Fox Rehabilitation, Cherry Hill, New Jersey*

Falls are a major health problem in the elderly community, increasing the risk of mortality, morbidity, disability and frailty as well as increasing medical costs. The purpose of this novel evidence-based program is to: provide comprehensive fall risk assessments and progressive group exercise classes to reduce the incidence of falls in assisted living residents; provide independent seniors residing in the community with no-cost progressive exercise classes; provide assisted living corporations with showcase programming to promote facility as a community resource center. All residents in 20 assisted living communities (2,000+ residents, ages 55 - 100 years) participated in a fall risk assessment, upon move into community, quarterly, at functional decline or post fall. Assessment includes fall history, strength testing (30 Sec Chair Stand), gait testing (Timed Up and Go) and balance testing (Functional Reach). 1700 high fall risk residents received an interdisciplinary improvement plan including physician/nurse system review, medication review, occupational, physical, or speech therapy, environmental hazards assessment, caregiver education, change in toileting routine, or use of DME. 300 low to moderate fall risk residents participated in customized, 12 week dynamic and progressive group exercise classes, designed by physical therapists and lead by exercise physiologists, 2x/wk for 60 minutes per session. This innovative collaborative project resulted in fall reductions up to 43% in one year. Resident impairments and function also significantly improved: Sit-Stand by 2.6 repetitions, TUG by 3.6 seconds, FR by 1.6 inches. Independent community seniors also attended exercise classes, thus increasing the viability of the facility as a community resource center for seniors.

### ZOLPIDEM USE AND RISK OF FALLS IN OLDER MEN

S. Diem<sup>1</sup>, S.K. Ewing<sup>2</sup>, K.L. Stone<sup>3</sup>, S. Ancoli-Israel<sup>4</sup>, S. Redline<sup>5</sup>, K. Ensrud<sup>1,6</sup>, 1. *University of Minnesota, Minneapolis, Minnesota*, 2. *University of California, San Francisco, California*, 3. *California Pacific Medical Center, San Francisco, California*, 4. *University of California, San Diego, California*, 5. *Brigham and Women's Hospital, Boston, Massachusetts*, 6. *Veterans Affairs Medical Center, Minneapolis, Minnesota*

Limited data is available about the safety of zolpidem in older patients, in particular regarding risk of adverse outcomes including falls and fractures. To test the hypothesis that zolpidem use is associated with increased risk of falling, we compared risk of any ( $\geq 1$ ) and recurrent ( $\geq 2$ ) falls in zolpidem users vs. non-users in the MrOS study, a prospective cohort study of community dwelling men  $\geq 65$  years old. Between 2007-09, 4471 men (mean age 79.5 $\pm$ 5.3 yr) attended a clinic visit and completed a medication inventory; of these, 197 men taking benzodiazepines were excluded from the analyses. Of the remaining 4274 men, 81 reported zolpidem use in the previous 30 days. During the subsequent 1 year follow-up period, men were contacted every 4 months about falls. In age-adjusted models, zolpidem use was associated with increased risk of 1+ [RR 1.47 (1.16, 1.87)] and 2+ [RR 1.45 (0.99, 2.12)] falls. Further adjusting for health status, IADL impairment, walk speed, and Geriatric Depression Scale (GDS) had little effect on 1+ falls [RR 1.41 (1.09, 1.83)], but 2+ falls was no longer statistically significant [RR 1.37 (0.89, 2.11)], likely due to low power. Because prior history of falling is a strong predictor of subsequent falls, we also performed analyses in which we excluded men with a history of falling in the previous year; results were similar in these analyses. Future RCTs evaluating efficacy of non-anxiolytic, non-benzodiazepine sedative hypnotics in treating insomnia in older adults should include incident falls as a safety endpoint.

### THE TEMPORAL AND SPATIAL NATURE OF FALLS IN ACUTE MENTAL HEALTH SETTINGS IN THE UNITED KINGDOM

C. Victor<sup>1</sup>, C. Simpson<sup>2</sup>, V. Narayanan<sup>3</sup>, A. Dickinson<sup>2</sup>, C. Griffiths<sup>3</sup>, D. Humphrey<sup>3</sup>, 1. *Brunel University, Uxbridge, United Kingdom*, 2. *University of Hertfordshire, Hatfield, United Kingdom*, 3. *Oxford Health NHS Foundation Trust, Oxford, United Kingdom*

Introduction Falls are the most commonly reported patient-safety incident in mental health settings for older people with approximately 36,000 falls reported from these settings per year. Risk of falling is exacerbated by mental health problems, such as impaired mental status due to dementia and depression, and their treatments. However, we have very little understanding of either the context or best way to prevent falls in these settings. This paper will present phase 1 findings from a mixed-methods exploratory case study. Methods Methods included retrospective analysis of reported falls for a 12 month period, non-participatory observation (300+ hours), focus-groups with staff (n=5) and interviews with senior managers (n=6). Findings We will use the data to explore the temporal and spatial nature of falls within 5 acute mental health settings. We found falls were not evenly distributed across the course of the day, with peaks occurring in the morning, and early afternoon. Staff reflections on this data during focus group discussions, and our observations of the temporally-determined flow of activity and use of space by staff, patients and visitors to the ward have enabled us to understand some of the patterns and possible factors that contribute to falls in these settings. Conclusions Use of routinely collected data, enhanced by staff reflection and observation can aid understanding of factors contributing to falls in acute mental health settings. Data of this nature could be used by organisations seeking to manage risk, improve patient safety, and develop appropriate interventions.

## AN ANALYTICAL REVIEW OF LOCAL AND NATIONAL FALL POLICY AND GUIDELINES IN ENGLAND AND WALES

C. Victor<sup>1</sup>, V. Narayanan<sup>3</sup>, C. Simpson<sup>2</sup>, A. Dickinson<sup>2</sup>, C. Griffiths<sup>3</sup>, D. Humphrey<sup>3</sup>, 1. Brunel University, Uxbridge, United Kingdom, 2. University of Hertfordshire, Hatfield, United Kingdom, 3. Oxford Health NHS Foundation Trust, Oxford, United Kingdom

**Background** There is an urgent need to improve the care of older people at risk of or who experience falls in mental health settings. Falls are the most frequently reported patient safety incident. NICE Guidelines recommends the use of multidisciplinary fall risk assessment during individualised treatment and in prevention care plans for older people at risk of falls (NICE, 2004). This poster outlines work underway to explore the policy guidance issued by NHS Mental Health Trusts in England and Health Boards in Wales. **Methods** We requested fall policies and other relevant documentation from NHS mental health trusts in England (56) and healthcare boards in Wales (6). Policies are being subjected to a quantitative content analysis to explore guidance given to clinical staff and managers. **Findings** We obtained falls policies from 42 mental health trusts in England, and 2 from healthcare boards in Wales. 30 policies were publically available on the internet. 1 Trust told us they did not have a fall-prevention strategy. 1 was currently reviewing their policy. Analysis of fall risk assessment tools show variation in the number of risk-variables included. Few Trusts used validated tools such as STRATIFY, FRASE, MORSE, and MHOA, others used customised falls risk assessment tools. **Conclusions** A wide variety of screening and assessment tools are in use, however, the most commonly used are those developed by individual Trusts, or which focus solely on the external environment, with no screening/assessment of individual patients. Use of invalidated tools raises questions of reliability and effectiveness.

## RELATIONSHIPS BETWEEN SELF-ESTIMATION OF STEPPING-OVER ABILITY AND FALLS IN OLDER ADULTS

R. Sakurai<sup>1,2</sup>, Y. Fujiwara<sup>1</sup>, M. Ishihara<sup>2</sup>, K. Imanaka<sup>2</sup>, 1. Tokyo Metropolitan Institute of Gerontology, Itabashiku, Tokyo, Japan, 2. Tokyo Metropolitan University, Tokyo, Japan

In old adults, tripping over an obstacle during a walk is a major cause of falls. Making a trip during a walk may result from possible inaccurate self-estimation of likely age-related impairment in stepping-over ability. We examined the accuracy of self-estimation of stepping-over ability using a stepping-over test (SOT) in old adults (343 young-old and 151 old-old adults, with 71 young adults as a control group), with an inquiry about their experience of falls for a year prior to this study. Participants were assigned to either faller or non-faller group. In the SOT, a horizontal bar was presented at 7 m distance in front of the participants and the height of the bar was continuously manipulated in a descending/ascending direction. The participants then verbally reported their estimation of maximum height (estimated height, EH) of the bar at which they believed to successfully clear. They subsequently performed trials of SOT motor action initially at the EH until their highest clearable bar height (actual height, AH) was determined. Our results showed that 39 young-old (11.4%) and 49 old-old adults (32.5%) failed to clear the bar at the EH, whereas all the young adults succeeded. This indicated that old adults tended to overestimate the stepping over ability more than did the young adults. Furthermore, the occurrence rate of overestimation was almost twice larger for the fallers (28%) than that for the non-fallers (16%,  $P = 0.017$ ), suggesting that self-overestimation of stepping over ability appeared with aging and may have increased falls.

## SYSTEMIC CAUSES OF FALLS IN STROKE SURVIVORS

M. Madady<sup>1</sup>, A.A. Zecevic<sup>1</sup>, A. Salmoni<sup>1</sup>, B. Young<sup>2</sup>, E. Britt<sup>3</sup>, 1. University of Western Ontario, London, Ontario, Canada, 2. London Health Sciences Centre, London, Ontario, Canada, 3. St. Joseph's Health Care, London, Ontario, Canada

According to WHO 15 million people worldwide and almost a million North Americans suffer a stroke every year. While information

about the incidence and risk factors of falling among stroke survivors is available, considerably less is known about the actual causes of falls and the circumstances surrounding these adverse events. The purpose of this project was to identify systemic causes of falls in stroke survivors as they transition from acute care to rehabilitation hospital, and to community or long-term care. A total of 30 stroke survivors were followed-up for six months post stroke. Their first fall at each stage of the care continuum was investigated using Systemic Falls Investigative Method (SFIM). Comprehensive data were collected through multiple interviews, document reviews, environmental scans, re-creation of events and was entered into the SFIM Database. The database produced falls reports that contained information about the faller, the fall, a descriptive summary of the occurrence, chronological sequence of events, a summary table of acts/decisions and contributing factors, and conclusions. The guiding framework in data reduction and analysis was the Swiss Cheese Model of Accident Causation. Summary tables from all falls reports were organized using NVIVO and coded to identify dominant themes. Results indicate that person-related factors combine with behavioural, situational and broader organizational and healthcare system influences as contributors to falls. When considering falls prevention programs in post-stroke rehabilitation and community re-integration, it is important to address stroke-specific causes, but also challenge system-wide contributors that affect stroke survivor's safety.

## FACTORS RELATED TO FALLS AND FRACTURES IN A LARGE SAMPLE OF ELDERLY PEOPLE FROM SOUTHERN BRAZIL

I.C. Caberlon<sup>1,2</sup>, A.G. Bósi<sup>1</sup>, 1. Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, RS, Brazil, 2. ULBRA, Canoas, RS, Brazil

Falls and fractures in the elderly represent a significant public-health problem. The present study aimed to investigate falls and fractures in the elderly (60 years and over) residents in the State of Rio Grande do Sul, Brazil. We collected information from charts of elderly patients presenting falls from four units of Urgency and Emergency. The final sample of 6,556 elderly assisted by falls, 4,664(71%) women and 1,892(29%) men, 26.8% occurred in winter followed by autumn with 24.5%. More than half of visits happened up to 6 hours after the fall. Fracture were more frequent on women, 31% of falls had fractures, 32% of the women and 28% of the men ( $p < 0.0001$ ). Average age of fractured people was significantly higher than people who did not fractured. Fractures of the upper-limbs were the most frequently recorded with 978 fractures, followed by fractures of the lower limbs with 620 fractures. Winter had the highest number of confirmed fractures within 34% of falls ( $p = 0.0002$ ), while the lowest percentage was the spring within 28% of falls. Age, sex, and winter were the significant risk factors for falls. A person one year older is 2.2% more likely to fracture when falling. The chances of women fracture after a fall are 15% higher than men the same age. This survey results point to the need for further epidemiological and clinical studies that can clarify issues related to other approaches to risk factors for falls and fractures.

## MULTIDISCIPLINARY FALLS RISK MANAGEMENT: TRAINING PROGRAMS TO TRANSLATE RESEARCH TO PRACTICE

T. Shubert, C.L. Clarke, E. Roberts, E. Schneider, J. Busby-Whitehead, Center for Aging and Health, UNC Chapel Hill, Chapel Hill, North Carolina

Falls risk management practices have been developed, tested and proven effective in research settings, however translation from research to clinical practice has been limited. This pilot study developed and tested a team-based curriculum, based on the tenants of implementation science, to facilitate practice change. The curriculum was taught over two sessions to facilities and agencies representing the continuum of care (wellness centers, continuing care retirement communities, home

health agencies, hospital-based systems). Each participating facility sent a minimum of three representatives from different disciplines to attend. Session 1 reviewed risk factors, screening and assessment tools and interventions. During the session, dedicated time was spent assisting each team to assess their own practices and to identify gaps in falls risk management. At the end of session 1 each team developed an implementation plan with a timeline for execution; Session 2 introduced outcome measures and then participants presented the results of their implementation plan. Forty participants from 7 different facilities have completed the curriculum. Baseline and post-test measures show significant changes in knowledge of falls risk ( $p < .05$ ). A follow-up implementation survey at 6 weeks collected qualitative data on the implementation process. To date five teams have reported partial or full implementation of at least one evidence-based falls risk management practice including integrating falls risk screening into annual medical visits and wellness screenings, implementing evidence-based exercises programs for home exercises and in restorative care, medication management programs, patient education programs, and developing communication protocols between all disciplines to improve risk management.

### **MANAGING FALLS IN THE OLDER ADULT POPULATION: OUTCOMES FROM AN INTERPROFESSIONAL FALLS MANAGEMENT COURSE**

J. Dauenhauer, S. Glose, D. Fromm Faria, K. Heffernan, *College at Brockport, Brockport, New York*

This presentation will describe the outcomes from an interprofessional evidence-based falls management course for undergraduate and graduate students. The 3-credit elective course was developed by a gerontological social work and nursing faculty member in partnership with a community-based case management organization that serves older adults. Creation of the course was in response to a mandate by the Health Resources and Services Administration, funding source for federal Geriatric Education Centers, to train interprofessional students using an evidence-based approach. A total of twelve students (6 in summer 2011 and 6 in summer 2012) completed the course which included 20 hours of classroom training followed by delivery of the Matter of Balance program to 40 community-dwelling older adults at four different locations. Presenters will describe results including 1) student outcomes from a pre/post falls knowledge test, 2) qualitative data from student evaluations, and 3) Findings from a falls risk assessment administered by students to community-dwelling older adult participants. Opportunities and challenges associated with course delivery will also be described.

### **PSYCHOMETRIC TESTING OF FALLS AND FALL-RELATED INJURIES QUESTIONNAIRES**

J. Kehinde, G.A. Pepper, *University of Utah College of Nursing, Salt Lake City, Utah*

Background: Although instruments identifying individual-related risk factors such as motor impairment, behavioral disturbances, and inability to discern or avoid hazards are frequently used, older adults living in NHs continue to fall. Clinicians need a rigorously developed and tested instrument to identify the impact of organizational factors such as quality monitoring, adequate staffing, NH policies, environmental and process-related issues on fall rates for appropriate interventions. Purpose: The purpose of this study is to further validate the psychometric properties of the previously piloted FFIQ in a larger sample of DONs. Methods: Using a correlational design, a survey of DONs will be conducted in 300 eligible NHs in California, Texas, and Utah using proportionate stratified (by NH characteristics) sampling. The FFIQ, a theory-driven instrument that measures the perceptions of DONs about the impact of quality monitoring, adequate staffing, NHs policies, NH environment, and process issues on falls will be used for this study. Descriptive statistics, exploratory factor analyses, test-retest and internal consistency reliability analyses will be conducted. Results: We expect

measures of the FFIQ to be efficient (require less than 20 minutes to complete) and to demonstrate acceptable-to-high reliability (test-retest and internal consistency) and construct validity. Implications: The theory-driven FFIQ would provide a valid measure of the impact of staffing, clinical and administrative policies, quality monitoring, staff education, process-related and environmental issues on NH falls for targeted interventions.

### **TREATMENT EFFECTS OF MULTI-COMPONENT FALL PREVENTION PROGRAMS FOR COMMUNITY-DWELLING OLDER ADULTS**

P. Chang, *School of Occupational Therapy, Texas Woman's University, Houston, Texas*

Background: Falls are the leading cause of acute hospitalization among community-dwelling older adults in the United States, especially those 75 years of age and older. As a result of falls, the elderly experience various degrees of functional decline which requires extensive medical care. Previous studies have examined treatment effects from different fall prevention strategies, however, it is not clear which multi-component approach is more effective than other approaches in preventing falls. Methods: A pilot study was conducted using pre- and post-test comparison design. Participants were older adults 75 years of age or older who reside in the community and have had at least one fall in the past year. After initial screening by the MMSE (score  $\geq 24$ ), participants met once a week, 50 minutes each session for 6 weeks to perform exercise programs followed by safety education. The outcome measurements included function, balance, walking endurance, and health-related quality of life. Results: 6 participants from 2 senior centers completed this pilot study. The mean age of these 6 participants (5 female and 1 male) is 80.8 ( $\pm 5.6$ ), and the mean MMSE score is 27 ( $\pm 1.8$ ). Preliminary data showed significant improvement in standing balance (Berg Balance Scale changed from 37.25 to 47.25) and walking endurance (6-minute Walk distance changed from 699 ft to 959 ft). These 6 participants also demonstrated some improvement in functional independence and psychological function. Conclusions: Strengthening and balance exercise programs have significant treatment effects on improving balance and walking endurance for older adults aged 75 and older.

### **FALLS RISK MANAGEMENT AND ELECTRONIC MEDICAL RECORDS: INNOVATION TO SUPPORT PRACTICE CHANGE**

L. Schrodt<sup>3</sup>, R. Weaver<sup>2</sup>, C.L. Clarke<sup>1</sup>, R. McWilliams<sup>2</sup>, J. Busby-Whitehead<sup>1</sup>, T. Shubert<sup>1</sup>, *1. Center for Aging and Health, UNC Chapel Hill, Chapel Hill, North Carolina, 2. Mountain Area Health Education Center, Asheville, North Carolina, 3. Western North Carolina University, Cullowhee, North Carolina*

In the western region of North Carolina 9 of 16 counties have 20% or more of the population over age 65. Older adult falls are the leading reason for emergency room visits and accidental deaths in this region. A survey of primary care physician practices indicated evidence-based falls risk management practices were not a routine part of older adult office visits. To increase the reach of clinical practice guidelines to prevent falls, a project was conducted to integrate falls risk screening, assessment, and intervention fields into the practice's electronic medical record (EMR). To enhance adoption, the EMR fields were created per Medicare's Physician Quality Reporting System, using falls risk assessment and plan of care as quality indicators. A brief training was created, and individual meetings with practice managers insured all staff and clinicians understood the new EMR fields. Eleven practices agreed to participate and five received the intervention. Baseline measures reveal that of the 5 practices serving 5000 Medicare patients, there was no consistent implementation of falls risk management practices amongst providers. After the EMR and training interventions, preliminary data support effective practice change, with  $> 80\%$  of Medicare patients screened and assessed for falls risk per EMR. Additional data from the

remaining pilot sites will be collected and analyzed to further assess the outcomes of this innovative, systems-based approach to increase the reach, effectiveness, adoption, implementation and maintenance of falls risk screening in a physician practice.

### **FALLING SHORT: RECRUITING ELDERLY INDIVIDUALS FOR A FALL STUDY**

S.R. Parasuraman, S. Rupcic, *Healthcare Innovation and Technology Lab, New York, New York*

Despite the importance of activity indicators in predicting the risk of falls in older adults, activity data on the elderly are limited. This may result from the recruitment and sampling methods of activity-related studies and fall observations in older adults. This article addresses recruitment and sampling methodology issues and draws attention to the gap in best practices left by previous literature. It leverages a systematic review of methods used to recruit elderly subjects for fall studies, highlighting the most effective recruitment strategies across several settings. These findings are further explored in light of the challenges faced by the researchers of one fall study in 2011, particularly in recruiting from the “sweet spot” of older adults at a sufficiently high risk of falling, yet with the requisite cognitive capacity to adhere to activity protocols. The analysis suggests several tactics for improving the recruitment of older adults for activity-related studies, including: recruiting from settings where community-dwelling older adults organize; utilizing short-term activity protocols to promote involvement among institutionalized elderly; establishing eligibility criteria that are not overly exclusive of those with lower cognitive functioning, mobility restrictions, and co-morbidities; employing direct mail recruitment methods to reach community-dwelling participants; and utilizing intermediaries to recruit institutionalized elderly.

## **SESSION 740 (POSTER)**

### **FAMILY CAREGIVING**

#### **WILLINGNESS TO ENROLL IN A RCT OF HAND & TUBE FEEDING IN INDIVIDUALS WITH DEMENTIA: CAREGIVER REPORTS**

E.J. Amella<sup>1</sup>, M. Madisetti<sup>1</sup>, C.M. Spencer<sup>1</sup>, V.L. Durkalski<sup>1</sup>, M.B. Aselage<sup>2</sup>, J. Zapka<sup>1</sup>, *1. College of Nursing, Medical University of South Carolina, Charleston, South Carolina, 2. Duke University, Durham, North Carolina*

**Background:** Studies suggest that in individuals with late-stage dementia, percutaneous endoscopic gastrostomy (PEG) tubes are no better than hand feeding yet caregivers (CGs) are regularly asked to make this decision. **Purpose:** To determine feasibility of enrolling individuals with late-stage dementia (IWD) into an RCT of PEG vs. hand feeding. **Method:** As part of a feasibility study, CGs (n=24) of IWDs [mild (n=7), moderate (n=8), and severe (n=9)] either living in the community (n = 17) or institutionalized (n=7) were interviewed in person. **Findings:** Eight CGs would consider enrollment - 9 were “unsure”. Of all CGs, those with IWD in late-stage (n = 9) were most likely to consent (3 “yes”, 3 “unsure”). The group was diverse based on relationship, age, race and education. IWD quality of life and mealtime dysfunction were poorest among those with severe dementia, while CG burden was highest in moderate dementia. Among CG’s, 64% would “not” or would be “slightly” influenced by their physician’s recommendation; 72% reported awareness of data presented regarding feeding issues. Misconception of the research process was suggested: 64% believed their IWD would receive better care if enrolled; 68% either believed or were unsure if their IWD would be “placed” into a treatment arm that suited their health problems. **Conclusions:** CGs report willingness to enroll an IWD in this RCT, yet their provider’s recommendation was not reported as an influence. Timing of enrollment appears critical. Mis-

understanding of the research process and randomization creates challenges to informed consent.

### **GENDER SPECIFIC WEB-BASED EDUCATIONAL MODULES FOR CAREGIVERS OF PERSONS WITH ALZHEIMER’S DISEASE**

C.E. Gies<sup>1</sup>, L.L. Pierce<sup>1</sup>, V. Steiner<sup>1</sup>, D. Smolen<sup>1</sup>, S. Smith<sup>2</sup>, *1. College of Nursing, University of Toledo, Toledo, Ohio, 2. Wright State University, Dayton, Ohio*

Seventy percent of 5.3 million Americans with Alzheimer’s disease (AD) live at home, where family caregivers provide long term, complex care. Evidence in the literature suggests that men and women differ in how they approach and are affected by the experience of caregiving. Caregiver assessment can identify key problems specific to men and women. Cost effective, convenient Web-based Educational Modules (WBEMs) for AD caregivers could support caregivers and provide an efficient resource for healthcare providers in clinical settings. This evidence-based practice project, guided by Friedemann’s Framework and Stetler’s Model, identified gender differences in problems (incongruence) reported by caregivers of persons with AD. Stakeholders are persons with AD, their family caregivers and healthcare providers with Internet access. Gender specific WBEMs were developed to help caregivers cope with these problems. Four male and six female caregivers completed a web-based adaptation of the Carer’s Needs Assessment for Dementia instrument. Assessment results and evidence-based literature were compared to determine key gender differences in caregiving problems. Two male and two female WBEMs were then developed and evaluated for utility, feasibility and functionality by a second group of male (n=6) and female (n=6) caregivers using a Caregiver Evaluation Questionnaire. Both evaluator groups agreed that the WBEMs were well designed with clear, credible, informative content. Suggestions for larger font size and navigation directions will be incorporated in module revisions. WBEMs have potential to re-establish congruence/well-being for caregivers of persons with AD and be adapted for use by healthcare providers and caregivers of persons with other chronic illnesses.

### **FACTORS ASSOCIATED WITH QUALITY OF LIFE OF RURAL WOMEN CAREGIVERS OF PERSONS WITH ADVANCED CANCER**

W.D. Duggeby<sup>1</sup>, A. Williams<sup>2</sup>, H. O’Rourke<sup>1</sup>, S. Ghosh<sup>1</sup>, *1. Nursing, University of Alberta, Edmonton, Alberta, Canada, 2. McMaster University, Hamilton, Ontario, Canada*

**Research Aim;** To examine factors associated with health-related quality of life in rural women caregivers of persons with advanced cancer. **Sample:** 122 rural women, mean age 59.0 (SD=11.5) who had been caregiving on average 38 months (SD 77.3). **Study Design and Methods;** Correlation cross-sectional design was used. Six hundred surveys were mailed out through the Alberta and Saskatchewan Cancer Registry. Participants were asked to complete a demographic form, the Herth Hope Index (HHI), the General Self-Efficacy Scale (GSES), the Non Death Revised Grief Inventory (NDREGI) and the SF 12. **Data Analysis:** Variables significant at the p<0.10 level in the univariate analysis were entered in the multivariate generalized linear model to determine significant factors associated with health-related quality of life as measured by SF12. **Results:** The SF 12 mean physical health summary score was 43.3 (SD= 4.63) and the mean mental health summary score was 45.2 (SD 5.99). The factors associated with physical quality of life were self-efficacy (GSES) (p=0.003) and guilt (NDRGEI Subscale) (p=0.035). Self efficacy (GSES) was a significant factor for the SF12 mental health-related quality of life summary score (p=0.004). **Discussion/Conclusion:** Compared to United States population norms, study participants scored below the 25th percentile for physical health summary score and close to the 25th percentile for mental health summary scores. This suggests that they had poor reported physical and mental health. General

self efficacy (belief they can perform difficult tasks or cope with adversity) was a significant factor for both physical and mental health.

### **FAMILY CAREGIVING FOR OLDER ADULTS: THE ROLE OF RESOURCES IN MODERATING CAREGIVER OUTCOMES**

G. McGhan, R. BeLue, J. Penrod, *Penn State University, University Park, Pennsylvania*

**Purpose:** According to the National Alliance for Caregiving (2011), 65.7 million caregivers make up 29% of the United States adult population and are found in 31% of all the households. Caregiving can result in increased morbidity and mortality for the caregiver however; recent studies have shown positive outcomes such as improved well-being. Support for family caregivers is important, yet there is a shortage of strategies to assess caregivers' needs. The purpose of this study is to examine the relationship between resources in the caregiving role and their effects on caregiver strain and satisfaction. **Methods:** The Conservation of Resources model provides the theoretical framework and accounts for both the positive and negative outcomes of caregiving. Secondary analysis of data from the 2004 National Long-Term Care Survey, Informal Caregiver Supplement was completed using OLS Regression with moderation analysis (n=1471). **Results:** Our findings of greater demands in the caregiving role resulting in higher levels of caregiver strain ( $\beta = .470, p < .001$ ) are consistent with previous research. An interesting result from this study is resources in the form of family support reduces caregiver strain ( $\beta = -.251, p < .001$ ) and positively moderates the effect of caregiver demands on strain levels ( $\beta = -.107, p < .001$ ) whereas resources in the form of personal support has a stronger relationship with satisfaction ( $\beta = .164, p < .001$ ) than with strain ( $\beta = -.087, p < .005$ ). **Conclusions:** These findings support the need to assess caregivers' perceptions of their support systems so that interventions may be tailored to address their specific resource needs.

### **FACTOR ANALYSIS ON A RESPITE NEEDS QUESTIONNAIRE FOR KOREAN FAMILY CAREGIVERS TAKING CARE OF DEMENTIA PATIENTS**

M. Song, *nursing department, Hoseo university, Asan-si, Republic of Korea*

**PURPOSE** The purpose of this study was to identify the main factors among the respite needs of Korean family caregivers taking care of dementia patients in order to develop effective respite care programs. **METHODS** The data were collected from 180 family caregivers of dementia patients who expressed a willingness to participate in the study during March through May, 2009 in community health care centers through a newly developed 23-item questionnaire for measuring the respite needs of family caregivers taking care of dementia patients. Factor analysis was conducted to identify the main factors from the respite needs questionnaire. **RESULTS** The factors with respect to the respite needs of Korean family caregivers taking care of dementia patients were classified into 6, that is, needs concerning 1) knowledge improvement and education 2) diversion and relaxation, 3) using public support systems, 4) rest and physical health management, 5) economic support, and 6) family support. **CONCLUSION** To achieve the most effective respite care for family caregivers taking care of dementia patients, the needs concerning knowledge improvement and education, diversion and relaxation, using public support systems, rest and health management, economic support, and family support should be chiefly considered.

### **CAREGIVER HEALTH OUTCOMES BASED ON ACCESS TO HEALTH CARE PROVIDER FOR THEIR CARE RECIPIENT**

C. Fowler<sup>1</sup>, M. Walia<sup>2</sup>, *1. Nursing, Old Dominion University, Norfolk, Virginia, 2. Eastern Virginia Medical School, Norfolk, Virginia*

**PROBLEM:** Many home bound older individuals do not have access to a health care provider (HCP) despite suffering from multiple chronic health problems. Their health status often impacts the health of their

caregiver. **PURPOSE:** The purpose of this study is to compare the health outcomes for caregivers of home bound older individuals based on the care recipient's access to a HCP. **EBP QUESTIONS:** Is there a significant difference between the scores on the Short Form 36 tool for those caregivers of home bound older individuals that have access to a HCP for their care recipients compared to those that do not? What are the barriers to obtaining access to a HCP? **DESIGN:** Descriptive cross sectional case control study. **METHODS:** The SF36 health assessment tool was completed by 55 caregivers (34 with access to a HCP for their care recipient and 21 without access). They were also asked specific questions about barriers to obtaining services from a HCP. **OUTCOMES:** The study showed lower mental and physical component scores on the SF 36 for caregivers that did not have access to a HCP for their care recipient, at a statistically significant level (MCS 46.36 vs. 39.28,  $p=0.47$ /PCS 50.79 vs. 41.75,  $p=0.002$ ) Also, it showed two major barriers to obtaining access, difficult transfers and behaviors. **SIGNIFICANCE:** Care recipients' access to a HCP has a positive effect on the health outcomes of caregivers. Additional research could evaluate new ways of reaching caregivers and extend the reach of HCPs to older individuals and their caregivers.

### **FROM MARGINS TO THE CENTRE: CAREGIVING FOR THE FRAIL ELDERLY IN SINGAPORE**

C.J. Bing, *Care Integrated Division, Agency for Integrated Care, Singapore, Singapore, Singapore*

Caregiving in Singapore is increasing in complexity with the ageing population and growing life expectancy compounded with a rising prevalence of more complex chronic medical and mental conditions. Caregivers face the high possibility of caregiver burnout as they are expected to meet their loved one's probable needs along the entire trajectories of illnesses while not necessary receiving timely supports. Singapore's Ministry of Health set up Agency of Integrated Care (AIC) in 2009 as the national healthcare integrator of Singapore. The mission of AIC is to achieve the best health outcomes for our patients and caregivers through right siting of services and building a well-connected health and social care system. In response to the gaps and disintegrated system of caregiver services, AIC established a caregiver framework to empower caregivers through 3 main thrusts: the "Information", "Support" and "Instrumental Skills" (ISIS) pillars. These pillars aim to provide caregivers with easily accessible and navigated information, an available robust network of support mechanisms and the right set of competency skills in managing their loved one's care needs across the different health and social care signposting. From this poster, participants will be informed on the first round of initiatives rolled out by AIC through platforms like the Internet, caregiver skills training, transitional and respite care services, designed to achieve AIC's roadmap of providing caregivers with a wide range of adequate supports that spin from early diagnosis to home care

### **PREDICTORS OF MENTAL HEALTH IN FAMILY CAREGIVERS OF THAI ELDERLY**

S. Jaratsit<sup>1,2</sup>, C. Reynolds<sup>1</sup>, R. Phatchana<sup>1</sup>, H. Stohry<sup>1</sup>, *1. Institute for Population and Social Research, Nakhornpathom, Thailand, 2. Miami University, oxford, Ohio*

The issues of family caregivers for the older adults are increasing discussed in aging societies. In Asian cultures, family members are expected to provide care for older relatives. In Thailand, many people prefer to provide care for older relatives rather than sending them to a nursing home; the caregiving situation gives many adults an opportunity to bond with their parents or older family members. Despite these benefits, family caregivers often suffer from stress due to the multiple roles required of them. This quantitative study examines significant factors affecting the mental health of 308 primary family caregivers for older adults (60+ years) in Kanchanaburi, Thailand, and explores the magnitude of stress affecting the daily lives of family caregivers. Stress

is defined in terms of mental health, which is measured using the Thai Mental Health Indicator (TMHI-15) as developed by the Thai Ministry of Public Health. Using a logistic regression analysis, six significant factors were found to affect mental health of family caregivers: work status, caregiving assistance(?), duration of caregiving, amount of services, educational level, and caring coping. Results suggest that time consumption is an important factor influencing stress of family caregivers.

## SESSION 745 (POSTER)

### FRAILITY

#### DO PSYCHOSOCIAL FACTORS MODIFY THE EFFECTS OF FRAILITY ON FUNCTIONAL DECLINE AND MORTALITY?

E.O. Hoogendijk<sup>1</sup>, H. van Hout<sup>1</sup>, H. van der Horst<sup>1</sup>, D.J. Deeg<sup>2</sup>, M. Huisman<sup>2,3</sup>, 1. Department of General Practice & Elderly Care Medicine, EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, Netherlands, 2. Department of Epidemiology & Biostatistics, EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, Netherlands, 3. Department of Sociology, VU University Amsterdam, Amsterdam, Netherlands

The aim of this study was to investigate whether psychosocial factors modify associations between frailty and adverse outcomes. The study sample consisted of 1188 men and women aged 65 and over participating in the two most recent waves of the Longitudinal Aging Study Amsterdam (LASA). Frailty and psychosocial factors were assessed at T1 (2005/2006). The frailty indicator was based on the frailty definition of Strawbridge. Psychosocial factors included mastery, self-efficacy, personal network size and received emotional support. Adverse outcomes included functional decline and mortality assessed at T2 (2008/2009). Results of logistic regression analyses demonstrated that frail older adults had higher odds of both functional decline and mortality. Mastery was associated with mortality and self-efficacy was associated with functional decline. No statistically significant interaction effects between frailty and psychosocial factors were found. The results of this study showed that frailty and psychosocial factors are associated with functional decline and mortality. However, it seems that psychosocial resources do not buffer against adverse outcomes in frail older adults.

#### AN IDENTIFICATION AND CARE PROGRAM FOR FRAIL OLDER PEOPLE: EXPERIENCES OF OLDER PEOPLE AND PROFESSIONALS

J. Bindels<sup>1</sup>, K. Cox<sup>1,2</sup>, G. Widdershoven<sup>3</sup>, O. van Schayck<sup>1</sup>, T. Abma<sup>3</sup>, 1. CAPHRI Research School, Maastricht University, Maastricht, Netherlands, 2. Fontys University of Applied Sciences, Eindhoven, Netherlands, 3. Medical Humanities, VU University Medical Centre., Amsterdam, Netherlands

**BACKGROUND:** Frailty is one of the largest problems that older people face, and is a risk-factor for adverse health outcomes such as disability and even death. It can put a burden on society by higher health-expenditures due to more hospitalization and an increasing demand for long term-care. In three regions in the Netherlands, programs for community-dwelling frail older people are developed, which contain the identification of frailty in older people and home-visits performed by practice nurses. A better understanding of the experiences of those involved is needed to gain insights into the results of interventions for frail older people. **METHOD:** Data were collected over an 18 months period. In-depth interviews were conducted with older people (n=23) and practice nurses (n=12). Furthermore, two focus group interviews took place with practice nurses, one with general practitioners and one with physiotherapists and occupational therapists. All data were analyzed using a Grounded Theory approach. **RESULTS:** Analysis elucidated that many community-dwelling frail older people experience lone-

liness. Older people appreciate the interaction with the practice nurses and use this interaction to share their thoughts concerning every day life. Not all practice nurses feel equipped to manage problems on the social domain of aging. Furthermore, professionals perceived problems in facilitating care for reluctant frail older persons. **CONCLUSION:** Problems on the social domain should receive more attention in the care for community-dwelling frail older people as well as in the support and education for professionals.

### FRAILITY IN COMMUNITY-DWELLING OLDER MEXICANS

E. Arias Merino<sup>1</sup>, N.M. Mendoza-Ruvalcaba<sup>1</sup>, J. Cueva Contreras<sup>1</sup>, R. Meda Lara<sup>1</sup>, M.J. Arias-Merino<sup>1</sup>, G.G. Ortiz<sup>2</sup>, 1. Salud Pública, Universidad de Guadalajara, Zapopan, Jalisco, Mexico, 2. Instituto Mexicano del Seguro Social, CIBO., Guadalajara, Jalisco, Mexico

Frailty is a geriatric syndrome that places older adults at risk for adverse health outcomes such as functional impairments, falls, multiple medical co-morbidities, hospitalization, institutionalization, and death. Objective: To describe frailty status in community-dwelling older Mexicans. Design: Data were used from the Health, Wellbeing and Aging Study (SABE) in Jalisco COETCYJAL-UGD 252008891, SSJal) and, Colima, Mexico (CASOENAC, FONCICYT 94670). Participants were 2082 non-institutionalized Mexicans 749 (36%) men and 1332 (64%) women, of 60 years and older. Measurements: Frailty was defined as: Unintentional weight loss (>3 kg in the last year), Weakness (Grip string), Slow walking (Mobility), Self-reported-exhaustion (Depressive symptoms), and Low physical activity level (Basic Activities of Daily Living). Information about socio-demographic factors, cognitive function, health conditions, depressive symptoms, functional and nutritional status, was obtained through a comprehensive gerontological assessment. Results: A total of 309 (14.8%) were frail, 915 (43.9%) pre-frail. Both exhaustion (34.4%) and slowness in walking speed (34.4%) were the most common criteria that contributed to the condition of frailty status, followed by grip strength (20.3%), low activity (11.5%) and weight loss (8.6%). Also the factors of being female, low education, malnutrition, depression, IADL, hypertension, diabetes mellitus, heart, lung and cerebral vascular disease and arthritis are related. Falls, urinary and fecal incontinence are related as well. Conclusions: Our results of frailty are higher than in other studies. Longitudinal studies are needed to establish predictors.

#### HOME SWEET HOME EU AAL TRIAL: SELECTION OF CLINICAL INDICATORS FOR FRAIL OLDER ADULTS

A. O'Hanlon<sup>1</sup>, I. Saez<sup>2</sup>, M. Vandewoude<sup>3</sup>, W. Keijsers<sup>4</sup>, P. Squillace<sup>5</sup>, 1. Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland, 2. Badalona Serveis Assistencials, Spain, Badalona, Spain, 3. ZNA (Ziekenhuis Netwerk Antwerpen), Belgium, Antwerpen, Belgium, 4. Health Information Management SA, Belgium, Antwerpen, Belgium, 5. Azienda Unità Sanitaria Locale di Latina, Latina, Italy

Ambient Assisted Living (AAL) technologies have the potential to extend independent living among older people. Home Sweet Home (HSH) is a European Commission co-funded AAL project in four European countries: Belgium, Ireland, Italy, and Spain. This project aims to specify clinical indicators for a practical and valid evaluation of frailty among older HSH participants. Participants were community based adults aged 65+ years, randomly grouped into those receiving usual-care-only and those augmenting usual care with home-based technologies. Clinical outcomes measures were chosen with respect to the following criteria: use of identical indicators across sites; relevance for an older population and for prevalent pathologies and conditions; usefulness for economical evaluation and reliability and ease of measurement. Measures had to be available in four trial site languages (Dutch, English, Italian and Spanish). All participants were successfully screened as being mild- or moderately frail using the Edmonton Frail Scale (EFS). Measures of cognitive status, handgrip strength and gait speed were suc-

cessfully included as indicators of frailty among the sample. Height, weight, unintentional weight loss, and the MNA-Short form for nutritional assessment were also successfully included, as were measures of mental health and well-being. Frailty can be understood as a composite of indicators across many domains of functioning including biological and physical, sensory and perception, psychological and social. Despite pragmatic and research challenges, HSH researchers were able to select and baseline successfully a range of clinical indicators or measures for frailty among older adults in four European trail countries.

#### COMPARISON ON FUNCTIONS BETWEEN COMMUNITY AND NURSING HOME RESIDING ELDERS IN KOREA

G. Hong<sup>1</sup>, S. Lee<sup>2</sup>, Y. Lee<sup>1</sup>, *1. Hanyang University, Seoul, Republic of Korea, 2. Bucheon College, Dept. of Nursing, Bucheon, Republic of Korea*

Frailty has been known to predict disability, institutionalization, and motility in both community and nursing home residing elders. Using the following frail indicators, the purpose of the study was to examine difference in general characteristics (age, gender, educational level, BMI, perceived health), physical (activities of daily living, grip strength, and peak flow), psychological (depression and familiarity), cognitive function, and nutritional status between community and long-term care facility residing elders in Korea. Descriptive study design was used through face-to-face interviews. Data collection was done from October, 2011 to February, 2012. Two hundred ninety-two community residing elders were recruited from K city through the public health centers, and 304 nursing home residing elders were taken from 7 long-term care facilities of more than 80 beds in several cities in Korea. Main instruments were included such as Korean version of the Modified Barthel Index, the Cornell Scale for Depression and Dementia (CSDD), familiarity scale, the Korean version of Mini-Mental Status Examination for screening dementia (MMSE-DS), and Mini Nutritional Assessment (MNA). Mean age was 77.94(SD=7.07), and the majority of the subjects was female (73.3%), and widow (66.5%). Age( $t=9.16, p<.001$ ), educational level( $\chi^2=53.37, p<.001$ ), BMI ( $t=-6.43, p<.001$ ), perceived health ( $t=-3.97, p<.001$ ), depression ( $t=-2.84, p<.01$ ), familiarity ( $t=-12.89, p<.001$ ), cognition ( $t=-20.71, p<.001$ ), and nutrition ( $t=-14.79, p<.001$ ) were statistically significant between two groups. Population based interventions that can improve all types of functions should be developed and adapted to postpone the frail process in elders.

#### DEVELOPMENT OF A BRIEF QUESTIONNAIRE FOR SCREENING FRAILTY AMONG JAPANESE OLDER ADULTS

S. Shinkai<sup>1,2</sup>, M. Nishi<sup>1,2</sup>, H. Murayama<sup>1,2</sup>, H. Yoshida<sup>1</sup>, Y. Fujiwara<sup>1</sup>, M. Kim<sup>1</sup>, H. Amano<sup>1</sup>, Y. Taniguchi<sup>1,2</sup>, *1. Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, 2. Japan Science and Technology Agency, RISTEX, Tokyo, Japan*

Background/Purpose: We previously developed a questionnaire-based 15-items check-list (CL) for screening older persons at higher risk for functional decline. This study further examined the validity of this CL for using as a frailty index. Methods: 612 community-dwelling elderly aged 65 years and over undertook a comprehensive geriatric assessment in 2007. Using the data, we examined the temporal relationship between Fried's frailty (=external criteria) and the CL for evaluating concurrent validity. Further, 916 community-dwelling elderly aged 70 years and over who participated in the baseline survey in 2001 were followed for subsequent 5 years regarding the onset of ADL disability and mortality. Using the data, we examined the predictive validity of the CL for such adverse health outcomes. Results: The CL (range=0-15 points; cut-off point=3/4 points) successfully discriminated Fried's frailty and non-frailty at the sensitivity of 70.0% and specificity of 89.3%. Higher the CL score, higher the prevalence of frailty; the linearity was highly significant ( $p<.0001$ ). As compared with older persons who had CL scores of less than 4 points, those who had CL scores of 4 points or over showed

significantly higher risk for developing adverse outcomes. Multiple-adjusted relative risks for ADL disability at 2 and 4 years later were 4.82 (95%CI: 2.54-9.15) and 3.07 (1.59-5.94), respectively. Likewise, that for mortality during the 4-year follow-up period was 2.40 (1.67-3.43). Conclusions: The CL had good concurrent and predictive validity as frailty index. Since it comprises 15 easy-to-answer questions, it could be widely used for research on frailty and its preventive intervention.

#### EXAMINING THE EFFECTS OF PREDICTORS ON LONGITUDINAL TRAJECTORIES IN FRAILTY INDICATORS

O. Zaslavsky<sup>1</sup>, B.B. Cochrane<sup>1</sup>, J.R. Herting<sup>1</sup>, N.F. Woods<sup>1</sup>, A.Z. LaCroix<sup>2</sup>, *1. University of Washington, Seattle, Washington, 2. Fred Hutchinson Cancer Reserach Institute, Seattle, Washington*

Frailty is a common geriatric condition with a wide array of adverse consequences. Despite its long history in research and publications, mechanisms of frailty development are still poorly understood. A number of models have been proposed to objectively screen for frailty and to assess its long-term consequences in clinical and community settings. Thus far, frailty indicators have been analyzed as predictors of health outcomes, based on a baseline "snap shot" of their distributions at the lowest quintile of functioning. Such definitions yield results that are inherently linked to the timing of measures and the unique characteristics of the sample. A finer-grained description of long-term trajectories of frailty indicators will increase our ability to predict clinically relevant geriatric outcomes while overcoming constraints imposed by cross-sectional measures. We examined trajectories of change in frailty indicators by applying Latent Class Growth Modeling to a longitudinal dataset obtained from a large cohort (N~45,000) of postmenopausal, community-dwelling older women (ages 65+) participating in Women's Health Initiative over an average follow up of 7-8 years. The analysis enabled us to test pre-specified hypotheses concerning the association of baseline covariates (e.g., demographic characteristics, co-morbidities, life style, psycho-emotional factors) with different longitudinal trajectories. In summary, as the result of being data-driven and multidimensional, the trajectories and their predictors derived from these analyses reflect clinically relevant longitudinal pathways of frailty in a large ethnically and geographically diverse cohort of community dwelling older women.

#### SESSION 750 (POSTER)

##### CIVIL ENGAGEMENT; VOLUNTEER ACTIVITIES

##### GENERATIVITY MOTIVATION IN OLDER VOLUNTEERS

H. Chen, N. Morrow-Howell, *Washington University in St. Louis, Brown School of Social Work, St. Louis, Missouri*

Aim: This study seeks to advance knowledge of volunteerism among older adults by examining factors associated with a generativity motivation for volunteering. Generativity is defined as an adult's concern for the welfare of the next generation. Methods: Data are from a study of Experience Corps® (EC), a national program where older volunteers are trained and supported in working with low-reading students in public elementary schools. There were two cohorts of new EC members in the survey, one joined in the fall of 2006 and the other in fall 2007. In this study, participants' demographic information and their primary reason to join EC are analyzed. A total of 500 members were interviewed at baseline. A logistic regression model was used to identify demographic factors associated with generativity as a motive to volunteer. Findings: Results showed that 60% of participants were motivated by generativity. Generativity motivation differed by race, marital status, but not by gender and living arrangements. African American volunteers were more likely to have generativity motivation than their non-African American counterparts. Participants who were never married were less likely to report motivation. Findings also indicated that there was an interaction

effect between gender and retirement status, showing that retired females were more likely to be motivated by generativity than working females and working and retired males. Implications: In general, recruitment messages about generativity would have wide appeal. Specifically, to increase the diversity of the volunteer workforce where ethnic minorities are underrepresented, messages about generativity could be targeted toward African Americans.

#### **RETIREMENT AND VOLUNTEERING: BURN CAMP AND COMMITTED SERVICE BY FIREFIGHTERS**

S. Kolomer<sup>1</sup>, D. Dillard<sup>2</sup>, 1. *University of Georgia School of Social Work, Athens, GA*, 2. *Georgia Firefighter Burn Foundation, Atlanta, Georgia*

Background: For 20 years, the Georgia Firefighters Burn Foundation has operated a weeklong summer camp for children with burn injuries. This organization boasts an extremely high return rate of camp volunteers. Many returning volunteers are now retired from their professional lives in the fire service. The purpose of this study was to explore whether providing service at a camp for burn-injured children is an activity in which retired fire service personnel knowingly or unknowingly participate in as a means of self-care. Methodology: Ten retired firefighters were interviewed about their volunteer experiences at burn camp. These volunteers attended camp at least two times, with most participating more than 10 years. Questions were designed to elicit information about the volunteers' experiences that provided motivation to continue returning to camp now that they were retired. General themes were identified and analyzed through a grounded theory approach to assist in understanding the role that camp has played in self-care for retired firefighters. Discussion: Anecdotal evidence has long suggested that volunteering at the camp for severely burned injured children appears to be as beneficial and meaningful for the volunteers as much as it is for the children. Many of the interviewees identified that camp feels like a family and provides support and comfort. The mutual benefits and rewards of volunteering at the camp, as well as physical decline and fear of being unable to contribute on the part of the volunteers will be addressed. Organizational challenges around issues of adaptation of a changing and aging volunteer base will also be presented.

#### **MEASURING THE PERSONAL IMPACTS OF NON-TRADITIONAL VOLUNTEERISM AMONG RURAL OLDER ADULTS**

J. Crittenden, L.W. Kaye, D.C. Wihry, *Center on Aging, Bangor, Maine*

While much is known about the impacts of traditional approaches to older adult volunteerism and the personal benefits derived from such opportunities, this poster will examine the benefits derived from non-traditional civic engagement, namely volunteerism that is self-selected and self-monitored. Encore Leadership Corps (ENCORPS) is a state-wide volunteer leadership program focused on engaging older adults in the areas of development and housing (N=51 projects); staying active, connected, and engaged (N=237 projects); staying healthy (N=47 projects); and transportation and mobility (N=7 projects). One hundred and sixty members, who are between 48 and 87 years (Mean=65 yrs), are working to address community and environmental issues in their respective regions of the state. All projects carried out by ENCORPS members are self-selected and self-driven. This poster presentation will examine the personal and community-level impacts of this unique volunteer leadership initiative. Findings indicate that non-traditional volunteerism pathways can yield the same personal benefits for older adults as more traditional volunteer pathways (i.e. volunteer opportunities dictated by organizational needs rather than personal or community-level needs). Analysis of member assessments (N=62), confirm that the most salient personal benefits derived from program participation include new skills acquisition (81.1%), enhanced confidence in leadership abilities (61.1%), increased socialization (83.3%) and improvements in self-reported physical (55.7%) and emotional health (70.2%). After one year of partici-

ation, members reported both increased immersion in their local communities (56.2%) and an elevated sense of contributing to the health and well-being of those settings (74.2%).

#### **NEIGHBORHOOD INFLUENCES ON THE DECISION TO VOLUNTEER IN LATER LIFE**

S. Dury<sup>1</sup>, M. Musick<sup>2</sup>, L. De Donder<sup>1</sup>, T. Buffel<sup>1</sup>, N. De Witte<sup>3</sup>, D. Verté<sup>1</sup>, 1. *Vrije Universiteit Brussel, Brussels, Belgium*, 2. *University of Texas, Austin, Texas*, 3. *University College Ghent, Ghent, Belgium*

This contribution explores the relation between social and physical features of the neighborhood and participation in volunteering. Relatively strong evidence of the influence of place on older people's physical and mental health exists. However, the question how neighborhoods promote or hinder volunteer participation remains under-explored in social gerontology. The data for the present research are derived from the Belgian Ageing Studies, a project which uses structured questionnaires to collect information about various aspects of quality of life among older adults at the level of municipalities. Using data from Belgian elderly people (N=59,977), a multilevel logistic regression model is tested, with personal characteristics, subjective and objective neighborhood-level measures as independent variables, and volunteering as dependent variable. The results reveal that several social features (e.g. being highly involved in the neighborhood) emerged as positive predictors of volunteering. In addition, experiencing traffic unsafety demonstrates a lower rate of volunteering. The discussion highlights the potential of the local environment as promoters or barriers for volunteering.

#### **PSYCHOLOGICAL CHANGES AMONG OLDER VOLUNTEERS WHO EXPERIENCED ROLE LOSS AND CHANGED SOCIAL NETWORK**

H. Jang, E. Gonzales, *Washington University, St. Louis, Missouri*

Purpose: This study examined changes of positive and negative affect and purpose in life for older volunteers who experienced role loss—death of family members, friends, or widowhood—at the beginning and end of one academic year in the Experience Corps® (EC) program. Specifically, new volunteers were moderated to imply the interaction effect of role losses on the dependent variables. Method: Data from the EC program on 435 volunteers aged 55 and over were used. Multiple regression models estimated the changes of positive affect, negative affect, and purpose in life on volunteers who experienced role loss and new volunteers were moderated. Results: Volunteers who experienced death of family members and were in widowhood were positively associated with changes of positive affect. For new volunteers, there is positive relationship between death of a family member and change in positive affect. For experienced volunteers, there is no relationship between losing a family member and change in positive affect. Implications: This study indicates that volunteering increases positive affect for older adults who had loss of a family member or were in widowhood. Specifically, new volunteers might have much advantage in psychological changes during volunteering.

#### **MATCHING SKILLS AND VOLUNTEER ACTIVITIES AMONG OLDER VOLUNTEERS IN SOUTH KOREA**

J. Park<sup>1</sup>, H. Lee<sup>2</sup>, 1. *Han Shin University, Osan, Gyeonggi, Republic of Korea*, 2. *Kangnam University, Yong In, Gyeonggi, Republic of Korea*

PURPOSE: Older volunteers have unique characteristics and are vastly different from previous generations of volunteers (Einolf, 2008). The purpose of this investigation explored the causal relationships between matching principles and the degree to which older volunteers express satisfaction, commitment, role identification with being a volunteer and well-being in later life. METHODS: The sample consisted of 274 volunteers at agencies in South Korea. Volunteer's motivation, personality, satisfaction, commitment, role identification and well-being were collected using a 5 point Likert scale. RESULTS: Path analyses found



significant direct effects between volunteer's subjective factors and engagement factors. Sobel test found indirect effects of motivation on satisfaction ( $\beta=.043$ ,  $t=2.729$ ,  $p<.05$ ), and personality on satisfaction and role identification ( $\beta=.064$ ,  $t=3.025$ ,  $p<.05$ ) when mediated by the degree of matching skill sets, suggesting a significant mediator. The analyses of the path model support the conceptual model, with the final model producing fit indices well within the range of a good fit of the data to the model ( $X^2=9.712$ ,  $p>.05$ ,  $CFI=.991$ ,  $RMSEA=.06$ ). IMPLICATION: This investigation demonstrates that "matching skillsets" as a mediator, which is connected to motivation and personality, along with well-being, satisfaction and role identification affect a volunteer's positive well-being. A key implication in the individual level is that understanding the transitional phase of retirement and creating volunteer opportunities that match not only the level of willingness to volunteer but the skills set brought to volunteer experience. In the agency level, applying matching principle can enable agencies to decrease the turnover rate and increase the retention rate of volunteers.

### **VOLUNTEER ENGAGEMENT IN TRANSITION TO RETIREMENT**

F. Tang, E. Choi, R. Goode., *Pittsburgh, Pennsylvania*

Older adults used to take up volunteering upon leaving the workforce. However, the changing demographics and expectations for a longer work life among the current older population may affect their volunteer engagement. Late-life work during transition to retirement is composed of a sequence of shifts between work and non-work statuses. Previous studies documented that both part-time workers and non-workers were more likely to volunteer than full-time workers. Presently, older adults tend to actively engage in both paid work and volunteering concurrently. Thus it is important to understand how diverse patterns of the transition to retirement are related to volunteer engagement. Using the data from Health and Retirement Study (2000-2008), this study first identified four latent statuses in retirement transition: full-time worker, part-time worker, fully-retired, and partially-retired. Then we examined transition probabilities that divided respondents into stayers (i.e., those remaining in the same status in sequence) and movers (i.e., those shifting to other statuses over time). We applied generalized linear mixed model to examine latent status and transition probabilities in predicting volunteer engagement over time. Findings showed that work-retirement statuses were not related to volunteering; however, those with high probabilities of remaining in the same status were more likely to volunteer. This study indicated that stability in work status is important for older adults to engage in volunteer activity during the transition to retirement, while those experiencing changes in work behaviors may not consider volunteering as an option for productive engagement.

### **VOLUNTEER GUARDIANS IN THE COMMUNITY: SERVICE PIONEERS**

A.L. Jones, *School of Social Work, University of Maryland, Reisterstown, Maryland*

The growing demographic of older adults will include an increasing number of individuals living with a lack of informal surrogate decision makers/advocates. In light of the possible reductions in government funding for services, community programs could be developed to recruit and train volunteers to serve as legal guardians for incapacitated disabled and older adults, a highly responsible and unique volunteer task. This poster will illustrate themes relating to why people volunteer as guardians, and how they perform duties, with a sample of volunteer guardians ( $n = 12$ ) from an agency in an Eastern state. Data were collected using semi-structured interviews. Data analysis employed grounded theory techniques (Hood, 2007). Qualitative themes indicate a typology of guardian performance ('how I do this') ranging from active case manager to guardian functionary. These performance styles have implications for how/when guardians 'ask for help,' how they 'deal with

conflict,' what their 'training needs' are, and how the agency may use this information to offer more effective management tailored to the volunteer guardians' needs and interests. Viewed through the theoretical lens of symbolic interactionism (Blumer, 1969), guardians expressed a desire to work with one individual who they regarded as unbefriended by society, and tended to strongly advocate on their behalf as a reflection of their role as volunteers in service to the larger society ('advocate/savior'). Implications for practice, policy and future research include the development of a recruitment/training model for volunteer guardians that could be replicated by government, faith-based, and other non-profit social service agencies. Hood, J. (2007). Orthodoxy vs. power: The defining traits of grounded theory. In A Bryant & K. Charmaz (Eds.), *The Sage handbook of grounded theory*, (pp.151-164). Thousand Oaks, CA: Sage Publications, Inc. Blumer, H. (1986). *Symbolic interactionism: a perspective and method*. Berkeley, CA: The University of California Press.

### **ACTIVITY PATTERNS AND WELL-BEING OUTCOMES ASSOCIATED WITH VOLUNTEERING**

N. Morrow-Howell, Y. Lee, *Washington University in St. Louis, St. Louis, Missouri*

Aim. The aims of this study are to 1) examine the change in activity experienced by volunteers who joined the Experience Corps (EC) program and served in a high-commitment volunteer role; and 2) explore activity patterns in relation to well-being outcomes. Method: A sample of 354 older volunteers from a longitudinal study of Experience Corps (EC) was used. Level of activity in 14 areas (leisure, exercise, visiting, shopping, etc) as well as physical health, mental health, and satisfaction measures were obtained at the beginning of volunteer service and three to four years later. Latent class analyses (LCA) were conducted to identify activity patterns, and activity change measures between the pre- and posttest were created based on findings from LCA. Then, structural equation modeling (SEM) was utilized to examine how activity changes were associated with changes in wellbeing outcomes. Findings: In both pre- and posttest, EC volunteers in the study sample were classified into two groups: high-activity and low-activity group. About 17% of the sample moved from low-activity at pretest to high-activity at posttest, 7% from high-activity to low-activity, and 76% stayed in the same group. Findings from SEM showed that EC volunteers who moved from low-activity to high-activity had larger gains in physical and mental health, compared to those in other groups. Changes in activities were not significantly associated with changes in satisfaction. Implications. These findings suggest that changes in activity patterns associated with volunteering might be a mechanism through which volunteering improves well-being outcomes.

### **SESSION 755 (POSTER)**

#### **DISABILITY, FALLS, AND MOBILITY**

##### **EFFECTS OF NEW INCIDENCE AND CUMULATIVE STROKES TO TRAJECTORIES OF PHYSICAL FUNCTIONING**

H. Hsu, *Department of Health Care Administration, Asia University, Taichung, Taiwan*

Purpose: The purpose of this study was to examine the effects of new incidence and cumulative strokes to the trajectories of physical functioning. Methods: Data were from a 6-wave longitudinal panel of the Taiwanese elderly aged 60 or more between 1989 to 2007. The participants who participated during 1993 to 2007 for at least 3 waves or more were included in the analysis ( $n=1,030$ ). Physical function was measured by activities of daily living and instrumental activities of daily living. Group-based trajectory analysis was used for the modeling. Results: Five groups predicted by newly and cumulative reports of strokes among the older adults were identified: The Intact group (37.7%),

the slightly difficult group (32.5%), the moderately difficult group (13.6%), the fast declined group (9.8%), and the severely disabled group (6.3%). The new incidence and the cumulation of strokes in the follow-ups related to the physical function trajectories. Having more chronic diseases would increase physical function disabilities for the intact, the slightly difficult, and the fast declined groups. Having more depressive symptoms accompanied with more function disabilities. The moderate disabled group got more social support when they had more functional disabilities, while the slightly difficult, the fast declined, and the severely disabled groups reported less social support when they had more functional disabilities. Conclusion: New incidence of strokes affected physical function trajectories and the effect may be cumulative. The post-stroke changes of mental and social functioning accompanied with physical disabilities should be monitored.

#### **FRAIL OLDER PEOPLE'S PERSPECTIVES ON BEING TRANSFERRED BY MEANS OF ASSISTIVE DEVICES**

A. Brandt, *The National Resource Centre on Disability, Assistive Technology and Social Psychiatry, The National Board of Social Services, Århus C, Denmark*

Assistive devices such as hoists and sliding blankets are often used by carers when assisting frail older people to transfer, e.g. from bed to wheelchair. The positive effects on the carers' health are well-documented, but very little is known about the perceptions of the persons who receive the assistance. In all 208 Danish persons who received assistance for transfer were interviewed face-to-face by experienced occupational therapists using a structured interview guide, also including open questions. The participants' mean age was 78.3 years (SD 12.7), 57.2% were female, 35.6% lived in private homes and the remainder in sheltered housing or nursing homes. Most had several functional limitations and poor health. More than half of the study participants had an electrically adjustable bed and a wheelchair, and about half got assistance for transfer by means of a mobile or a ceiling mounted hoist. In contrary to many carers' perceptions the participants were satisfied with the use of assistive devices: a mean of 82% were satisfied or very satisfied. Satisfaction with electrically adjusted beds was highest, and it was lowest with turning towers. Most comments on dissatisfaction were related to wheelchairs. Main explanations of high satisfaction concerned the feeling of security, and reasons for low satisfaction were poorly fitted devices. Only 30% took part in the assistive device selection process, mostly because they did not wish to be involved; in fact 85% were satisfied with the implementation process.

#### **UNDERSTANDING SAVING AND PURCHASE PATTERNS OF CONSUMERS IN A SELF-DIRECTED CARE PROGRAM: THE OF THE WEST VIRGINIA PARTICIPANT-DIRECTED GOODS AND SERVICES PROGRAM (PDGS)**

M. Inoue<sup>1</sup>, M. Lombe<sup>1</sup>, M. Putnam<sup>2</sup>, K.J. Mahoney<sup>1</sup>, *1. Boston College, Chestnut Hill, Massachusetts, 2. Simmons College, Boston, Massachusetts*

While evaluation of Medicaid home and community-based services has been extensive, analysis of saving patterns of self-directing consumers has been limited. The present study examines saving and purchase patterns of consumers (N=279) in the Participant-Directed Goods and Services (PDGS) program, part of the West Virginia Medicaid Aged and Disabled Waiver Program. The program offers participants an option to save part of their monthly budget and spend a maximum of \$1,000 each year on equipment, services, or supplies to improve their health statuses and home safety. Our assessment indicated that saving aims and accumulations varied considerably and were influenced by program consultants. Specifically, 32% of program participants saved for items related to improvement in personal functioning, such as dental work, eyeglasses, and hearing aids; 25% saved for household appliances (e.g., washer and dryer, WHAT ELSE?); 21% saved for home modifications, this included items such as walk-in showers and hand rails. We also

found that participants with higher levels of disability were more likely to request household level items compared to personal items. Savings were spent at a variety of shopping venues, with large home improvement stores being regularly patronized. Discussion of findings includes assessing high and low savers, identifying patterns within saving and spending activities, and considering program factors in relation to saving activities. Study conclusions comment on the need to more universally evaluate saving within Medicaid HCBS self-direction programs and to place this research within the larger discourse of asset building among low-income populations.

#### **FALLS AND RESILIENCE: THE PERSPECTIVES OF OLDER KOREANS WHO HAD EXPERIENCED FALLING**

B. Hwang, J. Kang, *Pusan National University, Pusan, Republic of Korea*

Falls are painful experiences among Older Koreans. It is frequently reported that the consequences of falls and their influence on health outcomes or quality of life might be fatal. But, many older Koreans have still led healthy lives in the community even after experiencing falls. The question how older Koreans could gain resilience in their daily life after experiencing falls has not been addressed. Resilience is defined as successful adaptation or recovery of existed capacity in the middle of seriously risky situation (Luthar et al., 2000; Hardy et al., 2004). As a result, this study investigated the experiences of falls from resilience perspectives. Using a phenomenological method, individual and semi-structured interviews were conducted with 15 participants. All participants were recruited from a voluntary fall prevention program in a senior center and a public health center. Four themes emerged from data analysis: recovery of a sense of mastery; reconfirmation toward meaning of life; mobilization of supportive social network; modification of home environment. Additionally, it was discussed that the living arrangement (living with someone/living alone) and income level of participants were influential factors in gaining resilience from falls. Findings from this study have provided insights into experiences of falling for older Koreans from resilience perspectives. These insights suggest gerontological social work interventions should promote a sense of mastery in prevention of falls, facilitate supportive social networks to older Koreans who have fallen, and improvement of their dangerous home environment.

#### **AVAILABILITY OF GERIATRIC CARE FACILITIES IN THE COMMUNITY: VARIATION BY THE PROPORTION OF FOREIGN-BORN POPULATION**

S. Choi, *College of Social Work, University of Tennessee at Knoxville, Knoxville, Tennessee*

Objective. Expanding the previous immigrant health service literature, which has focused heavily on individual-level characteristics, this study examined whether the supply of geriatric care facilities in the community differ by the proportion of foreign-born population at the county level. Contextual factors, such as community-level socioeconomic compositional and resource characteristics, play a significant role in shaping individuals' health service utilization. Methods: This study analyzed the 2009 Area Recourse File and the 2005-2009 American Community Survey (ACS) at the county level (N=3,114). The five-year aggregated ACS sample is designed to facilitate meaningful analyses of smaller areas. The number of stand-alone geriatric care facilities (skilled nursing facilities (SNF), home healthcare agencies (HHA), and hospice) per 100,000 older adults (ages 65+) in each county was calculated to reflect the level of availability of such services. The percentage of foreign-born population was an independent variable. County-level compositional and socioeconomic characteristics were controlled for in the multivariate models. Results: The percentage of foreign-born to the total population ranged from 0% to 63%. The results indicate that as the proportion of foreign-born population in the county increased, the availability of geriatric care facilities decreased (SNF ( $b=-0.04$ ,  $p < .0001$ ) and HHA

( $b = -0.09, p < .0001$ ). Conclusion: These discrepancies in the availability of geriatric care facilities in the counties with high proportions of foreign-born individuals will, in turn, affect individual level service utilization among older foreign-born individuals who live in the areas with limited resources.

## SESSION 760 (POSTER)

### ECONOMICS OF AGING

#### A STUDY ON CRITICAL FACTORS INFLUENCING THE INTENTION OF SENIOR CUSTOMERS TO SHOP ONLINE

H. Wu<sup>1</sup>, H. Chang<sup>2</sup>, Y. Lan<sup>1</sup>, W. Lu<sup>1</sup>, *I. Aletheia University, Tainan City, Taiwan, 2. Marketing, Central Taiwan University of Science and Technology, Taichung City, Taiwan*

In our modern society characterized by well-developed IT infrastructure, the Internet has become a prevalent trend, and most of us have experiences shopping online. Facing our aging society, EZ66, the first portal site in Taiwan specifically targeting the senior group, was founded in 2007 to serve the senior segment in Taiwan. From the perspective of senior customers, this study focuses on analyzing critical factors influencing their tendency to shop online and provides recommendations and references for websites administrators operating similar sites to improve their website designs to attract more senior customers within limited resources. Adopting the Technology Acceptance Model, or TAM, as the research framework, this study utilizes information quality, level of trust, related knowledge and support, website design quality, usability and easiness of use as variables and Structural Equation Model, or SEM, as the research method. To fulfill the goal of this study and understand the intentions of the senior groups shopping online, this study includes the middle aged and senior group (55 years or older) who have ever participated in the ez66 learning camp in the Kaoshiung Region as the study subject. The result identifies that related knowledge and support, website design quality, and easiness of use are the critical factors influencing the tendency of the senior group to shop online. Keywords: Seniors, Information Quality, Level of Trust, Related Knowledge and Support, Website Design Quality, Usability and Easiness of Use

#### EFFECTS OF COMMON POLICY RESTRICTIONS IN LONG TERM CARE INSURANCE ON THE LIKELIHOOD OF EVER QUALIFYING FOR BENEFITS

W. Lu, G.A. Jensen, *Institute of Gerontology, Wayne State University, Detroit, Michigan*

Expenditures for long-term care are one of the largest financial risks facing most older adults today, and private long-term care insurance (LTCI) has been marketed as a strategy to reduce this risk. LTCI policies typically contain provisions that can be difficult to navigate, because they often stipulate multiple criteria a subscriber must meet in order to qualify for payment of benefits. Using data from the ongoing Health and Retirement Study, this study examines the effects of common policy restrictions, and combinations of these restrictions, on the probability that a LTCI policyholder will ever qualify for benefits. It finds that even under the least restrictive LTCI policy, the presence of an "elimination period" (a deductible measured in terms of days-receiving-care) and the usual "ADL restrictions" (that the subscriber be unable to perform two or more activities of daily living) combined together would have excluded more than 50% of the individuals who had a nursing home stay over from collecting any benefits. The probability of ever qualifying for LTCI benefits ranges from 5.1% to 38.4% among all adults ages 65 and older, depending on the policy's particular provisions. The probability varies by gender, and ranges from 10.7% to 44.5% among females, and from 8.1% to 27.2% among males, again depending on the policy's provisions. The paper concludes that the coverage restrictions

in many policies represent a significant barrier to ever receiving a LTCI reimbursement.

#### THE ELDER ECONOMIC SECURITY STANDARD INDEX FOR THE UNITED STATES: GEOGRAPHIC AND DEMOGRAPHIC ASPECTS

J.E. Mutchler, E.A. Bruce, A. Gottlieb, J. Lyu, Y. Shih, M.S. Yang, *Gerontology, UMass Boston, Boston, Massachusetts*

The Elder Economic Security Standard™ Index (Elder Index) is a newly developed measure that quantifies the income required by seniors living in the community to maintain independence and meet basic living expenses. Developed by the Gerontology Institute at the University of Massachusetts Boston, in collaboration with Wider Opportunities for Women, the Elder Index is calculated using publicly available data that is routinely generated by federal agencies. Components of the Elder Index include housing costs (including renter costs and costs for home owners with or without a mortgage), food expenses, transportation expenses, cost of health care, and miscellaneous expenses. The Elder Index is calculated for every county in the United States, providing a consistent indicator of cost of living for seniors that is unmatched in geographic detail. Using GIS and descriptive statistics, this presentation provides a national overview of the Elder Index, revealing substantial differences in cost of living faced by seniors in different areas of the country. A substantial share of seniors in every state reports income that falls below the estimated cost of living. Risk of experiencing income gaps relative to cost of living especially affects seniors who are age 75 and over, members of racial and ethnic minority groups, and single women.

#### GROWING INCOME INEQUALITY IN LATER LIFE FOR KOREAN OLDER ADULTS

J. Kong, C. Shen, *Boston College, Boston, Massachusetts*

This study investigates the long term changes in the income distribution for older adults in Korea, defined as individuals of age 55 and older. Using data from the Korean Labor and Income Panel Study (KLIPS), income inequality within 5-year cohorts were examined for ten-year period of time (1998-2009). The Gini Index of inequality showed a steady increase over time, which supported the Cumulative Advantage/Disadvantage Theory that hypothesizes inequality within-cohort increases with advancing ages. In addition, the comparison of income sources between the bottom and top income quintiles showed that 41% of family income of older adults in the bottom quintile was comprised of financial assistance from family members while 13% of their family income was made up by social insurance income. In contrast, those who are in the top quintile rely heavily on their own earnings (66%); they had a higher percentage of social insurance income (15%). This result may indicate that the retirement income of Korean older adults is mostly obtained from private sources. Public retirement system in Korea may have negligible impact on relieving the heightened later-life inequality. The Individual mobility within the income distribution was also examined by calculating the ten-year quintile transition matrix. The result showed substantial transition probability rates of less than .30, which indicates that nearly 70% of individuals had experienced transition from one income quintile to another, either upward or downward. These high mobility rates open up the need for future research examining the complex dynamics determining later-life inequality.

#### ASSET SHOCKS AND FUTURE VALUE AMONG RESPONDENTS TO THE HEALTH AND RETIREMENT SURVEY

L.H. Nitz, *Univ Hawaii at Manoa, Honolulu, Hawaii*

This study tests the hypothesis that insights or skills from holding financial or other bureaucratic occupations produce better long term asset accumulations after random shocks than the insights or skills from

craft occupations or unclassified occupations. In addition, it tests the hypothesis that college education similarly facilitates asset accumulation. We can think of the respondent's occupation and education as fixed. Their initial allocation of assets and the annual changes in assets can be seen as a random shock—as if a neutral arbiter credited or debited the respondent's bank account at the end of every year. Subjects were 4766 respondents to the Health and Retirement Survey who had non-missing data for education, year 2 occupation, initial assets, and eight years of asset changes. The accumulation process was modeled using a fixed effects (education and occupation) and random effects (initial assets, yearly changes). Denominator degrees of freedom were set to reflect the two fixed effects, subsuming the random repeated measures. SAS PROC GLIMMIX type III tests for effects showed that both occupation and education effects were significant ( $F=11.77$ ,  $p<.0001$ ;  $F23.5$ ,  $p<.0001$ , respectively). Joint effects were not significant. Least squares means for year 8 total assets were: Craft \$284,052; finance, \$552,354; other \$390,113. Least squares means for education were \$308,025 for HS or less and \$513,854 for college. Holding a financial occupation and education affect responses to financial shocks

#### **DETERMINANTS OF THE RETIREMENT ASSETS AND THE STOCK HOLDINGS WITHIN RETIREMENT ASSETS: EVIDENCE FROM THE SURVEY OF CONSUMER FINANCES AND THE HEALTH AND RETIREMENT STUDY**

T. Yang<sup>1</sup>, S. DeVaney<sup>1</sup>, Y. Cheng<sup>2</sup>, 1. *Purdue Univ, West Lafayette, Indiana*, 2. *University of Texas at Austin, Austin, Texas*

The primary objective of this study was to develop a model of the retirement assets and the stock holdings within retirement assets of 401(K) and Keogh accounts. Building upon the theory of human capital, the theory of planned behavior, and the bargaining power model, this study proposed a model suggesting that human capital, attitudes about finances, and the relative bargaining power of the spouse would influence an individual's retirement assets. Using the data from the Survey of Consumer Finances, Part 1 explored the relationship between the three proposed domains and the amount and the allocation of retirement assets. In Part 2, the relationship between the proposed domains and retirement assets were examined by utilizing variables available in the Health and Retirement Study. Those who had higher education, who had better health, saved regularly, and were more likely to take financial risk were more likely to have larger retirement assets, and were more likely to hold more stocks in the retirement assets. The results on the influence of the spouse on retirement assets and the allocation of retirement assets showed supported the bargaining power model. However, the variance explained was small. The study contributed to the literature on the human capital, health capital, and the debate among bargaining power model and shared-resource model. Educators, financial advisors, and policy makers should continue to inform workers to save for retirement when possible and to assume risk that is appropriate to their situation. Spouses should discuss how they will allocate their retirement savings.

#### **IMPACT OF TWO SOCIAL PROGRAMS -70 Y MÁS AND SEGURO POPULAR- ON THE USE OF HEALTH SERVICES FOR THE ELDERLY**

B. Manrique-Espinoza, A. Salinas-Rodríguez, S. Sosa-Rubi, M. Tellez-Rojos Solís, *Instituto Nacional de Salud Pública, Cuernavaca, Morelos, Mexico*

Seguro Popular and 70 y más are two social programs designed to reduce poverty in Mexico. The goal of Seguro Popular (SP) was to improve the financial protection of the uninsured population against excessive health expenditures, and the goal of 70 y más was to improve the living conditions of the older adults aged 70 and over in rural areas. Using a quasi-experimental prospective study, we estimated the effect of both programs on the use of health services for the elderly. The sample consists of 2191 older adults living in 516 rural communities in seven

states of Mexico. The study has two comparison groups: intervention versus control. The analysis includes the baseline measurement (2007) and the follow-up (2008). We analyzed five response variables, all of which were dichotomous: eye exam, hearing test, use of dental services and the implementation of the influenza vaccine. We used a model of differences-in-differences to estimate the effect of both programs. At baseline, in the intervention group, 41% of the older adults received outpatient care, 12% had access to eye exams, 5.8% for hearing exam, and 13% went to dental services. We found no significant effect of 70 y más on the use of outpatient services and preventive health. The Seguro Popular had significant impact on the increased use of outpatient health services (6.8%,  $p = 0.017$ ) in the eye exam (2.7%,  $p = 0.012$ ) and the application of the influenza vaccine (5.3%,  $p = 0.017$ ). It is recommended to expand the links between the two programs so that the observed effect on the use of health services will result in better overall health status of the elderly.

#### **THE LONG-TERM FINANCIAL IMPACTS OF CARING FOR AN AGING PARENT: FINDINGS FROM THE HRS, 1992-2008**

J.C. Greenfield, *Washington University in St. Louis, Saint Louis, Missouri*

With parental caregiving on the rise, a growing body of evidence suggests that not only does caregiving take a physical and emotional toll, but it can also be expensive for caregivers. However, most studies of financial impact use only cross-sectional data to examine the association between caregiving and income or assets. Using multivariate regression and latent growth curve models with data from nine waves of the Health and Retirement Survey (HRS, 1992-2008), this study examines the longitudinal effects of parental caregiving on caregivers' income and assets. We find that not only is caregiving in each wave associated with lower income in that wave, but also, an increase in caregiving duration is associated with increasingly lower wages over time. Findings from models of assets are less clear, though, with caregiving duration associated with statistically significant ( $p<.05$ ) asset decreases in only some waves. As expected, age, gender, education, and self-rated health have significant relationships with asset accumulation/decumulation over time, and in some cases have a mediating effect on the relationship between caregiving and assets. We conclude that the negative impact of caregiving on income is compounded over time, but that the impact of caregiving on long-term asset accumulation and decumulation is less clear. The characteristics of caregivers and the caregiving experience play an important role in determining whether caregiving has a long-term negative effect on household savings and retirement preparedness, and policies designed to buffer negative effects of caregiving need to take these characteristics into account by prioritizing support for vulnerable groups.

#### **SESSION 765 (POSTER)**

##### **ENVIRONMENT AND AGING**

#### **A REVIEW OF BUILT ENVIRONMENT MEASURES IN OLDER ADULT PHYSICAL ACTIVITY AND HEALTH STUDIES**

P. Allen<sup>1</sup>, C.M. Hoehner<sup>2</sup>, R.C. Brownson<sup>1,2</sup>, 1. *The Brown School, Washington University in St. Louis, St. Louis, Missouri*, 2. *Division of Public Health Sciences, Washington University School of Medicine, St. Louis, Missouri*

Background: Despite the growing interest in built environment (BE) research, sparse research exists on BE measures in older adult studies. The purposes of this review are to describe available BE measures, identify measurement gaps, and inform methodology improvement for future research. Methods: Multiple databases were searched for the literature review. Inclusion criteria were studies that quantitatively tested relationships of the BE with physical activity, physical or cognitive func-

tion, or health among adult samples with mean ages  $\geq 55$  years, published 2000-2011 in English in peer-reviewed journals. Reviews and qualitative studies were excluded. Results: One hundred fifteen studies met inclusion criteria for the review. Measures derived mostly from disability or non-gerontology ecological models, with variability in how measures were operationalized. Few of the 38 studies employing non-census GIS-based measures reported efforts to verify or improve completeness and accuracy of non-research archival data. Twenty of 80 studies with perceived BE measures used scales from the well-tested Neighborhood Environment Walking Survey (NEWS). NEWS and twelve additional questionnaires had test-retest scale reliability in the moderate to high range. The eight environmental audit instruments assessed multiple domains, including quality of street-scale features. Walkability and presence of recreational, retail, and service destinations were well assessed at a community-scale for urban design and land use policies but few street-scale measures addressed older adults' varying gait speeds and functional abilities. Conclusions: Future BE research with older adults can be enhanced through adaptation of well-studied perceived BE measures for older adults combined with modified environmental audit or GIS measures.

### **WISCONSIN RESIDENTS' PERCEPTIONS OF "AGING-FRIENDLY" COMMUNITY CHARACTERISTICS: DOES RURALITY MAKE A DIFFERENCE?**

C.E. Barber, *Human Development and Family Studies, University of Wisconsin-Madison, Madison, Wisconsin*

"Aging-friendly" refers to the extent to which a community possess the characteristics that make it an environment where people can live their entire lives, if they so desire, rather than having to relocate because of age-related changes (Scharlach, 2009). **RESEARCH QUESTION:** Does the degree of a county's rurality influence the extent to which residents perceive them to be "aging-friendly"? **METHODS:** The Index of Relative Rurality (Waldorf, 2007) was used to categorize Wisconsin counties as metropolitan, the rural-metropolitan, or rural. Data were collected from 120 focus group participants; 31 residing in metro counties; 47 in rural-metro sphere counties, and 32 in rural counties. Participants were given a list of "aging-friendly" characteristics for each of 13 areas (e.g. housing, transportation) and asked to indicate how many they perceived were present in the communities where they lived (1 = None of them; 2 = A few of them; 3 = About half of them; 4 = Most of them; 5 = All of them). **RESULTS:** One-way between groups MANOVA indicated a statistically significant difference among the three levels of rurality on the combined measures of aging-friendly community characteristics:  $F(2,117) = 4.035, p = .001$ . When the results of the ratings of aging-friendly community attributes in the 13 areas were considered separately, the only differences to reach statistical significance were: Transportation and accessibility:  $F(2,117) = 13.26, p = .001$ ; Health care services and preventative screenings:  $F = 29.07(2,117), p = .001$ ; and Community connectedness  $F(2,117) = 7.83, p = .001$ .

### **ENVIRONMENTAL INFLUENCES ON THE EXPECTATION TO AGE IN PLACE: EXPLORING THE EPA MODEL FOR AGE-FRIENDLY CITIES IN DETROIT**

A.J. Lehning<sup>1</sup>, R.J. Smith<sup>2</sup>, R. Dunkle<sup>1</sup>, 1. *School of Social Work, University of Michigan, Ann Arbor, Michigan*, 2. *Wayne State University, Detroit, Michigan*

Aging in place in has a number of potential benefits for older adults, their families and their communities, but there is little empirical evidence regarding the factors that contribute to an elder's ability to age in place, particularly in terms of relevant environmental characteristics. Based on the EPA Model for Age-Friendly Cities, this study examined the relationship between the social and physical environment and the expectation of aging in place using cross-sectional data from a representative sample of 1,372 older adults living in Detroit. Using exploratory factor analysis, we identified six factors that capture the

EPA Model: 1) access to business and leisure, 2) access to health care, 3) neighborhood problems, 4) social interaction, 5) social support, and 6) community engagement. In the final logistic regression model, only one of these factors was significant: those with higher scores on the neighborhood problems factor (i.e., those reporting more housing and neighborhood problems and lower perceived neighborhood safety) had lower odds of expecting to age in place. These findings may reflect the characteristics of our sample (i.e., urban, majority African American, and disproportionately low income) as well as contribute to a more general understanding of the influence of environmental characteristics on older adults' expectation of aging in place.

### **COORDINATED BED MOVES: A THERAPEUTIC TECHNIQUE FOR OLDER ADULT PRISONERS**

M.T. Harrison<sup>1,2</sup>, R. Macgirvin<sup>1</sup>, R. Papp<sup>1</sup>, D. Haycock<sup>1</sup>, L. Walsh<sup>1</sup>, W.O. Harrison<sup>3</sup>, 1. *Psychology, Nevada Department of Corrections, Carson City, Nevada*, 2. *Fielding Graduate University, Santa Barbara, California*, 3. *University of California San Diego School of Medicine, San Diego, California*

The burgeoning population of older adult prisoners is an active topic in both scientific and lay press. The Nevada Department of Corrections established a structured living program (SSLP) for older prisoners nine years ago. The purpose of the program was to provide humane and humanistic care while meeting physical, psychological and spiritual needs of these individuals. One aspect of that care is the location of the five-foot-by-eight-foot space the prisoner calls "my house", and who lives in the neighborhood. This paper will discuss how successful aging in place behind bars is facilitated by the location of each individual relative to the remainder of the prison housing unit, as well as by the support provided by those who share the unit. Research into home and community preferences among older adults has found that most favored aging in place in the home where they have lived for years, and that this brings life satisfaction to them. When 'home' becomes reduced to a small space in a cell or dormitory, it takes on even more importance. Coordinated bed moves play a critical role in the success of the structured living program. The Unit Management Team (correctional officers, caseworker and Program administrator) regularly discusses placement of individuals in SSLP and their progress in the Program. When individual problems related to physical or mental health occur, the strategy of bed reassignment is seen as the most effective therapeutic measure to ameliorate problems, and has developed into a successful aspect of Unit Management within SSLP.

### **AGING IN PRISON: THE NEGOTIATION OF INSTITUTIONALIZATION AMONG MEN 55 AND OLDER**

R. Filinson, D. Ciambone, *Sociology, Rhode Island College, Providence, Rhode Island*

An interview study was conducted of 67 inmates aged 55 years of age or older at a medium security facility. The focus of the qualitative one-hour interviews was on prisoner perceptions of aging while incarcerated. The findings indicated that inmates of this interview study were experiencing the physical changes that accompany aging but by virtue of their imprisonment, were removed from many of the conventional social transitions associated with aging such as retirement or interacting with grandchildren. The major themes that emerged in their narratives were largely not unique to an aged population and included issues with staff, health care, food, other inmates, dying in prison as well as loss of freedom, discomfort, and separation from family and a "normal life." Because imprisonment so powerfully governs every aspect of their life, old age and aging tended to diminish in significance. Differences between the inmates' current selves and younger selves—particularly if they have been incarcerated for a long time—and even differences between themselves and younger inmates appeared less salient in their current environment. Consequently, the concerns of aging and aging well seem to have taken a back seat to the much more pressing ones of

surviving institutionalization, proving their innocence, and/or maintaining their humanity. Inmate interest in program offerings indicated that they preferred programs whose value would endure outside of the prison environment (and were not age-specific) Programs that provided vocational training, education, life skills, or competencies for transitioning out of the prison were the most highly prized.

#### **INCORPORATING CULTURE INTO ENVIRONMENTAL ASSESSMENT OF COMMUNITY BASED FACILITIES FOR PERSONS WITH DEMENTIA**

Y. Hamasaki<sup>1</sup>, B. Young<sup>2</sup>, 1. *Social Welfare, Kurume University, Kurume, Japan*, 2. *Kwansei Gakuin University School of Human Welfare Studies, Nishinomiya, Japan*

Due to an aging population and recent changes in government policy, small scale multi-functional long-term care facilities in Japan are growing in number. The goal of this research is to establish a post-occupancy evaluation tool for these community-based facilities serving persons with dementia. Care workers and social workers recognize that persons with dementia are influenced by their environment and that improved care requires an environment catered to their needs. However, through our preliminary study, we found that the existing post-occupancy evaluation tool (Professional Environmental Assessment Protocol or PEAP) is not adaptable for small scale facilities in rural settings as it was specifically designed for Special Care Units for persons with dementia often set in large scale facilities in urban settings. This study investigated environmental conditions of group homes through a questionnaire and on-site interviews in rural Kumamoto Prefecture. Results show that attention should not be paid to physical environment alone but that care should make the most out of the natural, regional, and cultural environments as well. These components can improve quality of care by contributing to “the continuity of ordinary lives”, a key element of dementia care. Regarding “individualized care” centered on care recipients, results show that staff in good facilities made efforts to establish a desirable regional care environment (e.g. promoting neighbors’ understanding of dementia or developing a network among facilities). These findings will contribute to improving the existing PEAP and adapting its design to the evaluation of small scale multi-functional long-term care facilities.

#### **BUILT ENVIRONMENT CORRELATES WITH METABOLIC RISK IN MIDDLE-AGED ADULTS**

P. Allen<sup>1</sup>, C.M. Hoehner<sup>2</sup>, R.C. Brownson<sup>1,2</sup>, 1. *The Brown School, Washington University in St. Louis, St. Louis, Missouri*, 2. *Division of Public Health Sciences, Washington University School of Medicine, St. Louis, Missouri*

Background: Built environment characteristics of residential neighborhoods have been associated with physical activity and obesity, but few studies have examined metabolic risk. Methods: This was a cross-sectional study of adult volunteers aged  $\geq 50$  years that completed a preventive medicine examination at the Cooper Clinic in Dallas, Texas in 2000-2007 while living in 12 counties around Dallas-Ft. Worth and Austin, Texas. Secondary analyses were conducted on fasting blood glucose, triglycerides, and HDL; clinical measures of waist circumference and resting blood pressure; and self-reported physical activity. Established criteria for the dependent variable metabolic syndrome were applied. Twelve spatial independent variables included land use, sidewalk coverage, and vegetation in residential buffers, and distance to closest park and city center. Bivariate binary logistic regression models were adjusted for age, sex, smoking, and alcohol intake. Results: The 3,547 adults’ average age was  $57.2 \pm 6.3$  years with 74.4% male, 84.6% college graduates, 74.4% employed, 95.8% white, and 21.3% met criteria for metabolic syndrome. Meeting metabolic syndrome criteria was associated with increasing distance to city center, adjusted odds ratios (95% confidence interval) 1.22 (1.05, 1.41), decreasing numbers of private recreation facilities, .84 (.72, .97), and decreasing street

connectivity, .84 (.72, .99). Relationships with distance to city center and private recreation facilities remained after adjustment for meeting physical activity recommendations ( $\geq 500$  MET-minutes/week). Conclusions: Living far from the city center is associated with metabolic risk more than characteristics of the near residential environment in this sample of middle-aged and older adults. Future research is needed with more diverse populations.

#### **A DEMOGRAPHIC PROFILE AND ANALYSIS OF MEDICINE DISPOSAL HABITS AMONG OLDER ADULT USERS OF PRESCRIPTION DRUG MAILBACK PROGRAMS**

L.W. Kaye<sup>1</sup>, J. Crittenden<sup>1</sup>, J. Middleton<sup>3</sup>, D.C. Wihry<sup>1</sup>, S.D. Brachman<sup>2</sup>, 1. *Center on Aging, University of Maine, Bangor, Maine*, 2. *UW-Extension Solid and Hazardous Waste Education Center (SHWEC), Milwaukee, Wisconsin*, 3. *University of Maine School of Social Work, Orono, Maine*

The accumulation of unwanted drugs poses potential health risks for older adults. Various models for collecting and disposing of expired and unwanted medications have been established to address this issue. This poster will highlight older adult medicine disposal habits and construct a demographic profile of program participants through a cross-state analysis of data from medicine mail back programs in Wisconsin and Maine. Findings from the Wisconsin program reveal a relationship between age groups and the classes of drugs returned. Individuals age 65-74 and those 75+ returned a greater percentage of prescription drugs (88.0% and 95.2%, respectively) than those under 50 (71.1%) and between 50 to 64 (84.5%) [ $\chi^2(3) = 30.34$ ,  $p < .001$ ]. Among those 75+, anti-neoplastics (66.7%) and cardiovascular agents (53.8%) were the most frequently returned classes of drugs. Among the 65-74 age group, alternative medicines (50.0%) and coagulation modifiers (45.5%) were the most frequently returned classes of drugs. Age was a significant predictor of class of drug returned ( $\chi^2(42) = 132.17$ ,  $p < .001$ ). Based on the analysis of Maine survey data ( $n = 8,850$ ), the average age of mail back program participants is 60 and most participants (63%) are female. The majority of survey respondents (73%) were first time users of the program. In Maine, returned medicine commonly originated from the respondent (53%), a living relative (24%) or a deceased friend or relative (16%). This poster will highlight the most compelling reasons for older adult utilization of mailback programming.

#### **ENHANCING SOCIAL EQUITY BY CREATING A CAMPUS THAT IS FRIENDLY FOR ALL AGES AND ABILITIES**

M. Cannon, A. DeLaTorre, *Institute on Aging, Portland State University, Portland, Oregon*

In Spring 2011, researchers at the Portland State University’s (PSU) Institute on Aging were awarded a grant by PSU’s Institute for Sustainable Solutions (ISS) to complete a “Solutions Generator” project. In partnership with municipal and university organizations, an interdisciplinary team was formed to host two activities that would address social equity as a component of sustainability. The first activity was a forum titled “Designing a PSU for Everyone” that was intended to learn about accessibility issues around PSU campus and to educate those involved as to how they could help develop inclusive design solutions for people across the spectrum of different ages and abilities. The second activity, which was deemed to be an “inclusive design charrette” by participants, brought 32 participants with varying ages and abilities together to focus on pedestrian accessibility, traffic patterns, way-finding problems, and other issues associated with a planned area of redevelopment on PSU’s campus and to provide design suggestions such as “intuitive design” principles that make future developments usable for everyone. The forum and inclusive design charrette process is considered to be an innovative approach to community development, and urban planning and design, which may serve as a model that can be shared with other organizations looking at accessibility issues surrounding aging and disability. The outcomes of the project included a final report

to the ISS, preliminary design schematics, and other recommendations that were shared with both PSU's community and those involved in practice and implementation connected to local, regional, and statewide municipal agencies.

## **SESSION 770 (POSTER)**

### **FAMILY CAREGIVING**

#### **LIFESPAN RESPITE: DIFFERENCES IN NEEDS AND PERCEPTIONS BETWEEN CAREGIVERS OF CHILDREN AND OF ADULTS**

L.S. Noelker, M. Rose, *Katz Policy Institute, Benjamin Rose Institute on Aging, Cleveland, Ohio*

Respite is a high-priority issue for family caregivers who provide the bulk of long-term services and support for maintaining individuals of all ages with disabilities or chronic conditions in their homes. This study focuses on differences in perceptions and experiences of persons involved in respite care for disabled children compared to those caring for older persons and adults with disabilities. Information was gathered from structured discussion sessions, registration and evaluation data at a respite summit in northeast Ohio, under the state's AoA-funded Lifespan Respite Initiative. The initiative's goal is to create an integrated lifespan respite system by uniting and developing respite programs, services and resources for caregivers of children and adults of all ages with special care needs. The 69 summit attendees represented 8 counties, 24 respite service organizations, 12 family caregivers, and others with personal or professional interests in respite. Children and individuals of all ages were served by 10 of the organizations; the remainder served older or all adults. While there were many common issues raised with respect to respite across the lifespan, those involved with disabled children and younger families viewed respite services as less available and accessible. They expressed concerns such as guilt about respite use, distrust of providers, fears about custody if they admit to needing respite, gaps in age-eligibility requirements for disabled children, and the lack of respite services for medically complex and technology-dependent children. Findings indicate that public policy affecting respite services and respite program design must accommodate these differences.

#### **DOES SOCIAL SUPPORT PREDICT SELF-RATED HEALTH OF URBAN AND RURAL BLACK INFORMAL WOMEN CAREGIVERS?**

P.A. Rozario, *School of Social Work, Adelphi University, Garden City, New York*

There is theoretical and empirical evidence for the influence of both the structural and functional dimensions of social support on health. In this paper we seek to clarify whether or not the functional dimension, i.e., the perception of the quality, vis. the structural aspect of social support, is a better predictor of urban and rural Black informal caregivers' self-rated health. The Black Caregiver Project is a cross-sectional study of a community sample of 521 urban and rural Black informal female caregivers. Using logistic regression, we regressed self-rated health on a set of demographic, geographical, and four structural and one perceived social support variables by geographic location. We found significant differences in predictors of self-rated health between urban and rural caregivers, in that age negatively predicted self-rated health while income, church attendance and positive perceptions of one's family functioning positively predicted self-rated health for urban caregivers. However, only age and family functioning were significant predictors of rural caregiver self-rated health. No structural indicators of social support were significantly related with self-rated health. Our findings add to the literature on the importance of the perception of family functioning for Black caregivers on their self-rated health. Although a subjective measure, there is empirical evidence that self-

rated health is a powerful predictor of objective health outcomes including mortality. As such, we discuss the implications of our findings in the light of the differences in predictors of urban and rural caregiver wellbeing.

#### **CULTURAL VALUES, RELIGIOSITY AND FAMILY MEMBER'S CAREGIVING ON THE POSITIVE APPRAISAL OF CARING FOR ELDERS**

F. Epps, *Our Lady of the Lake College, Baton Rouge, Louisiana*

There is limited research on the impact of cultural values, religiosity, and family caregiving on the family member's positive appraisal of caring for a dependent elder. This is particular true in comparing the positive appraisal of caregiving among minority populations such as African American and Hispanic family caregivers. The purpose of this study was to examine the influence of cultural values and religiosity on the positive appraisal of caregiving among African American, Hispanic and Caucasian family caregivers of dependent elders. The Structural Model of Appraisal (Lazarus, 1991) and Roy Adaptation Model (Roy & Andrews, 1999) theoretical frameworks guided formulation of six hypotheses and the study design. A predictive correlational study design was employed to examine the relationship amongst variables for African American, Hispanic and Caucasian family caregivers that reside in south-eastern Louisiana. Study participants (N=69) completed a demographic tool and four instruments the: (1) Katz Index, (2) Obligation Scale, (3) Duke University Religion Index, and (4) Positive Appraisal of Care Scale. Overall, there was not a significant difference in cultural values, religiosity, and positive appraisal of caregiving for African American, Hispanic and Caucasian family caregivers as a whole. However, it was found that cultural values and religiosity was a significant factor in predicting the positive appraisal of caregiving for African Americans. Findings from this study indicate that more research is needed in order to plan and organize culturally responsive and spiritually sensitive interventions to assist not only the elderly family member, but the family caregiver.

#### **KINSHIP CAREGIVERS PERCEPTIONS OF BURDEN AND SUPPORT GROUP EFFICACY**

D.J. Monahan, C.J. Smith, *School of Social Work, Syracuse University, Syracuse, New York*

Kinship caregiving is an important role for grandparents whose grandchildren are often kept out of the child welfare system as a result of the care they provide. Researchers are beginning to understand the societal value of kinship care and the impact both on the children as well as the grandparents. These relationships are increasingly sought out to provide care for children as a mechanism for preventing them from entering the costly formal foster care system. Because of the concerns that older relative caregivers may become overburdened by their responsibilities, interventions have been developed, such as support groups to help reduce care burden. In this national study of KinNet funded by the Children's Bureau, U.S. Dept. of Health and Human Services relative caregivers (n=102) were surveyed to assess the extent of their perceived burden of care, their care tasks, expectations about their care responsibilities and their satisfaction with support group services. Results of the analysis revealed that one-fifth of those surveyed reported that they felt "burdened," and 40% reported that caregiving interfered with their health. However, they maintained their willingness to sustain their caregiving roles, in part, due to the assistance they received in their support groups. When asked if they expected the child in their care to remain with them until the child was 18 years of age or completed high school, 74% report, "yes." Sample design and study size limitations are discussed. Public policy and practice implications for the larger societal and family system issues are also presented.

## GRANDPARENTS AS FAMILY CAREGIVERS IN CHINA: IMPLICATIONS FOR POLICY AND PROGRAMS

A.C. Mui<sup>1</sup>, J. Sun<sup>2</sup>, H. Chen<sup>3</sup>, 1. *School of Social Work, Columbia University, New York, New York*, 2. *Renmin University, Beijing, China*, 3. *Washington University, St. Louis, Missouri*

Based on the 2005 Chinese Longitudinal Healthy Longevity Survey (CLHLS), this poster addresses the growing phenomenon of older adults who are assuming primary responsibility for the care and rearing of their grandchildren. In China, due to rapid modernization and urbanization, massive numbers of married adults have migrated to urban areas for economic opportunities and career development. Data show that as a result of this urbanization, there are 73.3 million left-behind children (aged 0-17). Due to economics, housing, and household issues in Chinese cities, 80% of the left-behind children are reportedly staying in rural areas under the care of their grandparents. Social scientists are investigating psychosocial issues associated with left-behind children, but little research has been done on the needs, and resiliency, of grandparent caregivers. In addition, data show that about 90% of the grandparent caregivers feel that they were incapable of effective parenting, particularly as it relates to providing education-related support to their grandchildren. This sense of failing to provide for their grandchildren's education is primarily due to their own low level of educational attainment. Economically, 80.9% of the grandparent caregivers still work to support themselves and their grandchildren. Data point to the need to design parenting and financial support programs to assist these grandparent caregivers. Skill-building and psychosocial support programs can enhance these grandparent caregivers' capacity in parenting and problem solving as well as address communication among members of these long-distance intergenerational families. Implications for research, policy, and programs to support the grandparent caregiver population will be discussed.

## USING TECHNOLOGY TO SUPPORT FAMILY-CENTERED CARE FOR VETERANS WITH DEMENTIA

M. Luptak<sup>1,2</sup>, B.L. Hicken<sup>4</sup>, C.M. Daniel<sup>2</sup>, R. Hill<sup>3,2</sup>, R. Zheng<sup>3,2</sup>, M. Grant<sup>2</sup>, K.W. Eagar<sup>2</sup>, R. Rupper<sup>2,4</sup>, 1. *University of Utah College of Social Work, Salt Lake City, Utah*, 2. *VA Salt Lake City Healthcare System Geriatric Research Education and Clinical Center, Salt Lake City, Utah*, 3. *University of Utah Department of Educational Psychology, Salt Lake City, Utah*, 4. *VA Office for Rural Health - Western Region, Salt Lake City, Utah*

The Supporting Caregivers of Rural Veterans Electronically (SCORE) project utilized in-home telehealth delivery of education and support to family caregivers of veterans with dementia and employed remote licensed clinical social workers as care managers. Technology-naïve participants were assigned to a group which employed a simple in-home telehealth device or a group which received telephone support. Technology-savvy participants were assigned to a web-based user group or a group which received telephone support. Outcome variables included caregiver burden, social network, family conflict, caregiver efficacy and care receiver health care utilization data. SCORE Participants (N=60) were primarily female (96%), Caucasian/non-Hispanic (88%), spouses (87%) ranging in age from 37 to 89 with a mean of 69. Scores on the Lubben Social Network Scale-R 18 ranged from 23 to 73, with a mean of 49. At baseline, 63% of the participants reported family conflict and 60% reported family hardship. At completion, 58% of the participants reported family conflict and 55% reported family hardship. Both technology-naïve and technology-savvy caregivers demonstrated a significant reduction in burden in the home telehealth device and web-based conditions respectively. In the phone condition, naïve caregivers showed no reduction in burden whereas the savvy caregivers showed a reduction. Initial findings reinforce the importance of family-centered interventions to assist family caregivers and suggest that a web-based approach to caregiver burden relief is at least as effective as traditional approaches like phone support and other technology-based

approaches. Furthermore, it can be cost effective and holds promise for future caregiver training and consultation.

## THE IMPACT OF PLACING SPOUSES IN A NURSING HOME ON DEPRESSIVE SYMPTOMS OF THEIR PARTNERS IN THE COMMUNITY

M. Kwak, H. Kim, *School of Social Work, Univ Michigan, Ann Arbor, Michigan*

Placing a spouse in long-term care facilities is a stressful experience for his/her partner in the community, sometimes described as married widowhood. This study examines how the nursing-home placement of a spouse affects his/her partner who lives in the community and whether changes in caregiving status and spousal functional impairment moderate the effects of placement on depressive symptoms. The sample consists of married older adults ages 51 and over and their spouses from the Health and Retirement Study from 2000 to 2010 (n=12,115). Multilevel modeling was used to estimate trajectories of depressive symptoms and their relationship to the nursing-home placement of spouses. Sociodemographic and health characteristics of the respondents were also controlled. The multilevel modeling analysis indicates a linear decline of depressive symptoms over time. However, spouses' levels of functional impairment are associated with higher levels of depressive symptoms ( $\beta=0.01$ ,  $p<.01$ ), and providing care to a spouse is associated with higher levels of depressive symptoms ( $\beta=0.19$ ,  $p<.001$ ). After controlling for effects of caregiving status and spousal functional impairment, having a spouse residing in a nursing home still increases depressive symptoms ( $\beta=0.89$ ,  $p<.001$ ). Caregiving status and spousal functional impairment do not moderate the relationship between nursing-home placement and depressive symptoms. These findings suggest that transition to living apart in later life resulting from a spouse's illness itself may increase risks of depression for the partner regardless of caregiving status and spousal functional impairment after placement. Discussions include practical implications to reduce adverse effects of placing a spouse in long-term care facilities.

## THE EFFECTS OF GOVERNMENT EXPENDITURES OF NATIONAL FAMILY CAREGIVER SUPPORT PROGRAM ON CAREGIVERS' STRAIN: A MULTILEVEL ANALYSIS

Y. Lee, *University of Georgia, Athens, Georgia*

The National Family Caregiver Support Program (NFCSP) is one of the few federal policy initiatives aimed at supporting caregivers. NFCSP was established in 2000 to improve caregivers' physical and mental health through the provision of three major services—caregiver counseling/support groups/training, respite care, and access assistance. The purpose of this study is to examine the effectiveness of this program on caregivers' well-being. Data from the 2004 National Long Term Care Survey (N=1615) are linked to data from the government expenditures on NFCSP in 2004. Hierarchical linear modeling was used to analyze the main effects and the moderating effects of government expenditures on the three NFCSP services on caregiving strain. Findings from the study indicate that expenditures on access assistance and respite care moderate the caregiving burden-caregiving strain relationships. Caregivers reporting higher caregiving burdens have more caregiving strain. Additionally, caregivers who live in states with less expenditure of access assistance and respite care and who report more problems with ADLs, have the most caregiving strain. Interestingly, the interaction between hours of caregiving spent and access assistance indicates that caregivers who report more caregiving hours show higher caregiving strain, but also that the caregivers' strain is even higher for those who report more caregiving hours and live in states with higher expenditure of access assistance services. Findings suggest that NFCSP may represent an important factor that influences the well-being of informal caregivers, and that studies which examine factors at only one level may underestimate the effect of the social environment.



## RURAL VERSUS URBAN RESIDENCE AND INDIVIDUAL VARIABILITY AS INFLUENCES ON GRANDPARENT CAREGIVERS' NEEDS FOR SERVICE

B. Hayslip, K.S. Page, C. Phillips, R. Knight, *Psychology, University of North Texas, Denton, Texas*

There exists an extensive literature exploring the impact of living in a rural versus an urban environment on social service use and mental health service accessibility among older adults. In contrast, such differences have yet to be explored among grandparent caregivers. The present study enlisted the participation of seventy-five grandparent caregivers (Mage = 58.7) who participated in focus groups of 5-10 grandparents conducted in the nearest small town adjacent to where each lived. Nearly 75% of the sample was female, and 73% were raising 1 or 2 minor children (Mage = 9). Twenty-six of these grandparent caregivers resided in a rural county in North Central Texas, wherein rurality was defined in terms of residence in counties varying by population density and distance from a major metropolitan area. A MANOVA comparing overall levels of needs for support, information, and services, overall difficulties in getting resources, and perceived factors interfering with receiving help ( $\alpha$ s > .70) across rural and urban samples of custodial grandparents surprisingly suggested substantial similarity ( $p > .05$ ) in the above needs for help and services, difficulties in getting such help, and factors hindering the receiving of help across the rural and urban samples here. In contrast, qualitative and quantitative findings reflected the tremendous variability among grandparent caregivers, irrespective of rural or urban residence. These findings at once underscore the individualized nature of grandparent caregiving as well as emphasizing the universality of concerns about needs for and access to a variety of social services that many custodial grandparents experience.

## THE USE OF RELIGIOUS COPING AMONG INFORMAL CAREGIVERS IN A NATIONALLY-REPRESENTATIVE POPULATION

J.L. Spilman, A. Cortese, *KJT Group, LLC, Honeoye Falls, New York*

Approximately 52 million Americans provide informal care to an ill or disabled family member or friend. Informal caregiving may have deleterious effects on the caregiver's own well-being, requiring caregivers to utilize various coping mechanisms. One such mechanism may be religious coping, or the use of religious beliefs or practices to deal with stress. The aim of this research is to determine the prevalence of religious coping among informal caregivers as compared with those who do not provide unpaid care, and to examine the association between religious coping and caregiver characteristics. Cross-sectional data were obtained from a web-based survey, collected April 27-May 5, 2011. Respondents from this nationally-representative sample are members of an online access panel. Of the 999 total respondents surveyed, 210 respondents (21%) self-reported providing unpaid care for an adult in the previous 12 month period. All 999 respondents surveyed were asked to complete the religious inventory of the COPE scale, in addition to questions regarding their religious behavior, demographics and psychographic items. The 221 respondents who self-identified as providing unpaid care to an adult were additionally asked a battery of questions related to the informal care they provide. Statistical testing was conducted to investigate significant differences. We find a statistically significant relationship between the use of religious coping and informal caregiving, with caregivers utilizing this mechanism more than non-caregivers. Among caregivers, use of religious coping varies significantly across religious denominations, gender and race, but is comparable regardless of the type of care provided or the caregiver burden experienced.

## FOREIGN DOMESTIC WORKERS LOWER THE NEGATIVE IMPACT OF OLDER ADULT IMPAIRMENTS ON THEIR INFORMAL CAREGIVERS

R. Malhotra<sup>1</sup>, T. Ostbye<sup>1,2</sup>, C. Malhotra<sup>1</sup>, A. Chan<sup>1,3</sup>, *1. Health Services and Systems Research, Duke-NUS Graduate Medical School Singapore, Singapore, Singapore, 2. Duke University, Durham, North Carolina, 3. National University of Singapore, Singapore, Singapore*

In Singapore, many families employ foreign domestic workers (FDWs) to help care for elderly family members. The current analyses, utilizing Pearlin's stress process model, assess the moderating effect of support by a FDW on the impact of four types of impairments (in physical function, memory, behaviour and mood) in older adults on their informal caregivers. Data for 1,190 care recipient (CR; aged 75+ with >1 activity of daily living [ADL] limitation)-caregiver (CG) dyads was utilized. Scores for severity of the four impairments were calculated. CGs, responding to a modified version of the Caregiver Reaction Assessment (CRA) scale, reported on the impact of caregiving on: 1) schedule and health (SH), 2) finances (FIN), 3) lack of family support (LFS) and 4) self-esteem (SE). FDW support was defined as assistance from a FDW in ADLs/Instrumental ADLs. Linear regression models, one for each CRA domain, with interaction terms of the four impairment severity scores with FDW support, were developed. Significant interaction terms were retained. FDW support reduced, or even reversed, the negative impact of physical impairment on SH, of memory impairment on SH and LFS and of behaviour impairment on LFS and SE. A positive impact of mood impairment on SE was observed in the absence of FDW support. Provision of instrumental support by a FDW appears to be beneficial for informal caregivers of the elderly, the benefit increasing with an increase in older adult impairment severity. The role of FDWs in elder care should be carefully considered by the families of elderly with impairments and by policy makers in Singapore.

## CARING FOR ELDERLY PARENTS: EVALUATING FAMILY LEAVE LAWS IN COMPARATIVE PERSPECTIVE

Y. Yang, G. Gimm, *George Mason University, Fairfax, Virginia*

As baby boomers age, the need for laws to enhance quality of life for the elderly and meet the increasing demand for family caregivers will continue to grow. This paper reviews the national family leave laws of seven major OECD countries and provides a state-by-state analysis of family leave laws in the U.S. We find that the U.S. overall has the least generous family leave laws among the seven high-income countries. With the exception of three U.S. states, the Family Medical Leave Act of 1993 does not guarantee paid family leave for caregivers. GSA participants will learn about the current evidence on how more generous laws can impact family caregivers' employment and health outcomes, as well as other arguments for and against such laws. We argue that a generous, gender-egalitarian, and flexible family leave law, financed through social insurance, would not only be more ethical, but also financially sustainable.

## EFFECTS OF PAID LEAVE POLICIES ON CAREGIVER HEALTH AND EMPLOYMENT: EVIDENCE FROM PANEL DATA

G. Gimm, T. Yang, *Health Administration & Policy, George Mason University, Vienna, Virginia*

Approximately 9.7 million adult children over the age of 50 currently provide care for their elderly parents. This paper analyzes the impact of state paid leave policies on the health and employment outcomes of family caregivers using a quasi-experimental study design. Quality of life for the elderly is related to the employment and well-being of caregivers who support their parents with time and financial

resources. Using panel data from eight waves (1992-2006) of adult caregivers and non-caregivers in the RAND Health and Retirement Survey, we find preliminary evidence of small effects on employment associated with paid leave laws. However, we find mixed evidence of effects on mental health and physical health. GSA participants will understand the extent to which state paid leave laws can influence family caregivers' employment and health outcomes. Participants will also be able to describe policy implications and next steps for future research.

#### **THE INFLUENCE OF PERSONAL NORMS AND DYADIC RELATIONSHIPS ON THE DECISION OF FAMILY MEMBERS TO ASSUME AND RETAIN THE CAREGIVING ROLE; IMPLICATIONS FOR PRACTICE AND POLICY**

R. Montgomery, J. Lang, C. Mathes, E. Collet, *Helen Bader School of Social Welfare, University of Wisconsin - Milwaukee, Milwaukee, Wisconsin*

Recognition of the crucial contributions that caregivers make to the long-term care system and the negative consequences of caregiving, have prompted the introduction of policies and programs to support family caregivers. Yet, specific information necessary to strategically target services has not been readily available to guide practice. To address this problem, the state of Washington adopted the TCARE® protocol to assess caregivers' needs and strategically allocate support services. A key assumption of the TCARE® protocol is that a caregiver's decision to continue providing care is strongly influenced by the caregiver's expectations for role performance and the relationship between the dyad. The goal of this study was to test this assumption. Linear regression analyses were conducted to: 1) identify factors related to caregiver's intentions to place a caregiver in a long-term care setting; 2) determine whether these factors differed by type of relationship (e.g., spouse vs. child); and 3) determine whether the factors that influenced caregivers' decisions changed over time. Data were taken from 2,863 initial TCARE® assessments conducted between June 2009 and December 2011 and from follow-up assessments conducted with 813 (28.4%) caregivers. Consistent with the assumption of TCARE®, we found the strongest predictors of a caregiver's intention to place their care receiver in a long-term care setting were identity discrepancy, relationship burden, and problem behaviors. The associations of these measures with intention to place were stronger for spouses than for other caregivers and were stronger at the six-month follow-up. Practice and policy implications are discussed.

#### **SESSION 775 (POSTER)**

##### **LONG TERM CARE; NURSING HOMES**

#### **NURSING HOMES' SUCCESS IN USING THE INFORMAL DISPUTE RESOLUTION FOR APPEALING DEFICIENCIES**

D.B. Mukamel<sup>1</sup>, D. Weimer<sup>2</sup>, C. Harrington<sup>3</sup>, W.D. Spector<sup>4</sup>, L. Bailey<sup>1</sup>, Y. Li<sup>5</sup>, *1. Medicine, Univ of California, Irvine, California, 2. University of Madison-Wisconsin, Madison, Wisconsin, 3. University of California, San Francisco, San Francisco, California, 4. Agency for Healthcare Research and Quality, Rockville, Maryland, 5. University of Rochester, Rochester, New York*

Nursing-homes' quality is subject to state and federal regulations. Those not meeting quality standards are cited and issued deficiencies (tags), which until 1995 could be appealed only through a formal judicial process. Since 1995 nursing-homes have had access to the Informal Dispute Resolution (IDR) process, which is faster, less costly, and easier to access. About 10% of nursing-homes avail themselves of IDRs. In this study we examine national IDR data for the 2005-2008 period (obtained from CMS), augmented with OSCAR data, to investigate the determinants of successful IDR appeals. The study included 19,738 tag appeals. Of those, 26% were successful. We estimated logistic regression models with fixed state-effects in which the dependent variable

was the log-odds of a successful appeal. The odds of success were significantly higher ( $p < 0.05$ ) for tags from surveys rather than complaints, for facilities with a higher number of deficiencies, and for larger facilities. They were significantly lower for more severe tags, and if the tag was a substandard or an abuse and neglect tag, when the number of tags disputed by the nursing-home was higher, when the severity of all tags in the IDR were higher, and the quality reputation of the facility was lower. Year, stringency of the quality regulation in the state, and facility ownership were not significant. This study is the first to offer insights into the workings of the IDR process.

#### **THE ROLE AND RESPONSIBILITY OF FULL-TIME AND PART-TIME CARE MANAGERS IN NURSING FACILITIES IN JAPAN**

K. Kageyama<sup>1</sup>, Y. Sawada<sup>2</sup>, M. Kunisada<sup>3</sup>, H. Ishida<sup>4</sup>, H. Sumii<sup>3</sup>, D. Mori<sup>3</sup>, *1. Prefectural University of Hiroshima, Mihara, Hiroshima, Japan, 2. Nihon Fukushi University, Nagoya, Aichi, Japan, 3. Prefectural University of Hiroshima, Mihara, Hiroshima, Japan, 4. NPO Japan Kaigo Research, Mihara, Hiroshima, Japan*

Purpose: To compare the roles and responsibilities of full-time and part-time care managers in nursing facilities in Japan. Methods: A self-report time study of services provided to residents by care managers (CMs) in nursing facilities in Japan was conducted for two consecutive days between October and December 2010. During the study, 799 CMs recorded start and end times of their activities on timesheets using the Residential Social Work Codes that can be divided into 2 categories (16 large and 110 small categories). Nearly 60% of participants ( $n=457$ ) hold the dual positions of care manager and nursing assistant. Results: As for large categories among full-time CMs, "creation of care plans ( $210.1 \pm 147.8$ ,  $p < 0.001$ )," "assessment ( $87.7 \pm 93.3$ ,  $p < 0.001$ )" and "team management ( $141.8 \pm 99.6$ ,  $p < 0.01$ )" were the most common activities, and as for small categories, "assessment for discharge planning ( $37.3 \pm 49.3$  min.,  $p < 0.001$ )," "discharge planning ( $104.4 \pm 107.3$  min.,  $p < 0.001$ )," "staff meetings ( $39.9 \pm 29.0$  min.,  $p < 0.001$ )" and "quality assurance meetings ( $39.1 \pm 23.7$  min.,  $p < 0.001$ )" were the most common activities. As for large categories among part-time CMs, "direct care ( $212.3 \pm 233.62$  min.,  $p < 0.001$ )" was most common, and as for small categories, assistance with "transferring and changes in position ( $72.4 \pm 90.7$  min.,  $p < 0.001$ )" and "problem behaviors" were most common. Discussion: The results suggest that although Long-Term Care Insurance Law in Japan requires CMs to participate in assessment and care planning, many of them involve in direct resident care. In order to increase roles and responsibilities of CMs, it is important to change the work environment for them to concentrate fully on the duties of CMs.

#### **THE AMOUNT OF TIME NURSING STAFF SPEND ON DIRECT AND INDIRECT CARE IN NURSING FACILITIES IN JAPAN**

M. Kunisada<sup>1</sup>, Y. Sawada<sup>2</sup>, H. Sumii<sup>1</sup>, K. Kageyama<sup>1</sup>, *1. Health and Welfare, Prefectural University of Hiroshima, Mihara, Hiroshima, Japan, 2. Nihon Fukushi University, Nagoya, Aichi, Japan*

Purpose: To examine the amount of time that nursing staff spend caring for residents (both direct and indirect care) and to provide implications to revise the payment system for long-term care insurance (LTCI) certified nursing facilities in Japan. Methods: A self-report time study was conducted in 7 nursing care facilities in Japan. Both nurses ( $n=50$ ) and nurse's aides ( $n=172$ ) of those facilities were asked to record the amount of time they spent in each of their activities during 24 consecutive hours between March 2007 and September 2008. Using a new version of the "Care Code," created by the Ministry of Health, Labour and Welfare of Japan in 2006, the reported activities were then coded and grouped into 10 large and 64 smaller categories of nursing care services (e.g., assistance with bathing and toileting). Results: Approximately 40% of their time was spent on indirect care services that do not require interaction between nursing staff and residents. Of those, the highest

average amount of time was observed for “documentation and charting (25.58 min.),” followed by “communication and reporting (13.76 min.),” “cleaning dining room and hallway (12.65 min.),” “passing out and cleaning up of meal trays (5.86 min.)” and “other services (5.09 min.)” Discussion: Although LTCI currently takes into account only the amount of time that nursing staff spend on direct resident care for the payment system, the results suggest that it may be fair to include the amount of time they spend on both direct and indirect resident care in the system.

### **DRUG USE REVIEW AMONG ELDERLY RESIDENTS IN NURSING HOMES THROUGH COMPREHENSIVE GERIATRIC ASSESSMENT**

H. Shin<sup>1</sup>, H. Park<sup>1</sup>, Y. Suh<sup>2</sup>, E. Lee<sup>2</sup>, K. Kim<sup>2</sup>, B. Lee<sup>1</sup>, *1. Ewha Womans University, Seoul, Republic of Korea, 2. Seoul National University Bundang Hospital, Seongnam, Republic of Korea*

As Korea’s population is aging rapidly, the number of elderly requiring long-term care due to age-related chronic diseases is increasing. According to a study, 48 percent of residents in long-term care facilities had potentially inappropriate medications, and residents with a higher number of potentially inappropriate medications had a higher likelihood of being hospitalized. This study is intended to assess medication use of residents in elderly health care facility and the effect of pharmacist intervention on their medications through comprehensive geriatric assessment (CGA) tool. Among inpatients at geriatric center of Seoul National University Bundang Hospital who were hospitalized from January 1, 2007 through September 30, 2011, 42 patients from elderly health care facilities were involved. Pre-admission medication lists and discharge prescriptions were collected from the database of CGA and electronic medical record (EMR), and analyzed retrospectively. All of the patients were taking 4 or more medications before the admission, and 35.7 percent were taking one or more potentially inappropriate medications. By the implementation of CGA, the average number of drugs taken and the ratio of polypharmacy patients each decreased from 8.8 ( $\pm 1.1$ ) to 7.2 ( $\pm 1.0$ ) and from 100.0% to 88.1%, respectively. Also, patients with potentially inappropriate medications decreased significantly from 35.7% to 14.3%. It is considered that the pharmacist intervention can help to reduce the potentially inappropriate medication use in geriatric patients and that the role of consultant pharmacist in the elderly health care facility is necessary.

### **SOCIAL ENGAGEMENT AMONG NURSING HOME RESIDENTS: EFFECT OF FACILITY RACIAL COMPOSITION**

D. Tyler, S. Cai, Z. Feng, M. Clark, M. Fennell, *Center for Gerontology, Brown University, Providence, Rhode Island*

Purpose: Social engagement (SE), defined as interactions with others and participation in social or individual activities, has been linked to health outcomes among the elderly. Community dwelling Blacks report higher levels of SE than Whites. However, no studies have examined racial differences in SE among nursing home (NH) residents or the effect of NH racial composition on SE. Methods: Using 2000-2008 national MDS data, we stratified NHs into 3 groups based on their racial compositions (% white). We calculated the proportion of residents with low SE for each NH and compared this across the 3 groups. We then used 3 types of logit (base, fixed-effects and random-effects) models to examine the within- and between-facility differences in the likelihood of having low SE between Blacks and Whites. Results: The proportion of residents with low SE decreased across all categories of NHs from 2000 to 2008. However, NHs with higher proportions of Blacks or Hispanics consistently had higher proportions of residents with low SE. The base and conditional fixed-effects models indicated that Blacks’ higher likelihood of having low SE was mostly attributable to between-facility differences rather than within-facility differences. The random-effects model revealed that residing in facilities with the highest proportions of white residents was related to substantially lower risk of low

SE, regardless of race. Implications: In addition to other known disparities, residents in minority-concentrated facilities are at risk for low SE. Additional research is needed to determine the causes of low SE in these NHs and interventions to address this issue should be identified.

### **ALL IN A DAY’S WORK: STAFF RETENTION AND TURNOVER WORKING WITH PERSONS WITH DEMENTIA**

R.J. Karasik<sup>1</sup>, J. Berry<sup>2</sup>, P. Woischke<sup>1</sup>, *1. Gerontology, St. Cloud State University, St. Cloud, Minnesota, 2. Dementia Care Foundation, Darwin, Minnesota*

Staff turnover rates in nursing homes are notoriously high, with some rates topping 70- 100 percent (Castle & Engberg, 2006; Riggs & Rantz, 2001). Turnover is particularly challenging in dementia care with the added stress of managing behavioral and psychological symptoms of dementia (BPSD) (Brodaty et al., 2003). Specialized training has been shown to reduce staff turnover while simultaneously improving quality of care (Chrzescijanski, et al., 2007; Coogle et al., 2007). Type of training, however, makes a difference (Hughes et al., 2008; Kemeny et al., 2006). The current study examines the impact a holistic model of staff training and support has on staff turnover and retention decisions. The training model includes extensive orientation, individual mentoring of new staff, and on-going education in person-centered care. Additionally, the model limits the full-time work week to 32-hours and teaches staff to monitor their stress levels. Ten-year staff turnover rates for the model were 48.01%. A survey of staff (n=48) identified several factors that contributed to their work decisions. Respondents rated several factors, including higher staff ratios; specialized training in dementia; on-going support & training; feeling valued by management; and teamwork with peers as being particularly important to their decisions to remain on the job. Additional factors included job flexibility, food, and distance from home. Surprisingly, these factors were generally rated as being more important than wages and benefits. These findings are currently serving as the basis for a larger regional study examining dementia care staff perceptions regarding training, support, and factors of employment.

### **THE OLDER PERSONS’ TRANSITIONS IN CARE (OPTIC) STUDY: A PILOT TEST OF THE TRANSITION TRACKING TOOL (T3)**

G. Cummings<sup>1</sup>, C. Reid<sup>2</sup>, C.A. Estabrooks<sup>1</sup>, P. Norton<sup>3</sup>, J. Konnert<sup>4</sup>, G. Coleman-Miller<sup>5</sup>, *1. University of Alberta, Edmonton, Alberta, Canada, 2. Health and Exercise Sciences, University of British Columbia, Kelowna, British Columbia, Canada, 3. University of Calgary, Calgary, Alberta, Canada, 4. Alberta Health Services, Calgary, Alberta, Canada, 5. University of Alberta Hospital, Edmonton, Alberta, Canada*

Introduction: OPTIC is a mixed method researcher/decision-maker partnership study focused on care for nursing home residents requiring emergency transfers to emergency departments and back to the nursing home. In this paper, we present pilot data collected via the Transition Tracking Tool (T3), an instrument developed to record data relevant to determining successfulness of such transitions in care. The main purpose of the pilot test was to assess tool validity and feasibility of use. Method: Data were collected for 86 residents at study sites in Canadian provinces, British Columbia (n=27) and Alberta (n=59) over a 3 month period. The T3 tool comprises 750+ data elements including resident characteristics, reasons and precipitating factors for the transfer, advance directives, family involvement, healthcare services provided, communication handovers among healthcare personnel, disposition decisions, and dates/times and timing. Results: Findings confirm the ability of the T3 to discriminate between known service distinctions between sites. For example, more licensed practical nurse involvement in transfer processes was expected and observed in British Columbia, compared to more registered nurse involvement in Alberta. Regarding feasibility,

a majority of the T3 data elements from nursing home, emergency medical services and emergency department sites were accessed and recorded for each transition. Discussion: Transitions of residents from nursing homes to and from emergency rooms are not universally successful. The T3 will provide valuable evidence to allow for improvement of the transition experience for seniors, their families and the professional caregivers involved in the process.

## SESSION 780 (POSTER)

### RESEARCH METHODS AND ISSUES

#### ASSOCIATION BETWEEN HEALTH LITERACY, CARE TRANSITIONS INTERVENTION PARTICIPATION AND HOSPITAL READMISSION

S. Gravenstein<sup>1,2</sup>, R. Baier<sup>1,2</sup>, K. Butterfield<sup>1</sup>, H. Shamji<sup>1,2</sup>, R. Voss<sup>1</sup>, R. Gardner<sup>1,2</sup>, 1. *Healthcentric Advisors, Providence, RI, Rhode Island*, 2. *Warren Alpert Medical School of Brown University, Providence, RI, Rhode Island*

Because RCT volunteers represent as little as 20% of the overall target population asked to participate, results may not be generalizable when applied to broader populations in quality initiatives. To assess the characteristics of patients who consent vs. decline interventions, Healthcentric Advisors implemented a five-item survey (adapted from validated tools) to evaluate self-perception for likelihood of recovery and stress, advance care planning and health literacy. We administered this tool to a consecutive convenience sample of 294 FFS Medicare patients in medical wards at five Rhode Island hospitals, immediately prior to consent for a coaching intervention. We examined patients' subsequent consent based on their screening tool answers. Among 260 (88.4%) patients who completed the tool, 160 (61.5%) subsequently consented to the coaching intervention. Compared with those who ultimately consented to the intervention, patients who declined were less likely to be confident about their recovery (33.7% vs. 74.6% consent rates for low vs. high confidence,  $p < 0.05$ ), less likely to have an advance care planning discussion (39.5% vs. 70.7% consent rates for no discussions vs. discussions,  $p < 0.05$ ) and more likely to incorrectly interpret a medication label (41.7% vs. 77.2% consent rates for incorrect vs. correct interpretation,  $p < 0.05$ ). Researchers can incorporate these findings by asking simple questions to assess patients' health literacy and other key factors. Understanding which patients are at risk for failing to take part in an intervention can help researchers and clinicians differentially tailor recruitment or education, expanding to patients not represented in RCTs and unlikely to volunteer.

#### AGING AND THE DEMAND FOR HEALTH

M. Doyon<sup>1</sup>, H. Payette<sup>1,2</sup>, 1. *Gerontology, Université de Sherbrooke, Sherbrooke, Quebec, Canada*, 2. *Research Centre on Aging, Sherbrooke, Quebec, Canada*

Regarded as the founder of health economics, the Grossman health capital model provides mathematical and theoretical foundations for quantifying health determinants from the perspective of individual choices, scarcity of resources and health investments. Considering health as a depreciating stock over time, individuals seek to maximise their well-being based on the equilibrium between present (and future) benefits of health investment, required efforts, monetary constraints and consumption. Objectives: To develop an adaptation of the Grossman health capital model to the reality of longitudinal quantitative studies aiming at understanding determinants of health and functional autonomy in elderly populations. Methods: In contrast to previous empirical studies on the demand for health, we introduced three important aspects of aging in our theoretical Grossman-type model: 1) the perception of individual's health, 2) the direct satisfaction (utility) of good health, and 3) the dissatisfaction (disutility) of time and physical investments in presence of progressive functional decline. Results: Using maximiza-

tion methods, we theoretically demonstrated the relevance of using prior demands for health as a valuable control variable for the perception of health, and proposed mathematical foundations of the negative relationship between age and health in relation to time preferences and the depreciation rate of health. Conclusion: We derived an applicable biopsychosocial log-linear model of the demand for health based on our theoretical results. This will lead to a future empirical investigation of significance of prior demand for health, as well as a better understanding of coping and adaptation to health changes in the elderly.

#### IS LANGUAGE A PROBLEM? RESEARCHING OLDER ETHNIC MINORITIES

C. Victor, A. Ahmet, *Brunel University, Uxbridge, United Kingdom*

Within the UK there is a growing field of research exploring ageing and ethnicity. Our research in England and Wales focuses on a Leverhulme Foundation funded project exploring caring amongst older ethnic minorities. The project focuses on two age groups: 40-64 year olds and 64+ and six ethnic groups: black African, black Caribbean, Chinese, Pakistani, Indian and Bangladeshi. This is a mixed-methods project using both a quantitative survey of 1200 participants and 60 qualitative in-depth interviews. Given the difficulties of accessing these populations and the variety of languages spoken we contracted a specialist research company to conduct the survey and interviews for using the preferred language of the participant. The interviews were transcribed and then translated into English. There is an emerging literature examining issues such as accessing participants, language, ethnicity and cross cultural research. The first part of the paper will explore the issue of accessing participants and the issues associated with using a specialist research company and the challenges encountered as researchers. In the second part of the paper we explore the additional challenges of researching 6 ethnic groups and the use of 6 different languages. Translation presents a number of issues in qualitative interviewing, for example, in one transcript a participant stated "He almost looks after me very much". The meaning and interpretation based on language differences and cultural understandings of terms such as 'looked after' are central to any cross language research. We conclude by discussing some of the issues associated with translation and analysis

#### PARTICIPATION IN RESEARCH: EXPLORING THE COLLABORATION BETWEEN OLDER PERSONS AND RESEARCHERS

J. Bindels<sup>1</sup>, V. Baur<sup>2</sup>, K. Cox<sup>1,3</sup>, S. Heijing<sup>4</sup>, T. Abma<sup>2</sup>, 1. *CAPHRI Research School, Maastricht University, Maastricht, Netherlands*, 2. *Medical Humanities, VU University Medical Centre, Amsterdam, Netherlands*, 3. *Fontys University of Applied Sciences, Eindhoven, Netherlands*, 4. *Co-researcher, House of the Care, Sittard, Netherlands*

Researchers and policy makers are increasingly convinced that user involvement is necessary to adjust research and its findings to the needs of older people. To gain a better understanding of aging and its implications older people can be involved in research in numerous ways; as participants, advisors, interviewees or as co-researchers. Little is known about the quality of collaborations between older people as co-researchers and academic researchers. This study demonstrates a collaboration between older persons and researchers and systematically evaluates this by using qualitative research methods. Three older men participated as co-researchers in a study which evaluated the experiences of frail older people. In duo-teams (one co-researcher and one academic researcher) they conducted interviews with frail older people. In order to evaluate the collaboration, the co-researchers and academic researchers took part in individual in-depth interviews (after 6 months) and two reflection meetings (after 6 and 12 months). Throughout the collaboration, field notes were taken by both academic researchers and co-researchers. Thematic analysis of the data revealed

that age related prejudice and implicit ideas about a proper task division inhibit a successful collaboration between older people as co-researchers and academic researchers. Working in the field together and the reflection meetings helped to overcome these tensions. Co-labouring, expressing mutual expectations, discussing role divisions, and information sharing proved helpful in achieving a successful collaboration. Interim reflection on the collaboration was found to be necessary to achieve similar conditions.

### **RETAINING OLDER ADULTS AND OTHER DIVERSE PARTICIPANTS IN COMMUNITY-BASED HEALTH STUDIES**

D.H. Odierna, *Clinical Pharmacy, University of California, San Francisco, San Francisco, California*

Background: Longitudinal and clinical research studies are often hampered by poor retention of participants, which can bias results and lead to inaccurate findings. The individuals and groups most vulnerable to social inequalities and poor health may also be more difficult to recruit and retain in studies. Practice guidelines and policies that are based on research that does not adequately include older adults, minorities, and low-income populations risk perpetuating health disparities because findings may apply more to advantaged populations than those that experience social disadvantage. Methods: A social epidemiology framework was applied and six focus group interviews with 48 researchers and outpatient research subjects were conducted at three San Francisco research centers, including a center with a focus on dementia and cognition research, to identify multilevel factors in retention of research participants. Results: While a portion of the data confirms information available in the literature, new information emerged regarding factors at the contextual level (e.g., funding policies, bureaucratic and institutional barriers), the study level (e.g., hiring protocols, participant recruitment procedures, placement and integration of the study into the larger community, availability and use of resources), and participant-level (e.g., employment/retirement status, caregiver issues, perceived benefit, desire for access to information, a sense of community, and perceived connection to the healthcare delivery system). Conclusions: The context in which research is conducted, and the characteristics of research participants and studies may interact to affect retention rates. Investigators should explore multilevel strategies to improve retention of diverse participants in health studies.

## **SESSION 785 (SYMPOSIUM)**

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### **SEX, LONGEVITY & SOCIETY**

Chair: *B.A. Carnes, Geriatric Medicine, U. of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

Discussant: *B.A. Carnes, Geriatric Medicine, U. of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

The Butler Symposium this year is based on an important theme developed by Dr. Butler during his career, and it provides an interdisciplinary examination of the relationship between reproductive biology, longevity and society. One lecture will take an evolutionary/anthropological perspective on how reproductive strategies influence longevity. The centenarian talk will take a reverse look at this issue by seeing whether centenarian females sacrificed reproductive output for enhanced longevity. The third lecture will examine the health and societal implications of delayed reproduction, and the final lecture will focus on a topic of interest to nearly everybody; sex after 60.

### **INTER-GENERATIONAL TRANSFERS, SEX ROLES AND LONGEVITY IN HUMAN LIFE HISTORY EVOLUTION**

H. Kaplan, *University of New Mexico, Albuquerque, New Mexico*

This paper begins by reviewing the demography of extant hunter-gatherers and forager-horticulturalists, showing the relative uniformity in the length of post-reproductive life in such small-scale societies. It then delves into the details of the aging process among Tsimane forager-horticulturalists, with respect to both behavior and physiology. Data will be presented on time allocation, productivity and resource transfers, as a function of age, sex and family composition. Those data show that Tsimane men and women remain net producers until about age 70, the modal age at death for traditional populations, with significant downward transfers to descendants. They also show that men and women adjust their time use as they age, adapting to physical decline and reproductive cessation. Most males cease reproducing when their wives undergo menopause, and both sexes engage in significant grandparental investment. The paper concludes with a discussion of the theory of human lifespan evolution, and important new directions for research.

### **AGE AT LAST CHILDBIRTH AS A MARKER OF MATERNAL RATE OF AGING**

T.T. Perls, *Medicine & Geriatrics, Boston University School of Medicine, Boston, Massachusetts*

Previously published findings from the New England Centenarian Study revealed that centenarian women were more likely to have had children later in life than the average noted for their birth cohort. We found that a woman who had a child after the age of 40 was 4 times more likely to live to 100 than women who did not do so. This birth cohort (born around 1900) did not benefit from either estrogen supplementation or modern day fertility assistance. It is likely that the natural ability to have children beyond the age of 40 is a marker of a very healthy and slowly aging reproductive system and of the absence of age related diseases that would decrease fertility. I will discuss the ramifications of this finding in light of the disposable soma theory and the evolutionary forces that facilitate exceptional longevity.

### **THE SOCIETAL CONSEQUENCES OF DELAYED REPRODUCTION**

B.A. Carnes<sup>1</sup>, I. Schlupp<sup>2</sup>, *1. Geriatric Medicine, U. of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, 2. University of Oklahoma, Norman, Oklahoma*

The inevitability of death creates the equivalent of a race between reproduction and death. This race exists in virtually all organisms with one exception - humans. As humans gain control over their environment and its associated mortality risks, the age of first reproduction has been progressively delayed. This delay is not a natural delay, but a cultural response. The costs of delayed reproduction (e.g., congenital anomalies, genetic diseases) are chronicled in the scientific literature. The objective of this seminar is to summarize the biological consequences but to also explore the broader societal consequences of this clash between biology and culture.

### **SEX AFTER 60**

B.A. Carnes, *Geriatric Medicine, U. of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

Aging has many manifestations. In this presentation, an overview will be provided on how aging affects sex life and relationships in people older than 60. The intent is to identify the challenges posed by biological changes and how those changes can be mitigated. Further, the presentation will examine this issue through the perspective of both the male and female.

## STEM CELLS, CELLULAR SENESENCE AND AGING

## HUMAN MESENCHYMAL STEM CELLS FOR REPAIR OF THE AGING SKELETON: REGULATION BY ISOFORMS OF P63 AND P38

G.A. Howard<sup>1,2,3</sup>, K.M. Curtis<sup>1,2</sup>, K.K. Aenlle<sup>1,2</sup>, K. Chen<sup>1,2</sup>, B.A. Roos<sup>1,2,3</sup>, I. GRECC and Research Service, Veterans Affairs Medical Center, Miami, Florida, 2. Geriatrics Institute, University of Miami Miller School of Medicine, Miami, Florida, 3. Departments of Medicine, Biochemistry & Molecular Biology, and/or Neurology, University of Miami Miller School of Medicine, Miami, Florida

Human mesenchymal stem cell (hMSC) maturation is regulated by hepatocyte growth factor (HGF) and 1,25-dihydroxyvitamin D (1,25OHD). HGF secretion by hMSCs promotes their migration/proliferation. p63, a member of the p53 family, mediates the cooperative actions of HGF and 1,25OHD, up-regulates the vitamin D receptor (VDR), and drives hMSC differentiation. 1,25OHD activates VDR and p63 gene expression. HGF induces p63 binding to the VDR promoter increasing VDR gene expression. p63 has multiple variants via alternative promoters and RNA splicing, forming TA- and ΔNp63 isoforms and α,β,γ splice variants. While hMSCs progress toward the osteogenic phenotype, p63 switches from TA-p63α,β to TA-p63γ. 1,25OHD up-regulates ΔNp63 isoforms, while 24,25-dihydroxyvitamin D (24,25OHD) increases TA/ΔNp63γ mRNA and TA-p63α protein expression — linking 1,25OHD up-regulation of ΔNp63, required for differentiation, and 24,25OHD up-regulation of p63γ, known to regulate VDR expression. HGF signaling promotes osteogenic markers and mineralization — likely due to activation of one or more p38 isoforms (α,β,γ,δ). p38α and p38β are important for skeletogenesis, and their inhibition in hMSCs causes reduced alkaline phosphatase activity and decreased mineralization. HGF promotes phosphorylation of total p38 and differential regulation of specific isoforms. HGF increases p38α, -β and -δ, while decreasing p38γ mRNA. HGF treatment also increases p38β protein. We conclude that the actions of vitamin D on hMSC osteogenic differentiation are likely due to HGF priming hMSCs through activation of specific p38 isoforms, which then allows for a regulatory relationship between p63 gene products and unique 24,25OHD / 1,25OHD effects subsequently responsible for repair of the aging skeleton.

## STRESS RESPONSE AND HIGHLY SUCCESSFUL AGING: CLUES FROM THE HPA AXIS OF CENTENARIAN ROTTWEILER DOGS

D.J. Waters<sup>1,2</sup>, A.H. Maras<sup>2</sup>, H. Xu<sup>3</sup>, S.S. Kengeri<sup>2</sup>, E.C. Chiang<sup>2</sup>, N.N. Kariuki<sup>1,2</sup>, I. Purdue University, West Lafayette, Indiana, 2. Gerald P. Murphy Cancer Foundation, West Lafayette, Indiana, 3. Indiana University, Indianapolis, Indiana

An age-related loss of hypothalamic-pituitary-adrenal (HPA) axis resilience can result in hypercortisolism, which has been linked to an array of adverse outcomes including immune suppression, cognitive impairment, insulin resistance, and cancer growth. To better understand the biological mechanisms and adaptive capacities that contribute to highly successful aging, we studied exceptionally long-lived Rottweiler dogs that, similar to human centenarians, had achieved a duration of longevity that exceeds by more than 30% their breed-specific norm. We hypothesized that highly successful aging might be associated with a preservation of HPA resilience and life-long avoidance of hypercortisolism. The HPA axis of 18 canine centenarians was evaluated by determining: basal plasma cortisol, aldosterone, and ACTH concentrations; post-ACTH challenge plasma cortisol and aldosterone concentrations; and urine cortisol:creatinine ratios. HPA axis evaluation revealed three categories of canine centenarians. Fifty percent of dogs had normal basal cortisol and aldosterone levels with youthful response to ACTH chal-

lenge. Forty percent of dogs had low basal cortisol levels, yet preserved a youthful response to ACTH challenge. Only 10% of dogs showed a deterioration of ACTH response and none of the canine centenarians had hypercortisolism. Taken together, our results from canine centenarians suggest that hypercortisolism resulting from impairment of the HPA axis is not an obligate phenotype intrinsic to the aging process. Further, the discovery of an adaptive, low basal cortisol endophenotype in some of these dogs emphasizes the importance of studies that rely upon challenge, rather than basal measures, to understand the link between physiological resilience and highly successful aging.

## APPROPRIATE REGULATION OF SUBNETWORK OF PROTEOSTASIS IS NECESSARY FOR LONG-TERM HEALTHY SURVIVAL

P.L. Larsen, A.R. Sanchez, S. Takano, Department of Cellular & Structural Biology, The University of Texas Health Science Center at San Antonio, San Antonio, Texas

Animals have evolved to survive ambient temperature fluctuations. A conserved response to cool is an increased life span. Of the twenty thousand *C. elegans* genes, we found significant differential expression of only 338 genes in a microarray analysis of adults acclimatized to 15 C or 25 C (unpublished S. Takano, C. Curtis, S. Tavaré and P. L. Larsen). The largest functional category of the differentially expressed genes was proteostasis. The apparent specificity of the temperature-dependent regulation raised the possibility that the particular proteostatic changes are causal for healthy long-term survival in a cool environment. To test this for several genes in the category, adult worms were fed RNAi *E. coli*. The gene knockdown at 15 C caused severe herniation or paralysis in middle-aged adults, yet retained the long life. This suggests that while thermodynamics may play a role in benefits of cool conditions, it is not sufficient. The up-regulation of specific proteostasis genes is necessary for healthy long-term survival in cool conditions. We investigated whether the defects arose from muscle or neuron dysfunction by subjecting individuals to a daily functional examination from health into paralysis. Our longitudinal studies show that the initial defect is in backward locomotion and paralysis progresses from posterior to anterior, frequently concurrent with vulva herniation. Considering anatomical details, our model is that degeneration of cholinergic motor neurons likely underlies these phenotypes in proteostasis RNAi treated worms. In conclusion, we have found a signature for appropriate regulation of subnetwork of proteostasis necessary for long-term healthy survival in different environments.

## TELOMERASE AND STRESS RESISTANCE: LINKING KEY REGULATORS OF LONGEVITY AND SENESENCE

J. Smith-Sonneborn, University of Wyoming, Zoology and Physiology, Laramie, Wyoming

Stress resistance pathways, requisites for survival and longevity, surface as regulators of elderly vulnerability to acute and chronic diseases. Known functions of telomerase, independent of its role in telomere length, implicate telomerase as a regulator of stress resistance pathways, also activated by hormetic agents and their mimetics. Telomerase actively promotes changes global patterns of gene expression in growth promoting genes, and cell cycle progression, the antithesis of the cell cycle regulation inhibitor p16/INKA, the “senescent gene”. The catalytic protein of telomerase, TERT, physically occupies the upstream promoter regions of the Wnt pathway, active in stem cell development, and maintenance. Over-expression of TERT in various cellular systems confers higher resistance to physiological signals including chemotherapeutic drugs, UV and ethidium bromide, whereas knockdown of telomerase, increases sensitivity to damage. Oxidative stress causes 80–90% of all telomerase to enter the mitochondria and associates with resistance to oxidative stress in mtDNA from peroxide and beta amyloid peptide. Mitochondrial protection provides conservation of the cell powerhouse and maintenance of energy homeostasis in oxida-

tive stress, a common denominator in stress resistance pathways. Environmental and chemical stressors of exercise, starvation, radiation, and their mimetics, trigger hibernation and metabolic pathways to adjust alterations in energy metabolic states, and share upregulation of key regulator molecules NO, and PGC-1 upregulated by telomerase. How telomerase integrates with these hormetic induced pathways is unknown, but elucidation of their connections promises to target agents to shift metabolic states in favor of repair, function, and regeneration, rather than apoptosis, disease and death.

#### **ENDOTHELIAL CELLULAR SENEESCENCE IS INHIBITED BY LIVER X RECEPTOR AGONISTS**

T. Hayashi, K. Ina, H. Nomura, *Geriatrics, Nagoya University Graduate School of Medicine, Nagoya, Japan*

**Objective)** As endothelial senescence proceeds atherosclerosis, finding the anti-senescent molecule is important. Although nuclear receptors (NRs) affect many age related pathophysiological status, their effect on senescence was not known. **Background)** NRs are ligand activated transcription factors working in concert with co-activators and co-repressors to regulate various gene expressions. Its ligands are low molecular weight compounds like retinoic acid, vitamin D3, and thyroid hormone and was suggested to play pathophysiological roles in Atherosclerosis and Diabetes mellitus. However, there are no reports on the role of NRs in aging. **Methods)** Endothelial senescence was induced by exposure to high glucose (Hayashi T, Ignarro LJ et al. PNAS 2006). The effects of LXR agonists like TO901317 and its mechanism were investigated using LXR receptors-siRNA, endothelial NO synthase (eNOS)/ superoxide anion signals and cholesterol transport signals like ABCA1. **Results)** Exposure of human endothelial cells to high glucose (22mM) for 3 days increased senescence-associated- $\beta$ -galactosidase activity, a senescence marker, and decreased telomerase activity, a replicative senescence marker, which LXR agonist, TO901317 prevented in a dose-dependent manner. The effect was associated with reduced reactive oxygen species and increased NO. eNOS-siRNA reduced the anti-senescent effects of LXR agonist. High glucose treatment reduced eNOS expression, and LXR agonist recover it. In the experiment of endothelial senescence evaluated by SA $\beta$ galactosidase, LXR $\alpha$  and  $\beta$  siRNA showed the role of LXR $\beta$  in anti-endothelial senescence. LXR $\beta$  binded to ABCA1, which plays critical roles in endothelial cholesterol efflux. Finally, streptozotocin-induced type 1 diabetes model rats showed more senescent cells and decreased HDL function in aortic endothelium of aged rats compared with age-matched control and LXR agonist-treated animals.

#### **SESSION 795 (SYMPOSIUM)**

##### **AGING AND PEOPLE OF THE MIDDLE EAST: OLD COUNTRY VERSUS NEW WORLD EXPERIENCES**

Chair: *K.J. Ajrouch, Sociology, Eastern Michigan University, Ypsilanti, Michigan*

Co-Chair: *M. Aydin, University of California, Los Angeles, California*

Discussant: *S. Salari, University of Utah, Salt Lake City, Utah*

New frontiers in aging include growing interest in immigrant experiences and the cultural aspects of aging. In this symposium, we raise questions about how aging experiences in homeland countries compare to experiences among those living in the U.S. First, Abdulrahim and colleagues present data from the Family Ties and Aging Study collected in Beirut, Lebanon during 2009 to examine social relationships and health. Results indicate that women's health, but not men's, is vulnerable to negative quality relations with children. Next Aydin and colleagues take advantage of unique data available from the California Health Interview Survey collected from 2001-2009 to provide a health portrayal of Arab Americans aged 50+. Gendered patterns are detected among Arab Americans to reveal more smoking and obesity among Arab American men than women. Comparisons are also made with other

recent immigrant groups including Asian and Latino Americans. Ajrouch and colleagues then compare and contrast Arab Israeli and Arab American attitudes toward care in later life. Drawing from two separate studies of adults aged 60+, the authors carry out parallel analysis to uncover the extent to which gender, education, religion, religiosity, and filial obligation predict attitudes about living preferences, and the role of family and the state. These papers are then discussed by Salari to identify similarities and differences, and to illuminate the gaps in aging research among these populations. In sum, the symposium aims to initiate a discussion about old country versus new world experiences, with special focus on those with ancestry in the Middle East.

##### **CARE PREFERENCES AND NATIONAL CONTEXT: ARAB MINORITIES IN THE U.S. AND ISRAEL**

K.J. Ajrouch<sup>1</sup>, T.C. Antonucci<sup>2</sup>, A. Lowenstein<sup>3</sup>, R. Katz<sup>3</sup>, M. Silverstein<sup>4</sup>, J. Jackson<sup>2</sup>, *1. Sociology, Eastern Michigan University, Ypsilanti, Michigan, 2. University of Michigan, Ann Arbor, Michigan, 3. University of Haifa, Haifa, Israel, 4. University of Southern California, Los Angeles, California*

It is now widely established that among Arabs ethnicity is a prominent factor in explaining family norms, above and beyond religious affiliation. To begin to disentangle cultural beliefs from stratification factors, we compare and contrast Arabs living in two countries: the United States and Israel. Drawing from two datasets with parallel measures we examine Arab Americans (N=101) and Arab Israelis (N=200) aged 60+. Multivariate analyses show that among Arab Americans, Muslims were more likely than Christians to report preferring help from family than government. Among Arab Israelis, however, being Muslim, low religiosity and high filial obligations were associated with agreement that the family should have a larger role than the government in caring for older adults. The diversity of Arabs is discussed as a key feature to better understand care preferences

##### **A GENDERED PROFILE OF HEALTH AMONG OLDER ARAB AMERICANS LIVING IN CALIFORNIA**

M. Aydin, T. Sadegh-Nobari, D. Grant, K. Abanilla, *UCLA Center for Health Policy Research, Los Angeles, California*

This study uses data from CHIS (2001-2009) to provide a comparative gendered health portrait of Arabs (50+ years) living in California (n=526). Population estimates suggest smoking history is more prevalent among older Arabs (50.6%, CI: 44.7-56.4) compared to older Asians (30.6%, CI: 29.2-31.9), and Arab males are more likely to have a smoking history (59.9%, CI: 52.3-67.7) than Arab females (39.1%, CI: 29.9-48.4). Rates of diagnosed diabetes are more than double among Arab males (19.6%, CI: 13.4-25.7) compared to Arab females (7.8% CI: 4.3-11.2). Notable is the high rate of overweight and obesity among Arabs (71.2%, CI: 65.7-76.6), compared to 35.8% of Asians (CI: 34.3-37.4) and 59.7% of non-Arab Whites (CI: 59.2-60.1). Among Arab males, 78.0% (CI: 71.7-84.3) are overweight or obese compared to 62.8% (CI: 53.9-71.7) of Arab females. The impact of acculturation and lifestyle on health risks, especially among older Arab males, will be discussed.

##### **SOCIAL RELATIONSHIPS AND SELF-RATED HEALTH IN LEBANON: THE INFLUENCES OF AGE AND GENDER**

S. Abdulrahim<sup>1</sup>, K.J. Ajrouch<sup>2</sup>, T.C. Antonucci<sup>3</sup>, *1. American University of Beirut, Beirut, Lebanon, 2. Eastern Michigan University, Ypsilanti, Michigan, 3. University of Michigan, Ann Arbor, Michigan*

International research has shown that the quantity and quality of social relationships influence health outcomes differentially for older versus younger adults and for women versus men. Employing data gathered during the summer of 2009 in the Greater Beirut Area (N = 369), we tested the association between social relationship quality (with spouse and child) and self-rated health (SRH). Regression results revealed that, overall, positive relationship quality with spouse exhibited the strongest significant association with

SRH. High negative relationship with child was an important determinant of poor SRH among older women. Results suggest in Lebanon, positive relationship quality with spouse hold primacy in determining subjective health. On the other hand, negative relationship quality with child gains importance as a predictor of SRH among older women.

## SESSION 800 (SYMPOSIUM)

### DEEPENING UNDERSTANDINGS OF OLDER ADULTS' LEARNING AND USE OF THE INTERNET

Chair: *B. Xie, University of Maryland, College Park, Maryland*

Co-Chair: *I. Watkins, University of Maryland, College Park, Maryland*

Discussant: *S.J. Czaja, University of Miami, Miami, Florida*

Research during the past decade has been accumulating increasing amounts of evidence regarding older adults' learning and use of the Internet. Some areas, however, have received relatively little attention. This proposed symposium aims to address some of these gaps by introducing to session attendees recent advances made in deepening existing understandings of older adults' learning and use of the Internet. Specifically, we plan to present four quantitative studies that used a range of data collection and analysis techniques to explore previously understudied areas. Using data from the 2004 graduate sample of the Wisconsin Longitudinal Study (WLS), Berkowsky examined the relationship between Internet use, social integration, and mental well-being among older adults, focusing in particular on social integration as a possible mediator between Internet use and mental health. Cotten examined similarities and differences between the types of Internet use among older adults by comparing data from the Pew Internet & American Life Project and a randomized trial designed to help older adults learn to use computers and the Internet. Using pre/post data from nearly 10,000 older adults who completed a self-paced computer/Internet training program, Harootyan used descriptive and multivariate analyses to examine the effects of peer coaching by participants of the Senior Community Service Employment Program on the learners' skills as well as their attitudes and morale. Finally, Xie and Watkins' theory-driven randomized trial examined the effects of senior-oriented collaborative and individualistic learning strategies on older adults' learning of the technology for health-related purposes.

### GOING ONLINE: EXAMINING TYPES OF INTERNET USE AMONG OLDER ADULTS

S.R. Cotten, W. Anderson, B. McCullough, *Sociology, UAB, Birmingham, Alabama*

Internet use among older adults is much lower than among younger age groups. Although some limited literature suggests that families are one of the key 'pulls' for older adults to begin going online, little is known about the specific types of Internet use among older adults. Data from the Pew Internet & American Life Project and a randomized trial designed to teach older adults how to use computers and the Internet are compared to illustrate similarities and differences between the types of Internet use depending upon sample type. Results are divided according to social/communicative, health, leisure/entertainment, and other types of use. Implications for designing interventions for older adults that are tailored to particular types of Internet use are discussed.

### EXAMINING INTERNET USE, SOCIAL INTEGRATION, AND PSYCHOLOGICAL WELL-BEING IN A COHORT OF OLDER ADULTS

R.W. Berkowsky, *Sociology, University of Alabama at Birmingham, Birmingham, Alabama*

Information and communication technologies (ICTs), such as the Internet, have the potential to enhance social cohesion as well as promote social isolation, and these changes in social integration can have significant effects on mental well-being. This study uses data from the 2004 graduate sample of the Wisconsin Longitudinal Study (WLS) to examine the relationship between Internet use, social integration, and mental well-being in a sample of older adults. Results from OLS regression analyses indicate positive relationships between Internet use and measures of mental well-being including autonomy, environmental mastery, personal growth, positive relations to others, purpose in life, self-acceptance, and overall psychological well-being. Social integration partially mediates the effects of Internet use on well-being, with the strongest mediation effects seen for the positive relations to others outcome. The results of this study may help motivate and direct the distribution of ICT-related resources that will benefit this growing segment of the population.

### PEER COACHING FOR OLDER COMPUTER LEARNERS YIELDS IMPROVED SKILLS AND BETTER OUTLOOK ON LIFE

B. Harootyan, *Research, Senior Service America, Inc., Silver Spring, Maryland*

Peer coaching of older computer learners effectively improves their internet skills, computer confidence, and outlook on life. Results are presented from responses of senior learners in the Digital Inclusion Initiative, a computer/internet coaching program. Senior Community Service Employment Program participants assist other seniors using a self-paced tutorial program at public sites in 16 states. Learners (median age 68; two-thirds female; one-fourth some college; two-thirds with incomes <\$30,000) answered surveys at their first and subsequent sessions regarding computer use, internet skills, and attitudes. Descriptive and multivariate analyses of pre/post data for nearly 10,000 learners who completed the tutorial (graduates) indicate that the DII effectively improves computer skills, confidence in computer use, and comfort level in using the internet. In addition, graduates showed statistically significant improvement across 10 attitudinal/morale scales, including life satisfaction. Regression analysis indicates that the peer coaching experience itself (e.g., number of sessions) enhances learners' morale, self-efficacy and attitudes.

### DEVELOPING AND TESTING COLLABORATIVE LEARNING STRATEGIES FOR OLDER ADULTS' LEARNING OF E-HEALTH LITERACY

B. Xie, I. Watkins, *College of Information Studies, University of Maryland, College Park, Maryland*

Social interdependence theory predicts collaborative learning (CL) outperforms individualistic learning (IL). We modified two CL strategies, Jigsaw and Constructive Controversy, testing their effects on older adults with a randomized trial using a 2 (learning method: CL; IL) x 2 (time of measurement: Pre; Post) mixed factorial design. 119 older adults (age range: 53-87;  $M = 68.31$ ;  $SD = 7.66$ ) were randomly assigned to either condition (CL: 67; IL: 52). The intervention included four 2 hour-long instructions. Multivariate analyses revealed a significant interaction,  $F(3, 78) = 6.43, p = .001$ . Univariate analyses found a significant interaction on computer/Web knowledge,  $F(1, 80) = 101.85, p < .001$ , with participants in the IL condition outperforming those in the CL condition. No significant interaction was found on e-health literacy skills. These results suggest that, contrary to the prediction of social interde-



pendence theory, IL was more effective than CL in improving older adults' e-health literacy.

## SESSION 805 (SYMPOSIUM)

### DEVELOPMENTAL ASSOCIATIONS BETWEEN SHORT-TERM VARIABILITY AND LONG-TERM CHANGES

Chair: G. Hüllür, *Institute of Psychology, Humboldt University Berlin, Berlin, Germany*

Co-Chair: D. Gerstorff, *Institute of Psychology, Humboldt University Berlin, Berlin, Germany*

Discussant: C. Hertzog, *Georgia Institute of Technology, Atlanta, Georgia*

Behavioral changes manifest over many different time scales. Within-person changes extracted from repeated measures taken at yearly or bi-yearly intervals are indicators of individuals' developmental trajectory (e.g., cognitive aging). Within-person variability extracted from repeated measures taken at weekly, daily, or hourly intervals are indicators of individuals' dynamic characteristics (e.g., cognitive plasticity, emotional lability). The major objective of this symposium is to bring together a collection of papers examining whether and how the short-term dynamics of change in individuals' abilities or environments are connected to their long-term developmental trajectories. Hüllür and colleagues use data from the Berlin Aging Study to investigate antecedent-consequent links between micro-longitudinal cognitive plasticity and long-term cognitive change. Almeida et al. examine associations between real-life stressors and salivary cortisol in the National Study of Daily Experiences using diary methods. Chui and Luszcz investigate the links between salivary cortisol, and present and long-term depressive symptoms in the oldest-old in the Australian Longitudinal Study of Ageing. Finkel examines genetic variance in intraindividual variability in reaction time and cognitive functioning using data from the Swedish Adoption/Twin Study of Aging. The discussion by Christopher Hertzog will integrate the four papers and focus on the viability of integrated micro- and macro-longitudinal designs as an effective way to examine how short-term and long-term developmental processes are linked with one another.

### DEVELOPMENTAL ASSOCIATIONS BETWEEN COGNITIVE PLASTICITY AND LONG-TERM COGNITIVE CHANGES IN THE BERLIN AGING STUDY (BASE)

G. Hüllür<sup>1</sup>, N. Ram<sup>2,3,4</sup>, D. Gerstorff<sup>1,2,3</sup>, *1. Institute of Psychology, Humboldt University Berlin, Berlin, Germany, 2. The Pennsylvania State University, University Park, Pennsylvania, 3. German Institute of Economic Research (DIW Berlin), Berlin, Germany, 4. Max Planck Institute for Human Development, Berlin, Germany*

Developmental change spans different time scales. Although theory explicitly suggests that both long-term changes manifesting over the period of several years and short-term changes manifesting over days or weeks contribute to individuals' developmental trajectories, the associations between short- and long-term changes are not well understood. The Berlin Aging Study (BASE) assessed individuals' cognitive ability on 8 roughly bi-yearly occasions (20 years of macro-time). Sub-samples participated in micro-longitudinal "bursts" at Waves 4 and 7 (1 month of micro-time). Combining these data, we provide empirical evidence for how short-term cognitive plasticity serves as both an antecedent and a consequent of long-term cognitive aging. We discuss our findings regarding the importance of short-term variability for understanding individual development, some of the twists inherent in combined micro-macro designs, and suggest possible mechanisms responsible for associations among short- and long-term developmental changes.

### LONGITUDINAL PATTERNS OF DAILY STRESS PROCESSES AND DIURNAL CORTISOL

D. Almeida<sup>1</sup>, J. Mogle<sup>1</sup>, J.R. Piazza<sup>1</sup>, R.S. Stawski<sup>2</sup>, *1. Pennsylvania State University, University Park, Pennsylvania, 2. University of Michigan, Ann Arbor, Michigan*

Current stress theories suggest that chronic exposure to hormones elicited by stressors leads to accumulated wear and tear on the body, referred to as allostatic load. In this presentation we use diary methods that obtain repeated measurements from individuals during their daily lives to assess associations between real-life stressors and salivary cortisol in the National Study of Daily Experiences. Respondents completed nightly interviews about daily stressors at two time points across a 10 year period. The analyses differentiated between individuals who were high at both occasions versus low at both occasions in stressor exposure, reactivity and residue (prolonged affective stressor response). The results showed that individuals who were high in their exposure to stressful events at both time points had dysregulated cortisol rhythms. Compared to their younger counterparts, chronically stressed older adults showed the greatest amount of cortisol dysregulation. Discussion will focus on how daily stress processes and physical well-being.

### DIURNAL CYCLES OF SALIVARY CORTISOL, PRESENT AND LONG-TERM DEVELOPMENT OF DEPRESSION IN THE OLDEST-OLD

H. Chui, M.A. Luszcz, *Psychology, Flinders University, Adelaide, South Australia, Australia*

We examined the association between salivary cortisol, and present and long-term depressive symptoms in the oldest-old in the Australian Longitudinal Study of Ageing. Salivary cortisol samples were collected across seven days from 48 participants (M age = 88.9 years). Present depressive symptoms were assessed at the same time as salivary cortisol collection. Long-term development of depression was assessed four times over 12-years. More present depressive symptoms were associated with a higher level of cortisol at waking and a steeper decline during the day. A long-term increase in depressive symptoms was associated with a lower level of cortisol at waking, a higher level of Cortisol Awakening Response, and a flatter decline during the day. Findings demonstrate that present and long-term developmental patterns of depressive symptoms show differential associations with cortisol in the oldest-old. These findings may shed light on the inconsistent patterns of association between depression and cortisol in previous research.

### INTRA-INDIVIDUAL VARIABILITY IN REACTION TIME SHARES GENETIC VARIANCE WITH COGNITIVE FUNCTIONING IN LATE ADULTHOOD

D. Finkel<sup>1</sup>, N.L. Pedersen<sup>2</sup>, *1. School of Social Sciences, Indiana University Southeast, New Albany, Indiana, 2. Karolinska Institutet, Stockholm, Sweden*

Intra-individual variability (IIV) in reaction time has been related to cognitive decline, but questions remain about the nature of this relationship. Previous twin analyses suggest modest genetic influences on measures of IIV (Finkel & McGue, 2007). Twin analysis of reaction time measured at the fifth wave of the Swedish Adoption/Twin Study of Aging allowed us to extend our understanding of the relationship between IIV and cognitive aging. Mean and range in movement and decision time for simple and choice reaction time tasks were available from over 400 individuals aged 56 - 90. Cognitive performance on four factors was also available: verbal, spatial, memory, and speed. Analysis of twin similarity indicates that all of the genetic variance on the speed and spatial factors is acting via influences on mean and range in reaction time. The largest component of shared genetic variance is between IIV in movement time and the cognitive factors.

## SESSION 810 (SYMPOSIUM)

### NATIONWIDE DISSEMINATION OF THE CHRONIC DISEASE SELF-MANAGEMENT PROGRAM (CDSMP)

Chair: *M.L. Smith, The University of Georgia College of Public Health, Athens, Georgia, Texas A&M Health Science Center School of Rural Public Health, College Station, Texas*

Co-Chair: *M.G. Ory, Texas A&M Health Science Center School of Rural Public Health, College Station, Texas*

Discussant: *M.L. Boutaugh, U.S. Administration on Aging, Atlanta, Georgia*

Since the early 2000s, the Administration on Aging has supported the widespread delivery of evidence-based disease prevention programs for seniors. Simultaneously, the Healthy Aging Research Network of the CDC Prevention Research Centers has examined factors that can facilitate or impede the widespread dissemination and sustainability of evidence-based programming. This symposium will present various planning, dissemination, and effectiveness aspects associated with the Communities Putting Prevention to Work: Chronic Disease Self-Management Program, an initiative reaching nearly 87,000 participants across 45 states and two territories from April 2010 through February 2012. The first presentation (Lorig) will discuss the principles of designing scalable interventions within the context of the Chronic Disease Self-Management Program (CDSMP). The second presentation (Patton) will provide an overview of the national Communities Putting Prevention to Work: Chronic Disease Self-Management Program initiative including a graphic display of the rapid spread of CDSMP across the country to reach this large number of heterogeneous participants. Using data from this national dissemination, the third presentation (Smith) will present findings from a study comparing personal characteristic and workshop attribute profiles by delivery site type to illustrate the ability of CDSMP to reach a diverse set of participants utilizing a diverse network of delivery site organizations. The fourth presentation (Ory) will discuss outcome findings from a national study to show the effectiveness of CDSMP to improve health-related indicators over a 6-month period. To conclude, the Discussant (Boutaugh) will provide perspective about the CDSMP initiative in context of federal and private partnerships for future growth and sustainability.

### REACHING DIVERSE CDSMP PARTICIPANTS UTILIZING A DIVERSE DELIVERY INFRASTRUCTURE

M.L. Smith<sup>1,2</sup>, B. Belza<sup>3</sup>, M. Altpeter<sup>4</sup>, J.B. Dickerson<sup>2</sup>, S. Ahn<sup>5,2</sup>, M.G. Ory<sup>2</sup>,  
1. *College of Public Health, The University of Georgia, Athens, Georgia*, 2. *Texas A&M Health Science Center School of Rural Public Health, College Station, Texas*, 3. *University of Washington, Seattle, Washington*, 4. *University of North Carolina, Chapel Hill, North Carolina*, 5. *The University of Memphis School of Public Health, Memphis, Tennessee*

Background: Participant reach and program adoption are indicative of successful translational research efforts. Organizations typically serve older adults with varying characteristics, thus more diverse groups of older adults may enroll in evidence-based programs if a diverse set of delivery sites offer the intervention. Method: Nationwide data from 50,503 CDSMP participants were analyzed using multinomial logistic regression to generate profiles by delivery site type. Results: Approximately 66% of workshops were delivered at senior centers/AAA, 20.1% at healthcare organizations, 6.2% at community/multi-purpose organizations, 4.6% at county health departments, and 3.0% at educational institutions. Significant variation in participant characteristics (e.g., age, sex, race/ethnicity, rurality) and workshop attributes (e.g., class size, attendance) were observed by delivery site type. Conclusion: CDSMP has capacity to serve large numbers of heterogeneous participants through a growing delivery site organization network. Findings may inform program deliverers to offer CDSMP in settings reaching participants most likely to enroll in workshops.

### DESIGNING BEHAVIORAL INTERVENTIONS FOR SCALING

K. Lorig, *Stanford University School of Medicine, Palo Alto, California*

There are now many evidence-based programs for seniors being disseminated throughout the country. Scalability is a new frontier in evidence-based theory and research. Many researchers think that the work is over after proving an intervention is evidence-based. However, if you build it they will come but only if well-designed. Using the Chronic Disease Self-Management Program (CDSMP) developed at Stanford as a case study, this presentation will overview principles for designing scalable interventions. These include: (1) keeping it simple; (2) building a strong evidence base; (3) integrating mechanisms to assure fidelity standards; (4) supporting strong leadership and governance; (5) fostering active engagement of a range of implementers and communities; and (6) tailoring approaches (not interventions) to local situations. Dr. Lorig will share her twenty year plus experience of disseminating CDSMP providing lessons learned for others in bringing evidence-based programs for seniors to scale.

### MAINTAINING POSITIVE OUTCOMES IN A NATIONAL ROLL-OUT OF CDSMP

M.G. Ory<sup>2</sup>, S. Ahn<sup>4,2</sup>, M.L. Smith<sup>1,2</sup>, L. Jiang<sup>2</sup>, P. Ritter<sup>3</sup>, K. Lorig<sup>3</sup>,  
1. *College of Public Health, The University of Georgia, Athens, Georgia*, 2. *Texas A&M Health Science Center School of Rural Public Health, College Station, Texas*, 3. *Stanford University School of Medicine, Palo Alto, California*, 4. *The University of Memphis School of Public Health, Memphis, Tennessee*

Background: Despite the recent roll-out of CDSMP in most states through aging and health networks, there have been no studies about the effectiveness at the national level. This presentation addresses the impact of CDSMP on quality of life and role functioning outcomes from a national perspective. Method: 1170 participants from 22 different organizational delivery settings in 17 states were enrolled in CDSMP workshops as part of an outcome study within the broader ARRA initiative. Six-month assessments were available for 903 participants. Linear Mixed Models analyses were used to assess health indicator changes, controlling for key socio-demographics. Results: Participants were an average of 65 years, primarily female (82%), racially diverse (45%), with an average of 3 co-morbidities. Significant improvements were seen in overall quality of life, reduced pain and fatigue, and improved role function. Conclusion: The national dissemination of CDSMP replicated previously documented positive health outcomes found in previous research studies.

### AN OVERVIEW OF COMMUNITIES PUTTING PREVENTION TO WORK: CHRONIC DISEASE SELF-MANAGEMENT PROGRAM

K. Patton<sup>1</sup>, M.L. Smith<sup>2</sup>, M.G. Ory<sup>3</sup>, K. Lorig<sup>4</sup>, W. Zenker<sup>1</sup>, N. Whitelaw<sup>1</sup>,  
1. *National Council on Aging, Washington, District of Columbia*, 2. *University of Georgia, Athens, Georgia*, 3. *Texas A&M University, College Station, Texas*, 4. *Stanford University, Palo Alto, California*

Purpose: This presentation will provide an overview of the Communities Putting Prevention to Work: Chronic Disease Self-Management Program, an initiative led by the U.S. Administration on Aging in collaboration with the Centers for Disease Control and Prevention and the Centers for Medicare and Medicaid Services. Method: Evidence-based programs were disseminated in 45 states, Puerto Rico and District of Columbia by state units on aging or state health departments. Grantees developed a distribution and delivery system that increased CDSMP workshop availability and participant enrollment. Results: From April 2010 through February 2012, nearly 87,000 CDSMP participants were reached. Nearly 8,000 workshops were offered at community-based organizations nationwide, impacting a diverse, vulnerable group of older adults. Conclusion: This initiative was highly successful in terms of the rapid expansion and scaling of an evidence-based, community-based self-management intervention. Additionally, a variety of replicable best practices were identified and promoted.

## SESSION 815 (SYMPOSIUM)

### NEW DIRECTIONS IN THE STUDY OF GENERATIVITY

Chair: *R. Rubinstein, University of Maryland, Baltimore County, Baltimore, Maryland*

Discussant: *K. de Medeiros, Miami University, Oxford, Ohio*

Generativity is an important life-span developmental and cultural concept. This Symposium offers new directions in its study and understanding. The notion of generativity originally was developed to reflect parental energies towards the next generation, but this term has been reframed more recently to deal with a variety of nurturing or mentoring behaviors and with a concern for the self through time. Papers in the Symposium are based on the results of two research projects: an ethnographic study of cognitively-impaired older persons living in an assisted living and nursing home facility and a qualitative study of 192 older women, the majority of whom have never had children and have needed to deal with generative issues through non-parental means (called the GLOW Study). The five papers develop new interpretations of generativity. These include: a discussion of generative activities by victims of Alzheimer's disease in long-term care; an examination of how chronically-ill older persons continue generative actions; the development of a comprehensive framework for discussing generativity and contrasting it with exchange theory; a discussion of self-reliance among older women and its relationship to generative action; and, the construction of long-term care planning by childless older women in relationship to generative concerns. Each of these themes is substantively and theoretically developed to show how the scope of generativity can be enlarged to incorporate important activities by older persons.

### GENERATIVE ACTS OF PEOPLE WITH DEMENTIA IN A LONG-TERM CARE SETTING

P.J. Doyle, R. Rubinstein, *Center for Aging Studies, Sociology/Anthropology Department, University of Maryland Baltimore County, Baltimore, MD*

Erickson stated that "not being needed may be felt as a designation of uselessness...if one should withdraw altogether from generativity, from creativity, from caring for and with others entirely, that would be worse than death." The progression of dementia and entry into long-term care settings have not been examined as transitions that could impede generative activities. This paper uses data from an 8-month ethnographic project within a dementia-specific long-term care setting to examine the issues of generativity. Field notes from over 400 hours of observations as well as interviews with 20 residents with dementia were thematically analyzed to identify 1) instances of generative acts of people with dementia; 2) barriers to generativity (e.g., lack of recognition/encouragement of generative acts); and 3) common expressions by residents regarding ways they wish to be generative. This paper concludes by critically discussing the implications of generativity on the provision of person-centered dementia care.

### CHRONICALLY ILL OLDER WOMEN AND GENERATIVITY; A STUDY OF CHILDED VERSUS CHILDLESS WOMEN

S.M. Hannum, R. Rubinstein, *Sociology and Anthropology, University of Maryland, Baltimore County, Baltimore, Maryland*

The ability of chronically ill older women to continue generative activities into the third and fourth age, and the impact on quality of life, are important areas that have been largely ignored in the literature. As women age, and social relationships decline, engagement in meaningful activities becomes even more important to one's ability to achieve a satisfactory sense of one's life quality, helping to decrease feelings of loneliness and depression, increasing feelings of life satisfaction. This analysis of data from the GLOW study compares a subsample of chiled versus childless older women (aged 65+), investigating how morbidity affects a person's abilities to continue generative activities and, fur-

ther, how it impacts each woman's overall subjectively defined quality of life. Findings will be presented, including key themes regarding generative activities for older women, both with and without children. These themes will be discussed and applied utilizing an overall illness model.

### LONG-TERM CARE PLANNING AND CONCERNS AMONG GLOW (GENERATIVITY AND LIFESTYLES OF OLDER WOMEN) STUDY PARTICIPANTS

A. Mosby, *University of Maryland, Baltimore County, Baltimore, Maryland*

Across the population of people 65 and over in the U.S., approximately 35% need formal or informal long-term care services, and approximately 75% of the elderly receiving these services are women. Many institutions and support systems assume that elders receive a great deal of care from family. However, little is known about the concerns and future planning of people without children or familial support. The purpose of the GLOW study is to gather the perspectives on a variety of issues of women who are childless, including life story, views of later life, health care plans, outlets for generativity and events that have been important in their lives. This paper will report on the demographics of study participants and discuss general themes on their preferences for health care and caregiving services. The findings have significant implications for community planners, formal and informal long-term care providers, and support resources for seniors.

### GENERATIVITY THEORY: DEVELOPMENT OF A COMPREHENSIVE FRAMEWORK

L. Girling, M. Brazda, R. Rubinstein, *University of Maryland, Baltimore County, Baltimore, Maryland*

While earlier theories of generativity have been used in research, there is a need to expand upon these theories to develop a more comprehensive framework for understanding generativity. The theoretical approach proposed in this paper extends previous definitions of generativity by defining four foci of generativity (people, groups, things, and activities) and four spheres of generativity (historical, familial, individual, and relational). This new framework will allow researchers to answer critical questions about generativity and self-concept among the elderly. These questions include: 1.) What have older people done over their life spans that may be considered generative? 2.) What are the types of generativity and how do these compare among various older persons? And 3.) How do forms of self-expression, creativity, and even self-involvement relate to generativity?

## SESSION 820 (SYMPOSIUM)

### NEW FRONTIERS: ADVANCEMENT OF THE REDUCING DISABILITY IN ALZHEIMER DISEASE (RDAD) PROGRAM

Chair: *H.L. Menne, Margaret Blenkner Research Institute, Benjamin Rose Institute on Aging, Cleveland, Ohio*

Discussant: *L. Teri, University of Washington, Seattle, Washington*

Reducing Disability in Alzheimer Disease (RDAD) is a unique exercise and behavior management program. First, it has an evidence base supporting the benefit of the program for dementia caregiving families. Second, it involves both the person with dementia and the family caregiver while most evidence-based dementia programs focus solely on the caregiver. Third, RDAD encourages exercise with the goal of improving physical functioning for the person with dementia and reducing the physical burden on the caregiver. This symposium presents the RDAD trajectory from development and randomized controlled trial, to community-based replication, to enhanced versions of the program, and to a comparative efficacy trial. First, Teri provides background and history about the development of RDAD at the University of Washington. Next, Menne and colleagues describe the translation of RDAD from an evidence-based program to a community-based program offered across the State of Ohio. Enhanced versions of RDAD have also been

developed and Primetica and Bollin describe the rationale, modifications, and progress of a) having RDAD implemented by home health aides and b) developing and testing a group version of the protocol. Logsdon presents her study which tests the comparative efficacy of a shortened RDAD program and early stage memory loss support group. Discussion by Teri will provide reaction about the progress of RDAD as well as insights for further advancement of evidence-based programs.

### **REDUCING DISABILITIES IN ALZHEIMER'S DISEASE (RDAD): FROM EVIDENCE-BASE TO COMMUNITY TRANSLATION**

L. Teri, *U. Washington — School of Nursing, Seattle, Washington*

RDAD, Reducing Disabilities in Alzheimer's Disease, a patient-focused, caregiver-based program of exercise and behavioral change was developed to help family caregivers alleviate the behavioral problems prevalent among their care-recipients while simultaneously increasing their level of physical activity. Findings from an RCT of 153 community-dwelling patient-caregiver dyads RDAD significantly increased level of activity ( $p < .01$ ), improved their physical (SIP  $p < .001$ ) and affective function (CDDS,  $p < .02$ ) and reduced restricted activity days ( $p < .001$ ), improvement maintained two years post-treatment and institutionalization due to behavioral disturbance was less (19% vs. 50%). RDAD has been implemented in three states (Ohio, Oregon and Washington). This presentation will provide an overview of RDAD, describing salient findings and aspects of the intervention, and discuss issues considered during development to facilitate translation. It will provide a basis for subsequent presenters to address how RDAD has (or has not) been modified to fit their unique community-based agency needs.

### **OHIO'S REPLICATION OF REDUCING DISABILITY IN ALZHEIMER DISEASE**

H.L. Menne, J.D. Johnson, D.M. Bass, *Margaret Blenkner Research Institute, Benjamin Rose Institute on Aging, Cleveland, Ohio*

In 2008, the Ohio Department of Aging obtained support from the Administration on Aging to offer the program Reducing Disability in Alzheimer Disease (RDAD). Program modifications were needed to replicate RDAD as a community-based program. Core RDAD components (e.g., session topics, handouts) were not modified in the community replication; however, in collaboration with the original researcher, program administration components were modified (e.g., eligibility, different depression measures). Preliminary replication results are available from over 550 participating families in Ohio. In the original treatment group and in the Ohio replication there is an increase in the percentage of persons with dementia (PWD) who exercise for 60 minutes or more in a week (Ohio, T1 = 59.5%; T2=73.8%). Whereas Teri and colleagues (2003) note improvement in PWD depression during the first 3 months, in Ohio no difference in depression has been found. Program sustainability in the seven participating agencies will be discussed.

### **REDUCING DISABILITY IN ALZHEIMER DISEASE (RDAD), A HOME HEALTH AIDE TRAINER MODEL**

B. Primetica, H.L. Menne, *Benjamin Rose Institute on Aging, Cleveland, Ohio*

Reducing Disability in Alzheimer Disease (RDAD), a home health aide trainer model, was implemented at the Benjamin Rose Institute on Aging in September 2011. Four home health aides were trained as RDAD trainers, as opposed to nurses and social workers, using standard RDAD manual and protocols. To support the HHA implementation, the program administration guidelines were modified, such as providing dementia training to ensure common knowledge, administering quality assurance surveys with the families after six sessions, and offering additional supervision sessions. Trainer Survey results outline trainer characteristics (e.g., 100% female, 100% African American), and trainer satisfaction with RDAD administrative processes, content of sessions, documentation, and communication with supervisors. In addition, Family

Quality Assurance Surveys show satisfaction with trainers' knowledge and skills, timeliness, and communication about the program. This compilation of data demonstrates administrative challenges and successes with the RDAD Home Health Aide Trainer Model.

### **RDAD ENHANCED GROUP SESSIONS - A NEW COURSE IN THE FRONTIER**

S. Bollin<sup>1</sup>, H.L. Menne<sup>2</sup>, 1. *Alzheimer's Association, Northwest Ohio Chapter, Toledo, Ohio*, 2. *Benjamin Rose Institute on Aging, Cleveland, Ohio*

Agencies struggle with having the necessary resources to offer in-home interventions like the Reducing Disability in Alzheimer Disease (RDAD) program. In addition, families often benefit and build skills when interacting with peers who have similar experiences. To serve families in a manner that may be more cost effective, RDAD in Ohio staff developed a group format of RDAD that covers the identical topics over the same number and sequence of sessions as the in-home RDAD. RDAD Group is first implemented and closely monitored in one site. Initial groups will consist of 3-6 families and be facilitated by 2-3 staff members who are trained in RDAD and group dynamics. After gathering session-by-session feedback from facilitators and families, modifications will be made to the group implementation and re-tested in four additional sites in Ohio. It is hoped that RDAD Group will yield results similar to the current in-home version.

### **A RANDOMIZED TRIAL OF SOCIAL SUPPORT AND PHYSICAL ACTIVITY INTERVENTIONS FOR EARLY STAGE DEMENTIA**

R.G. Logsdon, L. Teri, S.M. McCurry, *Psychosocial & Community Health, University of Washington, Seattle, Washington*

This presentation describes the development and early stages of a randomized controlled comparative efficacy trial of modified versions of two evidence-based interventions: Early Stage Memory Loss support groups (ESML) and Reducing Disability in Alzheimer's Disease (RDAD). Each has been modified into a 4-week, group format involving both individuals with early stage dementia and family care partners. These modified interventions are being compared to each other and to a usual care (UC) control group. The aims of this investigation are to evaluate the comparative efficacy of each condition to: improve social participation and family communication; improve physical activity participation and physical function; and improve quality of life and depression for both persons with dementia and care partners. If successful, these 4-week programs may be developed into "modules" that can be incorporated into programming for individuals with early stage dementia in a variety of community settings.

### **SESSION 825 (SYMPOSIUM)**

#### **OLDER ADULTS AND DISASTERS: ARE GERONTOLOGISTS PAYING ATTENTION?**

Chair: *L.M. Brown, School of Aging Studies, University of South Florida, Tampa, Florida*

Co-Chair: *M. Gibson, Veterans Care Program Parkwood Hospital St. Joseph's Health Care London, London, Ontario, Canada*

Discussant: *R. Roush, Former President of the National Association of Geriatric Education Centers*

Disasters are increasing worldwide, and mounting evidence suggests that older people are disproportionately vulnerable. This begs the question, "Are gerontologists paying attention?" In this symposium, the importance of gerontology in disaster planning and response will be presented. These data driven presentations will highlight recent international initiatives, including a web-based training program for Canadian dementia care providers, coping and resilience among older adults affected by the 2011 Triple Disaster in Japan, and the adaptation of a disaster mental health initiative, psychological first aid (PFA), for nurs-

ing home residents. This symposium will highlight the critical issues driving the push towards more attention to emergency management among those whose professional identities include a gerontology or geriatric focus. We will describe issues that need attention such as building capacity for health care providers and organizations to protect older adults, the engagement of older adults fully as a resource within emergency planning and response, and the delivery of age appropriate mental health care that meets the needs of both providers and older adults. The presentation will draw on recent disasters across the world to illustrate the challenges and opportunities for gerontologists.

### **SERVICES FOR TREATING OLDER RESIDENTS' MENTAL HEALTH: USING PSYCHOLOGICAL FIRST AID**

L.M. Brown, K. Hyer, *School of Aging Studies, University of South Florida Tampa, Florida*

Psychological First Aid (PFA) is a flexible, culturally informed, evidence-based intervention that is now widely used by first responder organizations, such as the American Red Cross and the Medical Reserve Corp to reduce distress and promote adaptive functioning and coping in affected populations. This presentation will describe the findings from two research projects that evaluated the feasibility of using PFA with older adults. The first study examined the potential of using nursing home staff to administer a modified version of PFA after a disaster. PFA, like medical first aid, does not have to be delivered by a licensed mental health clinician. Our findings indicate positive staff evaluation of the training and a high degree of confidence in delivering the intervention. The second study describes how the PFA materials were modified and pilot tested. We also will discuss challenges in conducting efficacy research on PFA with vulnerable populations.

### **MERGING METHODS IN KNOWLEDGE EXCHANGE TO PROMOTE DISASTER RISK REDUCTION FOR OLDER ADULTS**

M. Gibson<sup>1</sup>, S. Clark<sup>2</sup>, *1. Veterans Care Program, Parkwood Hospital, St. Joseph's Health Care, London, Ontario, Canada, 2. Canadian Dementia Resource and Knowledge Exchange (CDRAKE), Canada*

E-learning is a growing method for delivering education across geographic, temporal and professional boundaries. However, it is known that many people prefer a combination of self-study and group process to support their learning journey. The Public Health Agency of Canada's Division of Aging and Seniors, the Canadian Dementia Resource and Knowledge Exchange (CDRAKE) and the lead developer (MG) of the e-learning series, "Frailty, Dementia and Disasters: What Health Care Providers Need to Know" partnered to deliver a four part Facilitated E-learning series to participants from across Canada. Learning interactions were built into the e-learning modules and implemented as group processes. Participant evaluations (n=39) were positive for both content and process. Potential applications of this merged methodology to build capacity in interprofessional education about seniors and disaster risk reduction will be presented.

## **SESSION 830 (SYMPOSIUM)**

### **SUICIDE RISK AND CHALLENGES OF OLDER ADULTHOOD**

Chair: *E. Price, West Virginia University, Morgantown, West Virginia*  
Co-Chair: *P. Bamonti, West Virginia University, Morgantown, West Virginia*

Discussant: *M.J. Heisel, University of Western Ontario, London, Ontario, Canada*

Older adults are at increased risk for death by suicide; therefore factors that may increase suicide risk need to be examined. Cognitive, emotional, and health challenges commonly faced by older adults may contribute to risk. This symposium will highlight these connections through presentations of empirical work and critical reviews of the lit-

erature. First, Madeleine Mellqvist will present a study of the relation between functional disability and death wishes across European populations. Second, Sarra Nazem will present a critical review of the literature examining the relations among cognitive impairment, dementia, and suicide risk. Third, Dr. Mark Kaplan will present research from the National Violent Death Reporting System examining the presence of alcohol in older suicide decedents. Fourth, Jay Gregg will critically review empirical support for the relation between hopelessness and suicide risk in late life. Lastly, Dr. Alisa O'Riley will present research examining rates and correlates of suicide and death ideation in older adults accessing community-based aging services. To conclude, Dr. Marnin Heisel will serve as the discussant summarizing the present findings and ideas for future research.

### **HOPELESSNESS AND SUICIDAL BEHAVIOR IN LATER LIFE: A CRITICAL REVIEW**

J.J. Gregg, A. Fiske, *Psychology, West Virginia University, Morgantown, West Virginia*

Older adults have high rates of suicide across the world. The identification of psychological risk factors for suicide in late life is crucial for prevention and intervention efforts. One such risk factor identified in younger adults is hopelessness, defined as a system of negative beliefs about one's self and one's future. In order to clarify the current state of this literature with regard to older adults, 16 studies were reviewed. Based on this critical review, hopelessness appears to be related to suicidal ideation and prior suicide attempts in older adults. However, the evidence regarding the relative strength of hopelessness as a risk factor for suicidal behavior in later life compared to depression and other variables is inconclusive. In addition, there are limitations associated with current measures of hopelessness among older adults (e.g., Geriatric Hopelessness Scale). Overarching strengths and limitations of the current literature and future directions will be discussed.

### **A CRITICAL EXAMINATION OF THE RESEARCH ON COGNITIVE IMPAIRMENT, DEMENTIA AND SUICIDAL BEHAVIORS**

S. Nazem<sup>1</sup>, A. Fiske<sup>1</sup>, M.R. Nadorff<sup>1,2</sup>, *1. Department of Psychology, Morgantown, West Virginia, 2. Baylor College of Medicine, Houston, Texas*

Rates of both suicide and dementia are elevated among older adults. A better understanding of whether individuals with dementia or cognitive impairment are at increased risk for suicidal behavior is imperative for identification, intervention and prevention efforts. The authors will present a critical analysis of the literature on the association between cognitive impairment and suicidal behaviors. Findings suggest that dementia is not associated with increased risk for suicidal behaviors (e.g., Chiu et al., 1996; Erlangsen et al., 2006; Peisah et al., 2007) but that early dementia or cognitive impairment may be common in individuals who have died by suicide or attempted suicide (e.g., Barkak & Aizenberg, 2002; Leuret et al., 2006; Osvath et al., 2005). The authors will provide an overview on the limitations of this research, providing explanation for results and inconsistencies across studies. Suggestions for future research, as well as implications for clinical practice will be addressed.

### **FUNCTIONAL DISABILITY AND DEATH WISHES IN ELDERLY EUROPEANS – RESULTS FROM THE EURODEP CONSORTIUM**

M. Mellqvist Fä sberg, K. Bä ckman, S. Östling, I. Skoog, M. Waern, *Neuroscience and Physiology, Mölndal, Sweden*

Background: Physical illness has been shown a predictor of suicide in the elderly. The association between functional disability and suicidal behaviour is less clear. Aims: To examine the relationship between functional disability and death wishes in late life. We hypothesized that the association between functional disability and death wishes is stronger

in countries with high suicide rates and test this in a large cohort of elderly Europeans. Methods: Data from 11 population studies on depression in late life were pooled, yielding a total of 16 487 respondents (65+). Level of functional disability was trichotomised (no, intermediate, high). A person was considered to have death wishes if the death wish/suicidal ideation item of the EURODEP scale was endorsed. Odds ratios for death wishes associated with functional disability were calculated in a multilevel logistic regression model. Results: Both intermediate and high functional disability predicted death wishes. No sex differences could be shown.

#### **SUICIDE AND DEATH IDEATION IN OLDER ADULTS OBTAINING AGING SERVICES**

A. O'Riley, K.A. Van Orden, H. He, C. Podgorski, Y. Conwell, *University of Rochester Medical Center, Rochester, New York*

Research suggests that late life suicide prevention programs need to be centered in organizations and institutions outside of the mental health system. One potential venue for instituting interventions designed to decrease late life suicide is organizations that provide services through the Aging Services Network (ASN); however, at the current time, little is known about levels of suicide risk among older adults who access aging services. This presentation will present data from a study examining the prevalence and correlates of death and suicide ideation in older adults accessing aging services. This study of 377 older adults (60+) who accessed an aging service organization in Monroe County, NY indicated that death and suicide ideation were common among Aging Services Network clients (14% endorsed current death or suicide ideation, 27.9% endorsed death ideation in the past year, and 9.3% endorsed active suicide ideation in the past year). In multivariate models, current and past suicide and death ideation were differentially associated with depressive symptoms, anxiety symptoms, medical comorbidity, demographic variables, alcohol misuse, and lower levels of social support. The results of this study provide evidence that aging service organizations may be ideal settings for intervention programs designed to reduce suicide ideation in late life.

### **SESSION 835 (SYMPOSIUM)**

#### **TOWARDS EFFECTIVE PROGRAMS ON FALLS PREVENTION AND FEAR OF FALLING IN DIFFERENT POPULATIONS**

Chair: *G.I. Kempen, Maastricht University, CAPHRI - Dept. of Health Services Research, Maastricht, Netherlands*

Co-Chair: *G. Zijlstra, Maastricht University, CAPHRI - Dept. of Health Services Research, Maastricht, Netherlands*

Discussant: *H. Lach, Saint Louis University, St. Louis, Missouri*

Falls and fear of falling are highly prevalent among aged people and their impact can be substantial. They can lead to reduced quality of life, reduced social and physical functioning, and increased costs following required health care. Falls and fear of falling are different constructs, yet related as they share particular risk factors and each is a determinant of the other. Reviews of the literature have shown that a variety of programs can prevent falls and fear of falling (or related concepts, such as balance confidence) in community-dwelling older populations. In this symposium we focus on the effects of prevention programs on fear of falling in different older populations, i.e. people with dementia and pulmonary disease, and on new findings that may contribute to the improvement of existing programs, e.g. people's perceptions and delivery of the program. Researchers from Germany, the US, and the Netherlands will present new data. Their presentations focus on: 1) objective assessments and subjective perceptions of fear of falling in people with dementia, 2) the effects of a pulmonary rehabilitation program on balance confidence, 3) the effects of a fall prevention program on fear of falling, 4) objective and subjective outcomes regarding the delivery of a fear of falling program, and 5) the effects of the imple-

mentation of a fear of falling program translated into practice. Our discussion from the US will reflect on the presentations in view of GSA's theme 'Charting New Frontiers in Aging' and will facilitate a discussion on-site.

#### **MISMATCH OF OBJECTIVE FALL RISK AND CONCERNS ABOUT FALLING IN PATIENTS WITH DEMENTIA**

K.A. Hauer<sup>1</sup>, M. Schwenk<sup>1</sup>, I. Dutzi<sup>1</sup>, S. Tüerner<sup>1</sup>, S. Englert<sup>2</sup>, *1. Geriatric Research, Bethanien-Hospital at the University of Heidelberg, Heidelberg, Germany, 2. Institute for Medical Biometry, University of Heidelberg, Heidelberg, Germany*

Objective: to determine the mismatch of objective fall risk and subjective concerns about falling and differences between subgroups of patients. Methods: Subgroups of mismatch were identified by Chi square automatic interaction detection analysis (CHAID) in geriatric patients with dementia (n=173) Results: Among the objective high risk group (HR, n=100) 65 patients were identified as mismatch (low subjective concerns, LSC). Among the objective low risk group (LR, n=74) 50 patients were classified as mismatch (High subjective concerns, HSC). In the LR group, mismatch patients (HSC) showed significantly increased anxiety, activity restriction, external support, denial of falls, concerns about falling and cognitive performance in some (verbal fluency, immediate recall) cognitive sub-domains and decreased Quol (SF-12) and balance and gait performance (Tinetti, sway area). In the HR group, mismatch patients (LSC) showed significantly decreased: reports of falls, activity restriction, external support, fall related concerns about falling, and depression and increased motor performance (Tinetti, TUG).

#### **BALANCE CONFIDENCE AND FUNCTIONAL MOBILITY AMONG PULMONARY REHABILITATION PARTICIPANTS: A PILOT STUDY**

D. Klima, M. Layshock, J. Chalmers, M. Goodwin, C. Martins, M. Treuth, *UMES, Princess Anne, Maryland*

Pulmonary disease is a significant health problem in the US. The purpose of the study was to examine the relationship between balance confidence, gait performance, and pulmonary function in a hospital-based Pulmonary Rehabilitation (PR) program. Twenty-three patients (mean age 71.1±8.5 years) with chronic obstructive or restrictive lung disease participated. Pulmonary function included parameters of forced vital capacity (FVC), forced expiratory volume (FEV1), and FEV1/FVC. Patients completed the Timed Up and Go (TUG), the 4 m walk, and the Activities Specific Balance Confidence Scale (ABC). Pulmonary function tests revealed a FVC of 2.5±0.7L, FEV1 of 1.5±0.5L, and FEV1/FVC of 59.3±13.8%. Patients reported low balance confidence (68.6±23.3%). A wide range in the TUG was evident (8-21 sec). The ABC scale was negatively related to TUG performance (r=-0.82, p<0.001), and negatively related to FEV1/FVC (r=-0.59; p<0.005). Balance confidence is related to lung function and functional mobility among pulmonary rehabilitation participants.

#### **THE EFFECTS OF N'BALANCE® ON THE FEAR OF FALLING AND PERCEPTIONS OF LEISURE IN COMMUNITY-DWELLING OLDER ADULTS**

C.M. Headley, *Exercise & Sport Science, Judson University, Elgin, Illinois*

This study examined the effects of a community-based fall prevention intervention (N'Balance®) for adults 55 and over, exploring fear of falling, balance and leisure self-efficacy. N'Balance®, a multi-factorial, multidimensional intervention, focuses on challenging and improving the sensory systems. This quasi-experimental intervention had both treatment and control groups using two sites. This 6-week program met twice weekly for 50 minutes, and included pre- and post-test physical and psychosocial assessments. Measures included the 30-second chair stand, 8-foot Up-and-Go, 50-foot Gait Analysis, Modified Clinical test of Sensory Interaction in Balance, Fullerton Advanced Bal-

ance Scale, postural analysis, and a questionnaire. Results of pre- and post-test assessments indicated that N'Balance© participation was associated with improved balance (.00), the fear of falling (.04), and approached significance with leisure self-efficacy (.06). Overall, results indicated that N'Balance©, a promising intervention, seems to reduce the fear of falling and improve perceptions in leisure self-efficacy in older adults.

#### **DELIVERY OF A FEAR OF FALLING PROGRAM: COMPARING FACILITATORS' SELF-REPORTS TO AUDIO RECORDINGS**

T. Dorresteijn<sup>1</sup>, G. Zijlstra<sup>1</sup>, J.C. van Haastregt<sup>1</sup>, J. Vlaeyen<sup>2,3</sup>, G.I. Kempen<sup>1</sup>,  
1. Department of Health Services Research, CAPHRI, Maastricht University, Maastricht, Netherlands, 2. Department of Clinical Psychological Science, Maastricht University, Maastricht, Netherlands, 3. Research Group Health Psychology, University of Leuven, Leuven, Belgium

This study compares facilitator's self-reported performance to audio recordings on the delivery of a cognitive-behavioral in-home program to manage concerns about falling in frail older people. For each session facilitators reported on a registration form the extent to which program components were delivered: fully (score 1), partly (score 2), or not achieved (score 3). Two independent reviewers scored the program components based on audio recordings. According to the reviewers 43% of the 38 program components were fully, 42% partly, and 15% not achieved (mean score = 1.7). Facilitators' self-reported data indicated that 86% was fully, 4% partly and 3% not achieved (mean score = 1.1). A Wilcoxon signed-ranks test showed a significant difference in the outcomes of the two assessment methods for program delivery ( $z = -9.50$ ,  $p < .01$ ). This study shows that self-reported data and audio recordings may lead to different findings regarding the delivery of a program.

#### **THE EFFECTS OF A FEAR OF FALLING PROGRAM TRANSLATED INTO PRACTICE**

G. Zijlstra<sup>1</sup>, M.F. Du Moulin<sup>1,2</sup>, J.C. van Haastregt<sup>1</sup>, M.C. de Jonge<sup>3</sup>, G.I. Kempen<sup>1</sup>, A. van der Poel<sup>3</sup>, 1. Maastricht University, CAPHRI - Department of Health Services Research, Maastricht, Netherlands, 2. Zuyd University of Applied Sciences, Heerlen, Netherlands, 3. Trimbo Institute, Program Mental Health, Utrecht, Netherlands

Results of an RCT showed the effectiveness of a multifaceted cognitive behavioral program on concerns about falling, daily activity, and recurrent falls in community-living older people. The present study explored the program effects after translation into daily practice. The sample comprised 125 community-living people aged 70 years and older who participated in the program between April 2009 and April 2011. Data was collected by questionnaires prior to the start of the 8-week program and at 2 and 4 months. Non-experimental pre-post test analyses showed significant differences at 4 months on several outcomes, e.g. concerns about falling (1-item:  $p < .01$ ; scale:  $p < .05$ ), avoidance behavior ( $p < .01$ ) and number of fallers ( $p = .01$ ). No significant improvements were shown on daily activity ( $p = .13$ ) and feelings of loneliness ( $p = .47$ ). These outcomes were largely similar to the outcomes of the RCT indicating that the program is not only effective in an experimental setting but also in regular practice.

### **SESSION 840 (PAPER)**

#### **CAREGIVERS**

#### **INTERMARRIAGE AND SOCIAL SUPPORT IN MIDDLE AND LATER LIFE**

M.J. Penning, Z. Wu, *Sociology/Centre on Aging, University of Victoria, Victoria, British Columbia, Canada*

Despite widespread attention to the implications of population aging and contemporary increases in intermarriage, little is known regarding

the implications of intermarriage for social support received in middle and later years of life. Drawing on data from the 2007 General Social Survey (GSS-21) conducted by Statistics Canada on intermarried (or cohabiting) and endogamously married (or cohabiting) adults aged 45 and over ( $N = 12,345$ ), this study examined the effects of intermarriage on the receipt of social support (instrumental, emotional). The results, generated by two simultaneous probit models used to correct for potential selection bias, revealed that while intermarriage was accompanied by a reduced likelihood of receiving instrumental forms of support and assistance from others outside the household, this was not the case when it came to emotional support. These findings indicate that intermarriage is not uniformly positive, neutral, or negative in terms of its implications for social support. Future theoretical and empirical work will need to address the complexities of these and other relationships in order to enhance our understanding of these emergent family structures.

#### **ARE AFRICAN AMERICANS CAREGIVERS REALLY LESS BURDENED? AN INTEGRATED LITERATURE REVIEW**

D.Y. Stevens, K. Hepburn, *Emory University, Atlanta, Georgia*

Background: Caregiver burden has repeatedly been linked with poor health outcomes in those caring for older adults with Alzheimer's disease. Despite having greater financial hardship, keeping elders at home longer, and perceiving greater needs, African American (AA) caregivers are reportedly less burdened than whites. The purpose of this review was to examine how burden has been conceptualized and measured in AA caring for adults with Alzheimer's dementia. Methods: CINAHL, PubMed, and Web of Science databases were comprehensively searched. Articles were limited to primary research reports involving human adults and published in English. The search strategy produced a total of 163 journal titles. Further review of the full text articles was conducted to identify studies that focused exclusively on caregiver burden in AA caring for adults with Alzheimer's dementia, resulting in a final selection of 17 quantitative and 11 qualitative studies. Results: Results from the quantitative studies show a difference in levels of caregiver burden by race. AA caregivers consistently reported lower levels of burden on a variety of measures, although such results were not seen in very recent studies. Qualitative reports, however, show a very different picture. Several qualitative studies suggest that AA are, indeed, burdened by caregiving responsibilities, but may express burden differently. Conclusion: The review provides a way to broaden the discourse about burden among AA caregivers, raises the possibility that there are cohort differences among AA caregivers, and poses questions about whether standard measures of burden or stress account sufficiently for the cultural context of AA caregiving.

#### **FAMILY DISAGREEMENT AS A STRESS EXACERBATOR FOR HISPANIC AND NON-HISPANIC WHITE CAREGIVERS**

S.S. Koerner<sup>1</sup>, Y. Shirai<sup>2</sup>, 1. Div. of Family Studies and Human Development, University of Arizona, Tucson, Arizona, 2. Dept. of Family and Community Medicine, University of Arizona, Tucson, Arizona

The amount of research attention devoted to the positive influence of family in the context of caregiving (e.g., studies of the buffering effects of family social support) far outweighs exploration of family's potential negative impact. Limited extant research suggests, however, that family conflict may be a critical factor in understanding caregiver well-being. Framed within a caregiving-stress model, and using a daily stress-reactivity perspective, the current study examined (a) whether family conflict, in particular, family disagreements about care-related issues, exacerbates the impact of daily caregiving stressors on caregivers, and (b) whether that exacerbating effect varies as a function of caregiver ethnicity; we hypothesized that the exacerbating impact of family conflict may be especially evident for Hispanic caregivers because of the salience of family in Hispanic/Latino culture and identity. Caregivers ( $n = 76$ , Hispanic;  $n = 51$ , non-Hispanic White) reported

their daily experiences of caregiving primary stressors (tasks, care-recipient problem behaviors), depressive symptoms, feelings of burden, and physical health symptoms on 8 consecutive survey days; and, in a separate one-time survey, reported on care-related family disagreements. Multilevel-modeling that controlled for age indicated significant moderating (i.e., exacerbating) effects of care-related disagreements: on days when caregivers were faced with more than their usual number of care-assistance tasks, they experienced increases in depressive symptoms and physical health symptoms, but this was especially true for those caregivers who reported relatively high levels of care-related family disagreements ( $b=.03$ ,  $p<.05$  and  $b=.09$ ,  $p<.05$ , respectively); contrary to expectation, this pattern was similar across ethnic groups. Implications for research and intervention will be discussed.

#### **FAMILY CAREGIVING, MENTAL HEALTH, AND MARITAL QUALITY: EVIDENCE FROM MIDUS II**

S. Kang<sup>1,2</sup>, N.F. Marks<sup>1</sup>, 1. *South Dakota State University, Brookings, South Dakota*, 2. *UW-Madison, Madison, Wisconsin*

Guided by a life course perspective, this study aimed to add to a population perspective on family caregiving and mental health by examining how providing caregiving for a child, spouse, parent, or parent-in-law due to their illness or disability (in contrast to not providing caregiving for any kin or nonkin) is linked to three dimensions of mental health (negative affect, positive affect, Ryff's psychological well-being), and evaluating how gender and marital quality (spousal support and/or spousal strain) might moderate these linkages. Data from married respondents in the National Survey of Midlife in the U.S., 2005 ages 34 to 83 ( $N = 1157$ ; 598 men, 559 women) were used to estimate multivariate models. Results revealed that providing caregiving for a child was associated with a higher level of negative affect, a lower level of positive affect, and a lower level of psychological well-being (Ryff) among women (but not men). Providing caregiving for a parent was linked to higher levels of negative affect in the presence of poorer marital quality (low support or high strain). Women caregivers for parents-in-law reported less positive affect than men caregivers. Caregiving for a parent-in-law was linked to more negative affect among women in the presence of low marital support or higher marital strain. Women providing caregiving for their parents-in-law also reported poorer psychological well-being in the presence of higher spousal strain. Overall, results revealed that married women experience more problematic mental health impact from family caregiving, and poorer marital quality exacerbates this negative impact.

#### **BURDEN AMONG CAREGIVERS OF HOSPITALIZED OLDER ADULTS WITH COGNITIVE IMPAIRMENT**

K.B. Hirschman<sup>1</sup>, K.N. Shankar<sup>2</sup>, A.L. Hanlon<sup>1</sup>, M.D. Naylor<sup>1</sup>, 1. *School of Nursing, University of Pennsylvania School of Nursing, Philadelphia, Pennsylvania*, 2. *University of Pennsylvania, Robert Wood Johnson Foundation Clinical Scholars, Philadelphia, Pennsylvania*

Caregiver burden is a multidimensional outcome of the chronic stress associated with care giving. Little is known about burden among caregivers of cognitively impaired older adults during a hospitalization. The purpose of this study was to describe the predictors of burden among a cohort of caregivers of cognitively impaired hospitalized older adults at the time of admission for an acute illness. We performed a secondary data analysis using cross-sectional data collected from family caregivers within 24 hours of the start of a hospitalization for their relative with cognitive impairment. Independent variables were selected through a priori decisions and bivariate analyses ( $p<0.20$ ). Multivariate linear regression was performed to analyze the effect of the independent variables on caregiver burden during the hospitalization. In this cohort of hospitalized, cognitively impaired, older adults, caregiver burden was highly associated with the presence of caregiver depressive symptoms ( $p<0.001$ ), lower self-efficacy to manage the patient's symptoms

( $p=0.04$ ), distressing neuropsychiatric symptoms ( $p<0.001$ ), the presence of delirium ( $p=0.001$ ) and higher deficits in basic activities of daily living for the hospitalized older adult ( $p<0.001$ ). These findings suggest that caregivers of patients with cognitive impairments experience high levels burden around the time of hospitalization. Understanding these contributing factors can advise the hospital team how to apply targeted caregiver interventions during the hospitalization to position the caregiver and the patient for a smoother transition back to the community.

### **SESSION 845 (PAPER)**

#### **INTERVENTIONS FOR OPTIMAL AGING**

##### **THE DEVELOPMENT AND EFFECTIVENESS OF AN INTERDISCIPLINARY, BEHAVIORAL INTERVENTION FOR MANAGING CHALLENGING BEHAVIORS IN RESIDENTS OF VA NURSING HOMES**

B. Karlin<sup>1</sup>, L. Teri<sup>2</sup>, S. Visnic<sup>3</sup>, 1. *Office of Mental Health Services, Department of Veterans Affairs Central Office, Washington, District of Columbia*, 2. *University of Washington, Seattle, Washington*, 3. *VA Serious Mental Illness Treatment and Evaluation Center, Seattle, Washington*

There is significant need for effective clinical interventions for managing challenging dementia-related behaviors, such as agitation, aggression, vocalization, and wandering. Antipsychotic medications have, in many settings, been the mainstay interventions for managing such behaviors. However, increasing research in recent years has revealed significant limitations, including limited efficacy and increased death risk, associated with the use of antipsychotic medications for managing challenging dementia-related behaviors (Schneider, Dagerman, & Insel, 2005; Schneider et al., 2006; Sink, Holden, & Yaffe, 2005). In an effort to bridge research and practice in this area, the Veterans Health Administration has developed and piloted an adapted psychosocial intervention for managing challenging dementia-related behaviors of residents in VA nursing homes [now called as "Community Living Centers" (CLCs)], known as STAR-VA. STAR-VA is a multi-component psychosocial intervention that involves working to identify and change activators of and consequences to challenging dementia-related behaviors and behavioral activation. In addition, the protocol involves enhancing front-line staff knowledge of dementia and promoting realistic expectations of residents with dementia. The protocol also involves promoting effective communication with individuals with dementia. Evaluation of training outcomes indicates that training in STAR-VA led to significant increases in clinical knowledge, skills, and competencies. Evaluation of patient outcomes indicates that the intervention led to significant reductions in the frequency and severity of challenging behaviors, as well as significant reductions in resident anxiety and depression. The program evaluation results further reveal key issues and challenges associated with successfully implementing this innovative, interdisciplinary intervention in a nursing home-type setting.

##### **BE MINDFUL: CONTEXTUAL SENSITIVITY CAN PREDICT COGNITIVE IMPROVEMENTS OBSERVED FROM SYNAPSE, A LIFESTYLE INTERVENTION**

S. Haber<sup>1,2</sup>, M.Y. Chan<sup>1,2</sup>, L.M. Drew<sup>1,2</sup>, D. Park<sup>1,2</sup>, 1. *Center for Vital Longevity, University of Texas, Dallas, Dallas, Texas*, 2. *Center for Vital Longevity, Dallas, Texas*

There is considerable interest in the impact of interventions and lifestyle changes on cognitive decline, but experimental data is sparse. Although the effects of intervention on cognition are clinically significant, understanding how individual characteristics are related to changes in cognition may help reveal what makes someone more or less susceptible to interventions. The Langer Mindfulness Scale (LMS; Langer, 1989) measures individual's tendency to seek and produce novel expe-



riences, challenge the limits of situational boundaries, and engage in the surrounding environment. Thus, it is hypothesized that measures of contextual sensitivity, like mindfulness, will be predictive of observed cognitive improvements for individuals placed in a novel intervention environment. A total of 110 senior participants were assigned to one of three cognitive interventions within the Synapse program that required an average of 15 hours a week for 14 weeks. The groups involved learning digital photography, quilting, or a combination of both. Participants completed a battery of pre- and post- cognitive and psychosocial test. A significant positive correlation between gains in cognitive performance and gains on the LMS was found. Additionally, regression analysis revealed that initial performance on the LMS was predictive of observed cognitive improvements. The results indicate that initial mindfulness scores and changes in mindfulness are related to changes in cognition. In sum, contextual sensitivity, as measured by the LMS, may influence the impact of cognitive interventions because it is related to how much an individual may interact with the ascribed intervention.

### **THE FAMILY SERIES WORKSHOP: A PSYCHOEDUCATIONAL INTERVENTION FOR CAREGIVERS OF PERSONS WITH DEMENTIA**

S. Llanque<sup>1</sup>, M. Niedens<sup>2</sup>, M. Enriquez<sup>1</sup>, *1. Nursing, University of Missouri-Kansas City, Overland Park, Kansas, 2. Alzheimer's Association Heart of America Chapter, Prairie Village, Kansas*

**BACKGROUND:** Currently, 14.9 million caregivers provided unpaid care to persons with Alzheimer's disease or related dementias (ADRD). Past research has uncovered positive results related to psychoeducational interventions for caregivers of persons with ADRD. **PURPOSE:** The purpose of this study was to examine the impact of a psychoeducational intervention, the Family Series Workshop, on levels of coping, caregiving competence, and stress among caregivers of community-dwelling individuals with dementia. The Stress Process Model served as the conceptual framework of this intervention. **DESIGN AND METHODS:** A 6-week intervention was implemented utilizing the Stress Process Model of Alzheimer's caregiving as the conceptual framework to help caregivers enhance care to persons with dementia. This study employed a non-controlled, pretest-posttest research design, which included 35 caregivers. Convenience sampling was used to recruit caregivers from three sites in a Midwestern metropolitan area: two churches and a hospital. **RESULTS:** Analyses using paired t-tests with random effect for site differences revealed that caregiving competence significantly increased ( $p = 0.036$ ) from Time 1 ( $M = 11.6$  points) to Time 2 ( $M = 14.6$  points). There were no significant differences between caregiver's coping and stress from pre- to post-intervention. Regression analysis showed a significant association was found concerning the mediator coping and its association with caregiving competence ( $p < 0.001$ ) and stress ( $p = 0.008$ ). **IMPLICATIONS:** The findings indicate that the Family Series Workshop can be an effective resource for enhancing caregiving competence. Both coping and stress are significant concepts of the caregiving process.

### **THERAPEUTIC COMPUTER ACTIVITY INTERVENTION FOR NURSING HOME RESIDENTS WITH DEMENTIA**

S.H. Tak<sup>1</sup>, S. Hong<sup>2</sup>, *1. University of Arkansas for Medical Sciences, Little Rock, Arkansas, 2. University of Tennessee Health Science Center, Memphis, Tennessee*

Nursing home residents with dementia lack activities for cognitive stimulation and enjoyment. The study examined the feasibility of a 7-week therapeutic computer activity intervention (TCAI) for cognitively impaired elders in nursing homes. Twenty six residents with dementia completed TCAI. Data were collected using 604 observational logs of computer sessions. The mean age of participants was 85 (S.D., 6.0) years. Their cognitive impairment ranged from moderate to mild dementia with a mean Mini Mental State Exam score of 15.8 (S.D. 4.2). On average, participants had 23 (S.D., 8.6) sessions and spent 562.9 min-

utes in the program. Sessions lasted 25 minutes on average. Participants neither had previous computer experience nor received computer training. With the use of adaptive accessories such as track ball or touch screen, all of them were able to point or click on the screen. They needed technical assistance in opening/closing an activity program or requiring directions on how to play a game. Participants engaged in various computer activities including slide shows with music, emailing/internet search, or various computer games. They exhibited positive verbal and non-verbal expressions and showed a high level of acceptance and openness to the computer during the TCAI. Identifying and selecting a computer activity for an individual was influenced by cognition and physical health status, computer literacy, and general activity preferences. Based on the findings, a model for tailoring computer activities for persons with dementia is detailed.

### **APPLICATION OF VALIDATION THERAPY IN DEMENTIA CARE WITH CHINESE NURSING HOME RESIDENTS**

A.M. Chong, *Applied Social Studies, City University of Hong Kong, Kowloon, Hong Kong*

**Introduction:** Problem behaviors and communication difficulties in residents with dementia are major sources of caregiver stress in nursing homes. Validation Therapy (VT), one of the psychosocial interventions in dementia care, has received increasing attention in the West but is seldom studied in the East. This article reports a clinical study of the application of VT on three Chinese nursing home residents suffering mild to moderate cognitive impairments. **Methods:** For half a year, in each alternate day, three times a day, a clinician applied VT through chatting with each of the three residents for at least 10 minutes on topics of interests such as their health and the weather. It was audio-recorded for data analysis with the clients' and the superintendents' consent. The effectiveness of VT intervention was assessed quantitatively through changes in the participants' cognitive competence as measured by the Chinese version of Mini-Mental State Examination, and their life satisfaction as measured by the 9-item Life Satisfaction Scale (LSS), and qualitatively through changes in problem behaviors and mood before and after intervention as reported by the staff. **Findings:** Clinical experiences found VT practice principles applicable to older Chinese with dementia. VT could not reduce the clients' levels of cognitive impairment, however, VT was found to enhance their life satisfaction and reduce problem behaviors. **Discussion:** The study provides some preliminary evidence to support the use of VT with older Chinese suffering cognitive impairments, because VT was found to restore communication, reduce problematic behaviors and enhance the clients' subjective well-being.

## **SESSION 850 (SYMPOSIUM)**

### **ALZHEIMER'S DISEASE AND HEALTH OUTCOMES**

Chair: *S.A. Hartikainen, School of Pharmacy, University of Eastern Finland, Kuopio, Finland*

Alzheimer's Disease and Health Outcomes Session 1 Alzheimer's Disease and Mortality - Risk of death after initial diagnosis of Alzheimer's disease: a national register-based study other studies about mortality Session 2: Association between Alzheimer's Disease and Fractures - Association between Alzheimer's disease and hip fractures in a Finnish register-based cohort - other abstracts about fractures among Alzheimer patients Session 3. Association between Alzheimer's Disease and Cardiovascular Outcomes -Incidence of stroke in people with Alzheimer's disease - a national register-based approach - other studies concerning cardiovascular outcomes

## ASSOCIATION BETWEEN ALZHEIMER'S DISEASE AND HIP FRACTURES IN A FINNISH REGISTER-BASED COHORT

S.A. Hartikainen, A. Tolppanen, *School of Pharmacy, University of Eastern Finland, Kuopio, Finland*

**Objective:** We investigated whether Alzheimer's disease (AD) is associated with prevalence or incidence of hip fractures. **Methods:** We performed a nested case-control study within a register-based cohort study including all community-dwelling persons with verified AD diagnosis in Finland on 2005 and single age-, gender and region of residence-matched comparison person per AD case (N=56,186, mean age 79.9 (SD 6.8) years, range 42-101 years). The diagnosis of AD was based on prescription reimbursement register. Data on hip fractures was extracted from Finnish National hospital discharge register on years 2002-2009. The analyses of incident hip fractures (n=2,981) were restricted to years 2006-2009 and four age and gender-matched controls per fracture case were identified. **Results:** Persons with AD were twice as likely to have previous hip fracture (OR, 95% CI 2.00, 1.82-2.20). In the nested case-control study, AD was associated with over two-fold increase in risk of incident hip fracture (adjusted RR, 95% CI 2.28, 2.08, 2.49). The increased risk associated with AD decreased linearly across age groups. Although people with AD had higher risk of hip fractures regardless of gender, the risk increase was larger in men than women. **Interpretation:** Persons with AD, regardless of disease duration have higher risk of hip fracture in comparison to general population. Although there was some suggestion of effect modification by age or gender, AD was consistently associated with doubling of the risk of incident hip fracture

## INCIDENCE OF STROKE IN PEOPLE WITH ALZHEIMER'S DISEASE - A NATIONAL REGISTER-BASED APPROACH

S.A. Hartikainen, A. Tolppanen, *School of Pharmacy, University of Eastern Finland, Kuopio, Finland*

**Objective:** Stroke increases the risk of dementias, including Alzheimer's disease (AD), but it is unknown whether AD increases the risk of stroke. We investigated whether non-institutionalized persons with AD have increased risk of stroke and whether there are differences in the incidence of ischemic or hemorrhagic strokes. **Methods:** We performed a register-based nested case-control study within a cohort including all community-dwelling persons with verified AD diagnosis in Finland on December 31, 2005 and a single age-, gender and region of residence-matched comparison person without AD for each individual with AD (N=56,186, mean age 79.6 (SD 6.9) years, range 42-101 years). Diagnosis of AD is based on prescription reimbursement register and diagnosis of stroke on hospital discharge register of Finland. The analyses were restricted to incident strokes (n=3,093) occurring between during years 2006-2009. **Results:** AD was not associated with risk of all strokes or ischemic strokes, but the risk of hemorrhagic strokes was higher among persons with AD (adjusted RR, 95% CI 1.39, 1.14-1.68). When the associations were analyzed according to age groups (<75, 75-79, 80-85 and ≥86 years), AD was associated with higher risk of all strokes, regardless of etiology, in the two youngest age groups, but not in the older groups. Similar associations were observed when the results were categorized according to AD duration. **Interpretation:** Our findings suggest that persons with AD, especially younger AD patients, have higher risk of strokes, mainly due to increase in bleeds

## SESSION 855 (SYMPOSIUM)

### EAST MEETS WEST FOR HEALTHY AGING

Chair: *K. Chee, Department of Sociology, Texas State University, San Marcos, Texas*

Co-Chair: *S. Diwan, San Jose State University, San Jose, California*

This symposium addresses multiple cultural issues related to health and wellbeing among older Asians in different Asian countries and

older Asian immigrants in the United States. Four studies conducted in China, South Korea, Japan, and the United States attend to culture-oriented factors and implications for health promotion. First, Leung discusses the development, reliability and validity of the Chinese Health Literacy Scale for Diabetes among elders in Hong Kong, with implications for health promotion. Second, Kim examines the prevalence of hypertension among elders in South Korea and discusses unemployment and lower consumption of vegetables, fruits, and dairy products as correlates of hypertension. Third, Katagiri describes the prevalence of depressive symptoms among older workers in Japan, using the Kessler-6 scale. Despite their lower status jobs, they gain benefit from employee-friendly environments and having colleagues as confidants. Finally, Diwan, based on focus group interviews, describes various barriers to health-promoting activities among older Asian Indian immigrants in the US, and suggests culturally-relevant approaches to promoting health in this group. The co-chairs will lead the discussion on how these findings contribute to a better understanding of Asian culture-specific factors associated with health and wellbeing of older adults; and how researchers may capitalize on existing Western research for future health promotion studies in the Eastern context.

## PSYCHOMETRIC PROPERTIES OF CHINESE HEALTH LITERACY SCALE FOR DIABETES AMONG ELDERS IN HONG KONG

A. Leung<sup>1,4</sup>, V. Lou<sup>2,4</sup>, M. Cheung<sup>1</sup>, S. Chan<sup>1</sup>, I. Chi<sup>3,4</sup>, *1. School of Nursing, The University of Hong Kong, Hong Kong, China, 2. Department of Social Work and Social Administration, The University of Hong Kong, Hong Kong, China, 3. School of Social Work, University of Southern California, Los Angeles, California, 4. Sau Po Centre on Aging, The University of Hong Kong, Hong Kong, China*

Patients with low health literacy (HL) often hide this from health-care providers, friends and relatives. This study developed and tested psychometric properties of the Chinese Health Literacy Scale for Diabetes (CHLSD). The Revised Bloom's Taxonomy Model was used to develop the CHLSD. Validity (content, construct, concurrent) and internal consistency were assessed with a sample (n=137) of Type-II diabetic patients aged 65 or older in Hong Kong. Cronbach's alpha for CHLSD and its four subscales (remembering, understanding, applying, analyzing) was 0.88, 0.88, 0.66, 0.65 and 0.71 respectively. CHLSD was significantly correlated with the following scales: Diabetic Knowledge (r=0.39), Diabetic Management Self-efficacy (r=0.25), Preschool and Primary Chinese Literacy (r=0.82), and Chinese Value of Learning (r = 0.30). This 34-item instrument took about 7 minutes to complete. CHLSD is a reliable and valid instrument for measuring Chinese diabetic patients' HL which would be important for clinicians to assess prior to conducting health promotion activities.

## PREVALENCE OF HYPERTENSION AND ITS CORRELATES AMONG COMMUNITY-DWELLING OLDER ADULTS IN SOUTH KOREA

H. Kim<sup>1</sup>, H. Kim<sup>2</sup>, A. Kim<sup>3</sup>, *1. Nursing, Inje University, Busan, Busan, Republic of Korea, 2. University of Michigan, Ann Arbor, Michigan, 3. Inje University, Busan, Busan, Republic of Korea*

This study investigates the prevalence of hypertension and its correlates among community dwelling older adults in South Korea, using data from the Korean National Older Adults Life Survey (n=15,146). The prevalence of hypertension was found to be 44.4%. Multivariate logistic regression analysis shows that hypertension was more prevalent as people became older; in females; in elderly who were previously employed or have never been employed as compared to those currently employed; elderly with obesity, diabetes and hypercholesterolemia as compared to those without these health conditions; elderly who consumed fewer than recommended vegetables, fruits, and milk products;

elderly with periodical health check-ups than those without these behaviors. Significant associations between the occurrence of hypertension and its correlates such as unemployment and lower consumption of vegetables, fruits, and milk products have implications for screening and developing strategies to promote the health of elders who are at the risk of hypertension in South Korea.

#### **MENTAL HEALTH OF OLDER JAPANESE WORKERS: CONSTRUCTION OF HEALTHY WORKING ENVIRONMENTS**

K. Katagiri<sup>1</sup>, I. Sugawara<sup>2</sup>, 1. *Institute for Social Gerontology, Nipponkoa Welfare Foundation, Tokyo, Japan*, 2. *Institute of Gerontology, the University of Tokyo, Tokyo, Japan*

The shortage of labor force owing to the aging population and declining birthrate is a social problem in developed countries. In 2004, the Japanese Elderly Employment Stabilization Law was revised to raise the retirement age to 65. This study examines the well-being of older workers (N = 496), using data collected in 2008 from five Japanese companies. The Kessler 6 scale was utilized to assess depression. The ANOVA result revealed that older workers were less depressed than younger ones. Logistic regression to determine whether the depression scale scores were above the cut-off point suggested that employee-friendly conditions and having colleagues to confide in have alleviating effects on depressive symptoms. Despite the stresses of working full time combined with low salaries and low status, older workers appear to be less depressed than younger ones. Implications for developing employee-friendly work environments to promote mental well being are discussed.

#### **CULTURALLY RELEVANT STRATEGIES TO ENGAGE ASIAN INDIAN IMMIGRANT ELDERS IN HEALTH PROMOTION**

S. Diwan, S. Krishnagiri, *San Jose State University, San Jose, California*

Asian Indian (AI) immigrants to the U.S. have elevated risk for heart disease, diabetes, and hypertension; increased mortality; low engagement in physical activity; increased depression from acculturative/intergenerational stress. We conducted three focus groups with service providers from three AI cultural/religious groups to understand barriers to health promoting activities and culturally relevant strategies to address them. Thematic analysis of qualitative data suggested psychological, cultural, and environmental barriers including: elders' fatalistic expectations of aging; non-awareness of need for specific health-promoting activities; low motivation to change; adult children's attitudes towards aging; transportation access; language proficiency; time constraints due to caregiving duties; and social isolation. Culturally relevant strategies suggested were: educating the family on health promotion and aging; developing intergenerational health programs; providing culture-specific advice re: diet, physical, and social activity; following up with seniors after educational presentations; and, presenting health promotion programs in culturally relevant ways. Implications for health promotion programming are discussed.

### **SESSION 860 (SYMPOSIUM)**

#### **IMPROVING OUTCOMES**

Chair: *L.W. Cohen, Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*

Discussant: *C. Beck, University of Arkansas, Little Rock, Arkansas*

This symposium presents the findings of four innovative studies conducted to understand and improve outcomes of individuals with and without dementia in long-term care settings and in the community. Together, they highlight the diversity of promising opportunities to change care practices and also the importance of rigorous research

designs to do so. Based in the community, the first presentation will discuss the efficacy of a randomized-controlled trial testing the effects of a blue-spectrum light treatment on sleep and mood among older adults with dementia and their informal caregivers; it showed positive effects for both individuals. The next two presentations are of projects intended to change care in long-term care settings. One targeted prescribers and caregivers to reduce potentially inappropriate antibiotic prescribing and found modest benefit to promote prescribing that is more consistent with guidelines; the second, an Mouth Care Without a Battle, showed strong benefit related to oral hygiene. All three interventions have clear indications regarding implementation and system change for adoption and sustainability. The final presentation focuses on the importance of the rigor of the research design on which these and other studies are grounded. It presents the results of an evidence-based review regarding which organizational characteristics, structures, and processes relate to better outcomes, and highlights the paucity of high quality data to inform this area despite the amount of research that has been conducted. The discussion will frame the opportunities to improve care and establish the evidence to change policy and practices.

#### **A HOME-BASED THERAPEUTIC LIGHTING INTERVENTION TO IMPROVE OUTCOMES IN DEMENTIA**

L.W. Cohen<sup>1</sup>, M. Figueiro<sup>2</sup>, D.A. Reed<sup>1</sup>, J. Preisser<sup>1</sup>, C. Williams<sup>1</sup>, S. Zimmerman<sup>1</sup>, P. Sloane<sup>1</sup>, 1. *Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*, 2. *Rensselaer Polytechnic Institute, Troy, New York*

Disturbed nighttime sleep affects older adults with dementia, and its disruptive effects are a leading cause of long-term care placement. Medications are commonly used to manage the problem, but lack efficacy and present dangerous side effects. Based on prior studies and laboratory findings, we conducted a randomized, controlled trial with crossover to examine the effects of a blue-spectrum light intervention on sleep and psychological well-being for older adults with dementia and their family caregivers. After six weeks of the in-home blue-spectrum light intervention, proxy-reported sleep efficiency for persons with dementia significantly improved ( $p < .05$  in dose-dependent analyses). Family caregivers recognized more widespread benefits across several measures of nighttime sleep ( $p < 0.05$ ). Well-being consistently (although non-significantly) improved on most measures, including depression and caregiving hassles and burden. Although light may be an effective treatment to improve sleep and well-being, future work must first address the challenges related to its delivery and fidelity.

#### **EVALUATING OUTCOMES OF AN INTERVENTION TO IMPROVE MOUTH CARE IN NURSING HOMES**

P. Sloane, S. Zimmerman, D.A. Reed, A. Barrick, X. Chen, L.W. Cohen, *Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*

Research has linked poor oral health to adverse outcomes including pneumonia, poor diabetic control, chronic pain, and reduced intake. Concomitantly, mouth care has been documented to be often deficient in nursing homes (NHs), especially among persons with dementia or physical impairment. To address these issues, a multidisciplinary team developed evidence-based guidelines for best practices. The care model involved dedicated oral care aides, used a variety of products and techniques that are not common in long-term care, and individualized care to manage behavioral symptoms. This session will overview techniques used and discuss the results of an 8-week trial of the intervention in three NHs (N=6) nursing assistants, 93 NH residents). Results identified strong, significant improvement in oral hygiene, reduced gingival inflammation and high satisfaction among the staff. Challenges to dissemination include controversy regarding specialized workers, provision of adequate time, organization of care, and inadequate data on costs and benefits.

## REDUCING POTENTIALLY INAPPROPRIATE ANTIBIOTIC PRESCRIBING IN NURSING HOMES

S. Zimmerman<sup>1</sup>, P. Sloane<sup>1</sup>, A.S. Beeber<sup>1</sup>, C. Kistler<sup>1</sup>, R.M. Bertrand<sup>2</sup>, L. Olsho<sup>2</sup>, L. Hadden<sup>2</sup>, C. Mitchell<sup>1</sup>, *1. Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, 2. Abt Associates, Cambridge, Massachusetts*

Concern regarding antibiotic-resistant organisms has reached global proportions, and attention now focuses on nursing home populations in which prescribing is high and may be inappropriate. To examine potentially inappropriate antibiotic prescribing and the ability to reduce it, we conducted a quality improvement program in six North Carolina nursing homes that trained prescribers and staff indications for antibiotic use; how to communicate signs and symptoms to better recognize situations in which use was inappropriate; and educated residents and families. At baseline, the number of monthly antibiotic prescriptions ranged from 26-52. Within three months, five of the six settings evidenced reduced prescribing ranging from 19-41%. Adherence to prescribing guidelines increased for urinary tract infections (8% to 12%), respiratory infections (2% to 8%) and especially skin infections (41% to 82%). While antibiotic prescribing may be reduced through concerted effort, more focused staff-prescriber communication and patient and family education are indicated.

## IMPROVING OUTCOMES FOR LONG-TERM CARE RESIDENTS WITH DEMENTIA: AN EVIDENCE-BASED REVIEW

W.L. Anderson<sup>2</sup>, S. Zimmerman<sup>1</sup>, P.D. Sloane<sup>1</sup>, S. Brode<sup>1</sup>, L.J. Lux<sup>2</sup>, A.S. Beeber<sup>1</sup>, L. Watson<sup>1</sup>, D. Jonas<sup>1</sup>, *1. Univ North Carolina Chapel Hill, Chapel Hill, North Carolina, 2. RTI International, Research Triangle Park, North Carolina*

While long-term care settings for persons with dementia differ in their characteristics, structures and processes, there is no evidence-based guidance as to which settings best meet residents' needs. This evidence-based review compared nursing homes and other residential settings for people with dementia. An exhaustive search of 7 databases from 1990-2011 identified 13 studies meeting review criteria. Overall, we found low or insufficient evidence regarding the effect of organizational characteristics, structures, and processes of care on health and psychosocial outcomes for people with dementia, and no evidence on informal caregivers' outcomes. There is moderate evidence that pleasant sensory stimulation reduces agitation and limited evidence that protocols for individualized care and to improve function relate to better outcomes. Also, while data are insufficient, they do not indicate a difference between nursing homes and residential care/assisted living except when medical care is indicated. Additional research is needed to help inform decisionmaking.

## SESSION 865 (SYMPOSIUM)

### MISSING DATA IN AGING RESEARCH: CHALLENGES, INNOVATIONS, AND BEST PRACTICES

Chair: *M. Shardell, University of Maryland School of Medicine, Baltimore, Maryland*

Discussant: *K. Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland*

Missing data is a common problem in aging research. Researchers are concerned that selection bias due to missing data from the sickest, most disabled participants may produce results not generalizable to the study population. Although numerous statistical methods have been developed to address missing data, not all methods are readily able to handle or leverage the nuanced design features of aging research without some adaptations. In this symposium, we present missing-data problems that are particularly relevant to aging research, and we propose both analytic and design-based solutions to help reduce bias. First, Dr.

Qian-Li Xue will provide an overview of missing data concepts including types of missing data and general guidelines for good practice. Dr. Scott Brown will then present a literature review describing current gerontological practice with missing data. Third, Dr. Rich Jones will illustrate the impact of item missingness in summed measurement scales on group- and individual-level inference. Fourth, Dr. Michelle Shardell will propose statistical methods for missing self-report data that leverage reports from proxy respondents such as relatives or care givers. Lastly, Dr. Donald Royall will illustrate planned missingness as a strategy to reduce costs, reduce assessment burden, and expand assessment opportunities in longitudinal studies. The objectives of this symposium are to provide session participants with 1) a working knowledge of missing-data concepts and challenges, and 2) analytic and design-based solutions to challenging missing-data problems that are commonly encountered in aging research.

### OVERVIEW OF KEY CONCEPTS OF MISSING DATA ISSUES IN GERONTOLOGICAL RESEARCH

Q. Xue, *1. Johns Hopkins School of Medicine, Baltimore, Maryland, 2. Johns Hopkins Center on Aging and Health, Baltimore, Maryland*

In studies of old adults, missing data are the norm rather than the exception. Analyses that exclude incomplete observations lose precision when the proportion of incomplete cases is large, and they may also yield biased inferences if the complete cases are not representative of the original cases. Therefore, proper handling of missing data is critical for valid inference. Although statistical tools for treating missing data are becoming widely available, application of these methods without a clear understanding of model assumptions and limitations will run the risk of deriving misleading conclusions. Using real data examples, this talk aims to (1) define different types of missing data in both observational (e.g., participant refusal) and experimental settings (e.g., non-compliance), (2) describe modern analytic approaches to handle different types of missing data, with particular focus on results interpretation, and (3) present general guidelines for good practice with missing data.

### MISSING DATA: EMERGENT ISSUES IN THE JOURNALS OF GERONTOLOGY: SOCIAL SCIENCES 2001-2010

J. Brown<sup>1</sup>, S.M. Lynch<sup>2</sup>, A. Bardo<sup>1</sup>, *1. Sociology and Gerontology, Miami University, Oxford, Ohio, 2. Princeton University, Princeton, New Jersey*

To detail how gerontologists address missing data in analysis of social surveys and to understand the trends in the field, we examined the last 10 years of publications in the Journals of Gerontology: Social Sciences (2001-2010). First, we note some disturbing trends, such as the incorrect application of listwise deletion as a missing data technique. We also look for patterns regarding how authors address missing data. For example, are more complex missing data techniques utilized if a statistician/methodologist is an author of or acknowledged in a manuscript? Overall, our findings suggest that missing data are a major issue for survey based gerontological research, and that missing data techniques need to be addressed more clearly in published work in gerontology.

### ITEM MISSINGNESS: IMPACT ON PARAMETER ESTIMATION AND INDIVIDUAL INFERENCE

R.N. Jones, *1. Hebrew SeniorLife, Institute for Aging Research, Boston, Massachusetts, 2. Harvard Medical School, Boston, Massachusetts*

Background. Clinicians and data analysts often have different views on the problem of item missingness. Method. A simulation study: Parameters were drawn from a study involving the prediction of clinical depression (CIDI) with the Geriatric Depression Scale (GDS). Data were simulated with varying amounts of missing data under completely random, random, and non-ignorable conditions. Two main outcomes were: (a)

the regression of CIDI on the prorated total GDS score, and (b) the bias in the estimate of a person's level of depressive symptom burden. Results. Population regression parameter estimates were unbiased when the complete sample was used, but biased when only persons with complete data were used. Conversely, even a small amount of randomly missing data was sufficient to bias estimates of individual's depressive symptom burden. Discussion: The impact of item missingness depends on the goals of the analysis. Conclusion: Differing views of clinicians and data analysts are justified.

#### ADDRESSING MISSING DATA USING PROXY REPORTS SUBJECT TO MISCLASSIFICATION

M. Shardell<sup>1</sup>, E.M. Simonsick<sup>2</sup>, G. Hicks<sup>3</sup>, B. Resnick<sup>4</sup>, L. Ferrucci<sup>2</sup>, J. Magaziner<sup>1</sup>, 1. *University of Maryland School of Medicine, Baltimore, Maryland*, 2. *National Institute on Aging, Baltimore, Maryland*, 3. *University of Delaware, Newark, Delaware*, 4. *University of Maryland School of Nursing, Baltimore, Maryland*

In studies of older adults, missing data due to nonresponse most likely occurs among the sickest, most cognitively impaired participants. To reduce selection bias and improve generalizability, researchers often recruit proxy respondents such as relatives or informal care-givers to report on behalf of participants who do not respond for themselves. However, proxy reports may be subject to misclassification error, which can produce biased results if simply substituted for missing participant self-reports in statistical analysis. We propose a statistical method using propensity score stratification that leverages proxy reports' ability to reduce selection bias and adjusts for misclassification bias. Since proxy reports are typically obtained only for participants with missing self-reports, the magnitude of misclassification bias cannot be determined empirically. Thus, we describe use of the proposed method for sensitivity analysis and demonstrate this approach to assess recovery of mobility after hip fracture in the Second Cohort of the Baltimore Hip Studies.

#### PLANNED MISSINGNESS

D.R. Royall, 1. *Psychiatry, UTHSCSA, San Antonio, Texas*, 2. *STVHS GRECC, San Antonio, Texas*

Longitudinal study designs are the sine qua non for investigating aging-related trends. There are now well-established methods for addressing missing data in such studies. Modern missing data methods minimize the problems formerly associated with missing data (e.g., loss of power and biased parameter estimates). "Planned Missingness" takes full advantage of these methods by incorporating them into the very design of longitudinal studies in order to purposefully plan missing data. This discussion will describe two state-of-the-art statistical methodologies for addressing longitudinal data: statistical measurement models and growth curve analysis, and then how the purposeful planning of missing data in these designs can reduce subject burden, improve data quality and statistical power, and manage costs.

### SESSION 870 (SYMPOSIUM)

#### WHAT CAN THE FEDERAL GOVERNMENT DO FOR YOU? UPDATE FROM THE NATIONAL INSTITUTE ON AGING

Chair: *M. Bernard, National Institute on Aging, Bethesda, Maryland*  
Discussant: *R. Hodes, National Institute on Aging, Bethesda, Maryland*  
Discussant: *R. Barr, National Institute on Aging, Bethesda, Maryland*

The National Institute on Aging (NIA) at the National Institutes of Health, Department of Health and Human Services conducts and supports biomedical and behavioral research with a focus on understanding basic processes of aging, improving prevention and treatment of diseases and conditions common in later years, and improving the health of older persons. The NIA also supports the training and career development of scientists focusing on aging research and the development

of research resources. The symposium provides an update on the latest research findings from the NIA, presented by the Institute Director, followed by a brief update on funding mechanisms. An opportunity is provided to meet and consult with representatives from the Office of the Director and extramural staff from the divisions of Extramural Activities, Geriatrics and Clinical Gerontology (GCG), Behavioral and Social Research (BSR), Neuroscience (DN) and Aging Biology (DAB).

### SESSION 875 (PAPER)

#### CARDIOVASCULAR DISEASE AND THE OLDER ADULT: INCIDENTS, PREDICORS AND PROSPECTS

#### ASSOCIATION OF ANDROGEN AND ANDROGEN RECEPTOR LEVELS WITH CORONARY ARTERY DISEASES IN OLD MALES

X. Li, X. Zhang, *First Department of Geriatric Cardiology, Chinese PLA General Hospital, Beijing, China*

Background Association between androgen status and prevalence of coronary artery diseases (CAD) has not been fully understood. The aim of this study is to investigate the correlation of endogenous androgen and androgen receptor (AR) level with CAD in old males. Methods 296 old male patients ( $\geq 60$  years) from different centers were enrolled and divided into the CAD ( $n = 237$ ) and control group ( $n = 59$ ) according to the results of coronary angiography. Serum levels of free testosterone (FT), total testosterone (TT), estradiol (E2), luteotrophic hormone (LH), follicle-stimulating hormone (FSH), sex hormone-binding globulin (SHBG) and dehydroepiandrosterone (DHEA) were measured in all participants. The androgen receptors of peripheral lymphocytes were assessed by flowcytometry. Results The serum level of FT was lower in the CAD group than that in the control group [ $(24.1 \pm 22.2) \times 10^{-9}$  mmol/L vs  $(34.1 \pm 31.8) \times 10^{-9}$  mmol/L,  $P = 0.06$ ]. But two groups showed no statistic differences in the levels of TT, E2, LH, FSH, SHBG, DHEA and lymphocyte AR. The logistic regression analysis showed that the level of FT was negatively correlated with the CAD risk ( $OR = 0.98$ ,  $P = 0.0049$ ) and positively correlated with the peripheral lymphocyte AR level. However age was negatively correlated with the levels of FT and AR. Conclusions Deficiency of endogenous androgen contributes to a high prevalence of CAD in old males. Age-related decreases of FT and AR may impair the physiological functions of androgen to accelerate the progression of coronary atherosclerosis.

#### EXERCISE TREADMILL TEST IN ASSESSING EARLY LESIONS OF THE LOWER EXTREMITY ATHEROSCLEROSIS

X. Li, H. Zhang, *First Department of Geriatric Cardiology, Chinese PLA General Hospital, Beijing, China*

Background Early detection of atherosclerotic lesions in lower extremity is important to patients of high risk for cardiovascular disease. The aim of this study is to assess the value of exercise treadmill testing in diagnosing early atherosclerotic lesions of the lower limb. Methods 173 outpatients with high risk for PAD were enrolled from the cardiology clinic. All patients were subjected to exercise treadmill testing (Bruce's protocol) and ankle-brachial index (ABI) determination, as well as lower limb artery ultrasonography within one week. Using ultrasonic findings as diagnostic criteria, the diagnostic value of exercise treadmill testing for early atherosclerotic lesions of the lower limb were analyzed. Results After exercise, ABI decrement (R value) increased in subjects with high risk for PAD with atherosclerotic lesions of the lower limb aggravating. Using the categories of large atherosclerotic plaques (area  $>20\text{mm}^2$ ), atherosclerotic plaques, and atherosclerotic lesions as positive diagnostic criteria, the area under ROC curve for R values were 0.802 (95%CI, 0.722, 0.882), 0.78 (95%CI, 0.708, 0.852) and 0.599 (95%CI, 0.44, 0.757), respectively. Using the presence of large atherosclerotic plaques in lower extremities as positive

diagnosis, R value was 0.85, with a sensitivity of 70.0%, a specificity of 91.9%, a LR+ of 8.64, and a LR- of 0.33. Conclusions Exercise treadmill testing in combination with ABI determination is a safe, accurate and objective tool for detecting early atherosclerotic lesions of the lower limb. Immediately after exercise, 0.85 is the cut-off R value appropriate for diagnosing large atherosclerotic plaques of the lower limb (area >20mm<sup>2</sup>).

#### **METABOLIC PREDICTORS OF ISCHEMIC HEART DISEASE AND CEREBROVASCULAR ATTACK IN ELDERLY DIABETIC INDIVIDUALS: THE ROLES OF HDL-CHOLESTEROL AND THE LDL-C/HDL-C RATIO**

T. Hayashi<sup>1</sup>, K. Ina<sup>1</sup>, H. Nomura<sup>1</sup>, T. Ohru<sup>2</sup>, K. Yokote<sup>3</sup>, H. Watanabe<sup>4</sup>, *J. Geriatrics, Nagoya University Graduate School of Medicine, Nagoya, Japan, 2. Tohoku University School of Medicine, Sendai, Japan, 3. Chiba University Hospital, Chiba, Japan, 4. Hamamatsu University School of Medicine, Hamamatsu, Japan*

**Objectives:** Dyslipidemia, especially LDL-cholesterol(LDL-C) is a risk factor for ischemic heart disease(IHD) in middle-aged diabetic individuals. However, the factors predicting IHD and cerebrovascular attack(CVA) in older patients are not well known. **Research Design and Methods:** This study was designed as a prospective cohort study(Japan Cholesterol and Diabetes Mellitus Study) with 4,014 type 2 diabetic patients(1,936 women; mean age 67.4±9.5years, median age 70 years, n=1261 <65years, n=1731 from 65 to 74years and n=1016 >75years; disease duration 9.6±8.0years). The levels of lipids, glucose, and other factors like blood pressure, were investigated relative to IHD or CVA by a multivariate Cox hazard model. **Results:** One hundred fifty-three cases of IHD and 104 CVAs(7.8 and 5.7/1000 people per year) occurred over 5.5 years. Lower HDL-cholesterol(HDL-C) and higher LDL-C was correlated with IHD in patients ≥75years(HR:0.629, P<0.01, 1.176, P<0.05), in contrast to higher systolic blood pressure, hemoglobin A1C(HbA1C) and LDL-C in subjects <65years and higher LDL-C/HDL-C in all generations. HDL-C was also correlated with CVA in patients ≥65years(HR:0.612, P<0.01). Kaplan-Meier estimator curves showed that IHD was more frequent in patients <65years in the highest quartile for LDL-C/HDL-C ratio and in patients ≥75years in the lowest quartile for HDL. CVA was most frequent in patients ≥75years in the lowest quartile for HDL-C. **Conclusions:** IHD and CVA in elderly diabetic patients are predicted by HDL-C. LDL-C, HbA1C and systolic blood pressure are risk factors for IHD in non-elderly, and LDL-C/HDL-C may represent the effects of both LDL-C and HDL-C. These differences in risk by age are important for individualized strategy to prevent atherosclerotic diseases.

#### **IMPORTANCE OF HDL CHOLESTEROL LEVELS IN DIABETIC INDIVIDUALS WITH TYPE IIB DYSLIPIDEMIA - 5-YEAR SURVEY OF CARDIOVASCULAR EVENTS-**

K. Ina, T. Hayashi, *Geriatrics, Nagoya University Graduate School of Medicine, Nagoya, Japan*

**Introduction** We investigated the relationship between lipid levels and ischemic heart disease (IHD) and cerebrovascular accident (CVA) in diabetic individuals with type IIB dyslipidemia. **Method** The Japan Cholesterol and Diabetes Mellitus Study is a prospective cohort study of 4,014 type 2 diabetic patients (1,936 women; age 67.4±9.5 years). The primary end points were onset of IHD or CVA. Patients with type IIB dyslipidemia were defined both triglycerides(TG) ≥150 and LDL-cholesterol ≥120mg/dl. 492 subjects showed type IIB dyslipidemia. **Results** IHD and CVA occurred in 4.0% and 2.7% of participants, respectively, over a 5-year period in the whole study. While occurrence of IHD and CVA in participants with type IIB dyslipidemia were 4.5% and 3.3% respectively. Participants with type IIB dyslipidemia showed higher proportions of occurrence of cardiovascular events. 492 participants with type IIB dyslipidemia were divided into those aged <65 years, 65–74years, and <75 years (n=180, 204, and 108, respectively). Lower

HDL cholesterol was significantly associated with the risk of CVA in diabetic individuals with type IIB dyslipidemia aged <65 years over a 5-year period, on the other hand, HDL cholesterol was associated with CVA in diabetic individuals older than 75 years in total patients analyses. **Conclusions** Lower HDL cholesterol was an important risk factor for cardiovascular events in diabetic individuals with type IIB dyslipidemia aged <75 years. Risk factors for diabetic individuals with type IIB dyslipidemia might be change with advancing age.

#### **PROXIMAL UPPER EXTREMITY WEAKNESS: A NOVEL RISK FACTOR FOR INCIDENT HEART FAILURE IN A COMMUNITY-DWELLING OCTOGENARIAN AND OLDER POPULATION: FINDINGS FROM A PROSPECTIVE STUDY**

K. Patel, A. Ahmed, *University of Alabama at Birmingham, Birmingham, Alabama*

**Background:** Little is known about risk factors for incident heart failure (HF) in late life when traditional risk factors may not play important roles. **Methods:** We studied 898 community-dwelling adults, age 80 years and older, free of baseline heart failure (HF) in the Cardiovascular Health Study. Upper extremity weakness was defined as self-reported difficulty with lifting, reaching, or hand gripping. Overall, 283 (32%) patients had upper extremity weakness, of whom 178 had difficulty with lifting, 59 had difficulty with reaching and 141 had difficulty with hand gripping. **Results:** Patients had a mean (±SD) age of 83 (±3) years; 51% were women; and 17% were African American. During 13 years of follow-up, centrally-adjudicated incident HF occurred in 35% and 29% of participants with and without upper extremity weakness. Unadjusted, age-sex-race-adjusted, and multivariable-adjusted associations of upper extremity weakness with incident HF were 1.36 (95% CI, 1.06–1.74; p=0.014), 1.61 (95% CI, 1.24–2.07; p<0.001), and 1.34 (95% CI, 1.01–1.78; p=0.040), respectively. When we categorized upper extremity weakness as proximal (reaching and lifting) and distal (hand gripping), the association was only significant for proximal upper extremity weakness. Similar significant associations were observed with all-cause and cardiovascular mortality but not with non-cardiovascular mortality. **Conclusions:** Among community-dwelling octogenarian and older adults, self-reported proximal upper extremity weakness was associated with increased risk of incident HF and all-cause mortality including cardiovascular mortality.

#### **SESSION 880 (PAPER)**

#### **OLDER ADULT FUNCTION: RISKS IMPAIRMENTS, AND INTERVENTIONS**

#### **THE RISK OF POTENTIALLY AVOIDABLE HOSPITALIZATIONS FOR ELDERLY RESIDENTS IN NURSING HOMES (NHS): ESTIMATES FROM A COMPETING RISK (CR) MODEL**

W.D. Spector<sup>1</sup>, R. Limcangco<sup>2</sup>, C. Williams<sup>3</sup>, W. Rhodes<sup>4</sup>, D.T. Hurd<sup>4</sup>, *J. Agency for Healthcare Research & Quality, HHS, Rockville, Maryland, 2. Social & Scientific Systems, Inc., Silver Spring, Maryland, 3. Abt Associates, Durham, North Carolina, 4. Abt Associates, Cambridge, Massachusetts*

Hospitalizations of long-stay NH residents are common, but as many as 60% have been estimated to be potentially avoidable. No consensus exists for which hospitalizations are deemed “avoidable,” and prevalence estimates vary greatly depending on which measure is chosen. Although individual risk is influenced by variation in clinical, facility, and policy factors, it also depends on the definition of “avoidable.” A quality improvement measure to identify NHs with more than expected hospitalizations is being developed; it is therefore important to understand how different measure specifications affect estimates and which factors are needed for case-mix adjustment. The sample is a cohort of long-term NH residents from 10/1/2006-12/31/2008. Data are from the

NH Stay file (10% facility sample), MDS assessments, OSCAR, and State policy data. We analyze the risk of hospitalizations accounting for the CR of death and unavoidable hospitalizations. Three hospitalization outcomes were compared: All Hospitalizations (ALLH), Ambulatory Care Sensitive Conditions (ACSC) and NH Avoidable Conditions (NHAC). Twenty-seven percent of hospitalizations are identified with ACSC and 56% with NHAC. For all models, having a prior hospitalization (past 90 days), number of prescribed medications, CHF, COPD, receiving oxygen, and diabetes were significant risk factors. Being male, serious infection, renal disease, pressure ulcers, IV medications, and catheter or ostomy were risks only for ALLH and NHAC. Significant facility characteristics and policy variables also differ by outcome definition. The analysis suggests that the ACSC compared to the NHAC would miss important avoidable hospitalizations, as well as important risk adjustments.

### **THE FINGER RUB TEST: IS IT VALID FOR SCREENING FOR HEARING LOSS?**

M.I. Wallhagen, W.J. Strawbridge, *Physiological Nursing, University of California, San Francisco, San Francisco, California*

Hearing loss (HL) is common in older adults yet screening rates are low. Use of audiometers in primary care settings can be expensive. A simple, quick (2 minutes) alternative is a standardized finger rub test. Practitioners stand behind patients who have their eyes closed, hold their arms to the sides of the individual's ears with arms either extended (70 centimeters) or with elbows bent (35 centimeters), and rub their fingers together. Both strong and faint finger rubs have been recommended. Yet despite its ease of use, minimal data are available comparing the results of the finger rub test with results of audiometric testing in ambulatory persons. We conducted the finger rub test on 40 older ( $\geq 60$ ) individuals (80 ears) for whom full audiograms were available. 62% were female, 35% were minorities. Hearing loss was defined as a high frequency pure tone average (at 1,000, 2,000, and 4,000 Hz) over 25 dB. Sensitivity of the strong finger rub at 70 centimeters was 95%; specificity and positive predictive value were 100%. At 35 centimeters sensitivity dropped to 81% while the other two values stayed high. Results for the faint finger rub at 70 and 35 centimeters were comparable for sensitivity and positive predictive value but much lower for specificity (53% & 77% respectively). Using the strong 70 centimeter parameters, this simple yet effective screening test could improve identification and referral of older primary care patients with hearing loss.

### **ASSESSING ADJUSTMENT TO AGING: A CROSS-VALIDATION STUDY FOR ADJUSTMENT TO AGING SCALE (ATAS-33)**

S. von Humboldt, I. Leal, *Research Unit in Psychology and Health, I&D, ISPA – Instituto Universitário, Lisbon, Lisbon, Portugal*

Aims: Adjustment to aging (AtA) is a multifactor adjustment process with implications on quality of life and well-being of aging adults. This study aims to develop and validate a scale to assess the factors that older adults recognized as determinant for their AtA, adding a cross-cultural comparative perspective towards aging well. Methods: Measures were completed, including demographics and the proposed original set of 127 items. Complete data was available for 709 older adults aged between 74-102 years ( $M=82.4$   $SD=6.45$ ). Factor exploratory and confirmatory factor analyses were run for dimension reduction and for exploring the factorial structure. Results: The 33-items AtA 8-factor scale showed overall good psychometric properties (in terms of factorial, convergent, discriminant and criterion validity, as well as reliability and sensitivity). The sampling adequacy was confirmed ( $KMO=0.789$ ) and the total variance explained by this eight-factor structure was 74.55%. Eight factors resulted from ATAS-33: (a) Accomplishment, creativity and challenges; (b) body and health; (c) stability and comfort; (d) interpersonal attachment and intimacy; (e) autonomy, mobility and safety; (f) spirituality, existential and personal beliefs; (g) zest and humour; and (h)

simplification and relaxation. All factorial weights were statistically significant ( $p<.05$ ). Conclusions: We present a valid and reliable 33-items/eight factor scale for estimation of AtA in a multicultural elderly population. Results emphasize that communication approaches in clinical practice and program development may benefit from clearly understanding AtA as an important component for reducing health disparities and for aging well, across cultures. Key Words: Adjustment to aging, aging well, older adults, scale, validation.

### **DOES COGNITIVE AND PHYSICAL FUNCTION INFLUENCE OLDER ADULTS PAIN MANAGEMENT? THE MOBILIZE BOSTON STUDY**

C.L. Stewart<sup>1</sup>, S.G. Leveille<sup>2,3</sup>, P. Schofield<sup>4</sup>, *1. Centre of Academic Primary Care, University of Aberdeen, Aberdeen, United Kingdom, 2. College of Nursing & Health Sciences, University of Massachusetts, Boston, Massachusetts, 3. Division of General Medicine & Primary Care, Beth Israel Deaconess Medical Center, Harvard Medical, Boston, Massachusetts, 4. School of Health & Social Care, University of Greenwich, London, United Kingdom*

The influences of cognitive and physical function upon older adults' pain management remains under-researched. This study explored associations between cognitive and physical limitations and use of pain management approaches by older adults with persistent pain. We studied 599 persons aged  $\geq 70$  in the population-based MOBILIZE Boston Study who reported persistent pain (Brief Pain Inventory severity subscale) at baseline. Limited physical function was defined as SPPB score  $<9$  or self-reported difficulty in ADL. Reduced cognitive function was defined as Mini-mental State Examination (MMSE) score  $<24$  or Trail Making Test A and B (TMT) decrement score  $>127.5$  seconds. Average age of participants was 77.8y, two-thirds were female and 77% were white. Regardless of function, use of pain management approaches was consistently associated with pain severity ( $p<.001$ ). Those with limited physical function (SPPB or ADL) combined with moderate to severe pain were more likely to use analgesics (SPPB,  $OR=5.7$ , 95% CI 2.5, 12.9), specifically opioid analgesics (SPPB,  $OR=18.4$ , 95% CI 5.4, 62.6), compared to those without limited function who had mild pain. Those with lower MMSE scores ( $<24$ ) and more severe pain were also more likely to use analgesics ( $OR=5.7$ , 95% CI 2.3, 13.9) and specifically, opioid analgesics ( $OR=12.3$ , 95% CI 4.3, 35.5). Few differences were observed using TMT scores. Functional associations with specific non-pharmacologic modalities varied widely. In general, function was more strongly associated with pharmacologic pain management than non-pharmacologic. Further research is needed to understand reasons behind pain management choices. Clinicians should consider possible influences of functional status when recommending pain management.

### **HIP IMPAIRMENTS AND FUNCTION IN OLDER ADULTS WITH CHRONIC LOW BACK PAIN: THE DELAWARE SPINE STUDIES**

G. Hicks, M. Sions, T. Velasco, *Physical Therapy, Univ Delaware, Baltimore, Maryland*

Background: Rehabilitation professionals have often cited a relationship between hip dysfunction and chronic low back pain (CLBP). Whether clinical hip impairments are more common and associated with greater functional limitations among older adults with chronic LBP is unknown. Methods: Participants in this comparative study included 86 community-dwelling older adults ( $>65$ ) with a primary complaint of CLBP and an age/gender matched group without LBP. CLBP was characterized as pain of at least moderate intensity on most days for the past three months. Clinical hip impairments included hip joint pain, morning stiffness and pain with hip internal rotation (IR). Function was assessed with the Oswestry LBP-Disability Questionnaire (ODQ) and the Medical Outcomes Short Form 36 (SF-36). Results: Hip joint pain, morning stiffness and pain with IR were more common among older adults with CLBP ( $p<.05$ ). Presence of at least one clinical hip

symptom was associated with a 7-fold greater odds of having CLBP [OR (95% CI): 7.15 (2.30-22.21)]. Participants with CLBP and co-existing hip impairments had greater pain severity (4.2 +/- 2.4 vs. 2.8 +/- 1.7,  $p=.01$ ) and worse ODQ scores (39.6 +/- 11.3 vs. 29.6 +/- 11.7,  $p=.03$ ) than individuals with LBP only. Among older adults with CLBP, presence of hip symptoms was associated with greater deficits in social function and role limitations due to both physical and emotional problems as measured by the SF-36 ( $p<.006$ ). Conclusions: Clinical hip impairments are more prevalent among older adults with CLBP and are associated with greater functional limitations and participation restrictions.

## SESSION 885 (SYMPOSIUM)

### CHARTING NEW FRONTIERS IN LONG-TERM CARE: EXPLORING ALTERNATIVES TO INSTITUTIONALIZATION

Chair: *K.S. Thomas, Brown University, Providence, Rhode Island*

The national move from an over-reliance on nursing home care to more home and community-based care has taken hold in recent years. Most states have developed nursing home transition programs to help older adults return to the community and many states are committed to helping older adults avoid unwanted nursing home placement altogether. Presenters in this symposium will discuss state variation in home and community-based services (HCBS) expenditures, differential outcomes of HCBS and institutional care, transitions out of institutions, and the effect of using home care services on the costs of institutional care. Specifically, one presenter will discuss the relationships among states' Older Americans Act expenditures, Medicaid investments in HCBS, and prevalence of low-care nursing home residents over a 10-year period. The second presenter will discuss the variation in the rates of potentially preventable hospitalization in HCBS and institutional care using Medicaid data from five states. Another speaker will identify and compare predictors of community discharge among nursing home residents enrolled in a Social HMO in Southern California, with implications for targeting strategies. Because limited evidence exists on whether home care expenditures substitute for institutional long-term care expenditures, the final presentation will estimate the causal effect of home care services on the costs of institutional medical care using Medicaid claims data from the Cash & Counseling Demonstration and Evaluation program in Arkansas, New Jersey, and Florida.

### THE RELATIONSHIP BETWEEN OLDER AMERICANS ACT TITLE III STATE EXPENDITURES AND PREVALENCE OF LOW-CARE NURSING HOME RESIDENTS

*K.S. Thomas, V. Mor, Brown University, Providence, Rhode Island*

Previous studies have suggested that anywhere from 5- 30% of nursing home (NH) residents have low-care needs and could perhaps be better served in the community. Using data for years 2000-2009 from the Older Americans Act (OAA) State Program Reports and NH facility-level data (including characteristics of the facility, the market, residents, and state policies) we examined the relationship between state investment on OAA Title III services and prevalence of low-care NH residents. Controlling for Medicaid HCBS spending, facility characteristics, and market characteristics, results from a two-way fixed effects model suggest that every additional \$10 a state spends per older adult on home-delivered meals is associated with a decrease in the low-care NH population of .3 percentage points. These findings highlight the

need for states to invest in OAA services, specifically home-delivered meals, in an effort to reduce the prevalence of low-care residents in NHs.

### POTENTIALLY PREVENTABLE HOSPITALIZATIONS AMONG ELDERLY MEDICAID LONG-TERM CARE USERS

*A. Wysocki, R. Kane, University of Minnesota, Minneapolis, Minnesota*

Elderly long-term care (LTC) users are at high risk for hospitalization. Some of these hospitalizations may be unnecessary if they result from conditions that could be prevented and/or managed in an individual's current setting. Given the substantial investment in HCBS, it is important to understand how those receiving HCBS compare to nursing home residents in terms of potentially preventable hospitalizations. This research compares the risk for a potentially preventable hospitalization between elderly Medicaid HCBS users and nursing home residents using person-quarter Medicaid and Medicare data from seven states from 2003-2005. An instrumental variables approach was used to control for the potential endogeneity of an individual's type of LTC use. HCBS users were found to have an increased risk compared to nursing home residents for both a potentially preventable and a non-potentially preventable hospitalization. These results suggest a need for more proactive integration of medical and LTC among HCBS users.

### COMMUNITY TRANSITIONS: PATTERNS & PREDICTORS OF NURSING HOME DISCHARGE FOR SHORT- AND LONG-STAYS

*A. Rahman, Z.D. Gassoumis, K. Fike, S. Enguidanos, K. Wilber, Davis School of Gerontology, USC, Los Angeles, California*

Discharge patterns for residents aged 65+ were examined using Minimum Data Set assessments from January 2001 to December 2003 for all members enrolled in a Social HMO in Southern California in 2000 and a propensity-matched Medicare sample. Time-to-discharge was examined for 3,762 episodes of care using Kaplan-Meier survival estimates, and logistic regression identified predictors of community discharge. Half of all new admission episodes ended in community discharge within one year. Of these discharges, 90% occurred within the first 90 days; only 10% occurred after 90 days. Only two resident characteristics predicted community discharge after 90 days: cancer (OR=0.38,  $p=.04$ ) and severe cognitive impairment (OR=0.44,  $p=.02$ ) both decreased the odds of discharge. Findings underscore the challenge of targeting transition program support to residents who are both capable of residing in the community and who will not otherwise discharge to the community on their own.

### THE CAUSAL EFFECT OF HOME CARE USE ON INSTITUTIONAL CARE EXPENDITURES

*J. Guo, Health Studies, The University of Chicago, Chicago, Illinois*

Using Medicaid claims data from the Cash & Counseling Demonstration and Evaluation program in Arkansas, New Jersey, and Florida (N=5555), this study empirically estimated the effect of using home care services on the costs of nursing facilities, inpatient medical care, and total institutional care while controlling for selection bias using an instrumental variables approach. The results suggest that using home care services significantly decreased expenditures on institutional medical care. A 10 percent increase in home care expenditures lowers annual Medicaid institutional expenditures by \$64 across the full sample, \$56 of which is a reduction in nursing facility expenditures. Neglecting to address endogeneity would have led to a conclusion of a net complement of home care to inpatient care, whereas controlling for the endogeneity of home care reveals the opposite. Therefore, receiving home care services appears to help avoid institutional medical care, which usually generates much higher costs.



## SESSION 890 (SYMPOSIUM)

### CONNECTING THE MICRO, MACRO AND MEZZO SYSTEMS FOR TRANSPORTATION AND HEALTH

Chair: C. Irmiter, American Medical Association, Chicago, Illinois

Discussant: R. Golden, Rush University, Chicago, Illinois

Healthcare providers are challenged to deliver quality care to older patients with multiple, chronic physical conditions, functional and mental impairments. At the same time, older patients are facing their diminishing health and well-being in a fragmented healthcare system, with a shortage of physicians and an increasing demand to improve their self care with limited help from the system. One problem for older patients that falls below the radar is how transportation impacts access to healthcare services. This symposium examines the research, practice and policy that is emphasizing the critical link between non-emergency medical transportation access and health care for older patients. Presenters will highlight the importance of national policy efforts to address older driver safety and mobility, of key research findings that describe and infer the use/cost of non-emergency medical transportation options for older patients of effective educational programs for healthcare professionals to assess, treat, and counsel older drivers

### POLICY RATIONALE FOR ADDRESSING OLDER DRIVER SAFETY AND MOBILITY BY PHYSICIANS

E. Wagner, National Highway Traffic Safety Administration, US Department of Transportation, Washington, District of Columbia

With each passing year, safe mobility for an aging population becomes increasingly important. Engaging the people who are likely to be able to influence older drivers' behavior is a key strategy in the National Highway Traffic Safety Administration's (NHTSA's) approach to ensure safety and mobility of older people. Educational materials are tailored to the different audiences and to the ways that they can influence driver behavior. For example, because older people are likely to listen to their physicians and other clinicians, it is critical that clinicians understand why they should and how they can address driving safety with patients and caregivers. Clinicians must also have resources and access to educational content that supports the guidance they provide. After attending this activity, participants will be able to discuss the rationale for addressing older driver safety in clinical visits. Participants will also be able to identify key resources on older driver safety.

### ASSESSING, TREATING, AND COUNSELING OLDER ADULTS ABOUT DRIVING AND TRANSPORTATION OPTIONS

C. Irmiter<sup>1,3</sup>, J. Schwartzberg<sup>1</sup>, L.D. Manning<sup>1</sup>, K. Peters<sup>2</sup>, 1. American Medical Association, Chicago, Illinois, 2. University of Illinois, Chicago, Illinois, 3. Loyola University, Chicago, Illinois

Clinicians lack knowledge and/or training of how and when to approach fitness-to-drive, and are even less knowledgeable about transportation options. To improve this, AMA developed a web-based curriculum educating medical residents/students, physicians, and healthcare providers in the evaluation and management of driving fitness concerns in the routine care of older patients. Six sites across the country were evaluated to understand what knowledge, skills, and abilities were gained from the curriculum. Pre and post surveys from 149 resident/fellows, 56 physicians, 26 non-physician health care professionals, and 20 medical students were analyzed using ANOVA and t-tests. Overall, 88% learned new strategies/ tools to use in practice, and there was a 70% (p<.0001) difference in change from pre to post test for all regarding familiarity with driving rehabilitation options available to patients. Moreover, there were statistically significant differences between groups for all other responses regarding attitudes, knowledge, and skills.

### NON-EMERGENCY TRANSPORTATION: PATTERNS OF USE AND MODELS FOR ACCESS

T. Prohaska<sup>1</sup>, A. Eisenstein<sup>1</sup>, K.L. Hoggard<sup>2</sup>, 1. Center for Research on Health and Aging, University of Illinois Chicago, Chicago, Illinois, 2. Logisticare Solutions, LLC, Atlanta, Georgia

Availability of non-emergency medical transportation (NEMT) services is critical to maintaining health and independence among older adults in the community. While Medicaid funded NEMT is available for older adults in over 40 states, underutilization remains an issue. This study report demographic and health characteristics among older (age 65+) NEMT users as well as use and cost for NEMT in two states (Delaware, n=2,467, Oklahoma, n= 6,804). A total of 54,164 NEMT trips were taken by older adults in Delaware in 2010 (93,826 Oklahoma). The majority of older NEMT trips were ambulatory users followed those needing wheelchair and stretcher assistance (58%, 33%, 8.8% Delaware, 67%, 32%, .01% Oklahoma, respectively). Two legged round trips were the most commonly requested NEMT service. These findings are applied to education and screening strategies to promote access to NEMT through medical care settings as point of entry.

## SESSION 895 (SYMPOSIUM)

### EXPLORING NEW RESEARCH TO BETTER SUPPORT FAMILY CAREGIVERS IN POLICY AND PRACTICE

Chair: S.C. Reinhard, AARP Public Policy Institute, Washington, District of Columbia

Discussant: S.H. Zarit, The Pennsylvania State University, State College, Pennsylvania

Families are the most important source of support to older adults. Increasingly, family caregivers monitor chronic and sometimes acute health conditions as well as provide long-term services and supports (LTSS) at home. These family members, who are often unprepared for carrying out these tasks, provide assistance in areas that once were provided by trained health professionals. Family caregiving in the rapidly changing systems of health care and long-term services and supports (LTSS) can have a significant impact on the family members who provide care. A key concern is that the continued reliance on family caregivers, without better recognition of and attention to their own support needs, could negatively affect the ability of family caregivers to provide care in the future. Ignoring family needs can increase strain and health risks that can impede a caregivers's ability to provide care, prevent unnecessary hospitalizations, and prevent or delay nursing home care. This symposium explores new frontiers in caregiving research sponsored by the AARP Public Policy Institute. Presenters will highlight the national economic value of caregiving, present results from research identifying the health care tasks that family caregivers perform, describe the extent to which states assess family caregiver needs within Medicaid home and community-based services waiver programs, and review the findings from a pilot program designed to improve the knowledge and skills of informal family caregivers for beneficiaries enrolled in waiver programs. Implications for health care and social service professionals to better recognize and support families as partners in care will be addressed.

### WHAT ARE THE HEALTH-RELATED TASKS THAT CAREGIVERS DO?

C. Levine, United Hospital Fund, New York, New York

Family caregivers are increasingly carrying out health-related tasks with little training or preparation. In December 2011, a national survey of 1,679 family caregivers was conducted to determine whether they performed health-related tasks such as wound care and medication management and administration, the type of health tasks that they performed, their difficulties in this area, and their level of stress. Of the total sample, almost half (50%) of the caregivers were performing some type of medical/nursing task, and about one-third were also assisting with ADLs

and IADLs, as well as medical/nursing tasks. This is the first national survey about this neglected area of caregiving research. This presentation will review the key findings, including detailed descriptions of the health-related tasks. The findings suggest that the conventional ADL/IADL framework for measuring caregiver responsibilities is inadequate to capture caregiver responsibilities in the current health care system. Recommendations for policy and practice will be offered.

#### **FAMILY CAREGIVING IN AN AGING AMERICA: THE NEW NORMAL**

L. Feinberg, S.C. Reinhard, R. Choula, *AARP Public Policy Institute, Washington, Maryland*

The challenges and pressures of family caregiving for older relatives or friends are a reality of daily life today. Although family caregivers are the backbone of our health and long-term services and supports (LTSS) systems, the significance of their role, and their own care-related strain and compromised health are often overlooked. This presentation examines, from an historical perspective, why family care matters to older people and to the nation's health care and LTSS systems. It discusses the "new normal" of family caregiving today for an aging relative or friend, and presents data on the economic value of the unpaid contributions of family caregivers in the U.S. The presentation also summarizes research about the impact of family care on caregivers themselves. Areas in which public policies can respond to the needs of family caregivers are highlighted.

#### **ASSESSING FAMILY CAREGIVER NEEDS IN MEDICAID HOME AND COMMUNITY-BASED SERVICES (HCBS) WAIVER PROGRAMS: THE NEXT FRONTIER**

K. Kelly, S. Coffey, *Family Caregiver Alliance, San Francisco, California*

Home and Community Based Services (HCBS) provided through Medicaid waivers, enable older and disabled adults to remain in their homes and can support family caregivers. The assessment process for HCBS is also a key opportunity to assess the caregiving situation, especially the needs, resources and strengths of the family caregiver. Where appropriate, the results of an assessment can be used to connect caregivers with supportive services. This presentation will present preliminary findings from a 50-state survey examining the state of the states in assessing caregiver needs within Medicaid HCBS Aged and Aged/Disabled waiver programs. The process for conducting a caregiver assessment in Medicaid waiver programs, the types of questions included to assess caregiver needs, and how the information collected is used to support family caregivers will be highlighted. Implications for policy and practice will be discussed.

#### **NEW JERSEY CARE PARTNER SUPPORT PILOT PROGRAM: PROGRAM AND PROCESS EVALUATION**

A.M. Tripp<sup>1</sup>, C.H. Woodcock<sup>2</sup>, *1. The Hilltop Institute, Baltimore, Maryland, 2. IMPAQ International, LLC, Columbia, Maryland*

The New Jersey Care Partner Support Pilot Program was designed to improve the knowledge and skills of family caregivers caring for older adults enrolled in New Jersey's Medicaid Global Options home and community-based services waiver and the Jersey Assistance to Community Caregivers program. The Hilltop Institute completed an assessment of the pilot program. Hilltop will describe the pilot program, including the process for developing and administering the caregiver assessment instrument. They will compare profiles of the caregivers at time of initial assessment and at three-month follow-up. Outcomes will be reviewed related to caregiving activities, available support systems, caregiver burden and other measures used in the assessment. The session will conclude with a discussion of implications for implementing caregiver support programs on a larger scale.

## **SESSION 900 (SYMPOSIUM)**

### **MULTIPLE PERSPECTIVES ON TRANSGENDER AGING**

Chair: *V. Fabbre, SSA, University of Chicago, Chicago, Illinois*

Co-Chair: *T.M. Witten, Virginia Commonwealth University, Richmond, Virginia*

Discussant: *B. De Vries, San Francisco State University, San Francisco, California*

This symposium will highlight multiple perspectives on transgender aging, in order to highlight this burgeoning area of research and to broaden gerontological theory and methodology with respect to gender identity and expression. Two presenters will report on findings from studies in the interpretive tradition. Analysis of life story interviews suggests that building upon the concept of a "third age" may be helpful in understanding experiences of gender throughout the life course, conceptualizations of the aging body, and the effects of a lack of knowledge on transgender issues at critical points in later life. An ethnographic analysis of participant observation at national transgender conferences illuminates the ways in which male-to-female identified adults make decisions about pursuing a gender transition in later life. In addition, two presenters will report on results of survey research. Structural equation modeling of data gathered from a national sample of 200 transgender people in midlife suggests that transgender adults face unique challenges in enacting resilience as they age. Findings and challenges from the third wave of an ongoing international survey of transgender adults emphasize resilience and spirituality at midlife and beyond. The discussant will draw attention to the challenges of developing a body of knowledge on the topic of transgender aging that is cohesive and adequately encompasses diverse theoretical and methodological perspectives on the topic while contributing to our overall understanding of aging in all of its complexity.

### **GENDER TRANSITIONS IN LATER LIFE**

*V. Fabbre, SSA, University of Chicago, Chicago, Illinois*

This presentation will illuminate the ways in which I am using Extended Case Method (ECM) to investigate the nature of gender transitions in later life. Multi-systemic analyses of data collected through participant observation at three national transgender conferences, along with the first wave of interviews conducted with older adults who contemplate and/or pursue a gender transition past the age of 50, will be used to present: 1) the ways in which male-to-female identified adults make decisions about gender transitions in later life; 2) perspectives on agency and social structure relevant to the unique social context in which transgender older adults navigate these decisions; and 3) implications for taking a life course perspective to study transgender aging and late life gender transitions.

### **TRANSFORMING LIFE COURSES: GENDER, AGE AND THE BODY IN TRANSGENDERED LIFE COURSES**

*A. Siverskog, National Institute for the Study of Ageing and Later Life, Linköping University, Norrköping, Sweden*

This paper is based on life story interviews with persons identifying as transgender aged 65 to 77 years old and explores age and ageing in relation to transgender identities. The theoretical frame used consists of social gerontology and queer theory. Three themes are focused: 1) the relation to gender throughout the life course; 2) the ageing body; and 3) the lack of knowledge on trans issues. The results illustrate how trans identities and practices have been seen as inaccessible during big parts of life, but that a different context in combination with being in "third age" can offer new possibilities to be open. There are also experiences of attempts to undergo sex reassignment surgery, but facing realities of health and the ageing body are making this impossible in some cases. Some interviewees also express worries for future needs of care where they fear they might be discriminated.

## ANTICIPATED ADAPTATION TO AGING AMONG TRANSGENDER PEOPLE IN MIDLIFE

K. Knochel, *Social Work, Augsburg University, Minneapolis, Minnesota*

This presentation reports the findings of a secondary data analysis of responses given by a national sample of 200 transgender people in midlife (ages 45 through 64) to the 2009 MetLife Mature Market Institute survey of LGBT midlife adults. I used structural equation modeling to test the effects of support network, adaptation to gender identity, and aging resources on the participants' anticipated adaptation to aging. Surprisingly, neither support network nor adaptation to identity was significantly associated with a participant's anticipated adaptation to aging. The results suggest that structural oppression and the fear of it are experienced by midlife transgender people whether or not they have built their capacity to enact resilience. This presentation provides preliminary insight into the resources and challenges that may impact transgender people's ability to enact resilience in old age and suggests future avenues of research with this population.

## WHAT 1,467 TRANS-PERSONS TELL US ABOUT SURVEY RESEARCH IN THE GLOBAL TRANS-IDENTIFIED COMMUNITY

T. Witten, *VCU, Richmond, Virginia*

In this third in a series of ongoing research surveys on aging, we received 1,467 hits to our survey on elder aging preparation, perceptions, needs, fears and identities. We discovered a number of fascinating insights into how the current trans-elders and young trans individuals are perceiving and preparing for old age. We found a number of respondents who were remarkably resilient in the face of numerous challenges. In addition, we found a number of respondents who indicated that they planned to end their lives before facing the challenges of later life. In my presentation I will provide a brief overview of the three surveys, how they were sampled, challenges in reaching elders of these populations and how our team faced some of the difficulties of inclusion in order to obtain the largest possible number of respondents. I will address the challenges of body, sex, gender and sexuality and how they impact our work in this field.

## SESSION 905 (SYMPOSIUM)

### POLICY SERIES: BREAKING THE SOCIAL SECURITY GLASS CEILING: A PROPOSAL TO MODERNIZE WOMEN'S BENEFITS

Chair: *C.L. Estes, University of California - SF, San Francisco, California*

Co-Chair: *D. Lifsey, Nat. Com. to Preserve SS & Medicare, Washington, District of Columbia*

The U.S. workforce looked very different in 1946, at the start of the Baby Boom generation, than it does today. A big part of this workforce transformation has been due to the contributions of women. While it is true that some women have broken through the glass ceiling and have entered the corporate board rooms of some of our largest and most successful companies, inequities remain. An enduring pay gap, under which women earn 19 percent less than men, means lower lifetime earnings for many women. Lower earnings, in turn, mean the accumulation of fewer assets. And a lifetime spent juggling the competing needs of career and family means employment patterns that contain frequent periods of unemployment and part-time employment. Over a lifetime these disparities aggregate and become glaring in retirement, especially for those from communities of color and those who live to an advanced age. For too many women, retirement is the culmination of an entire career – an entire lifetime – of pay and income inequality. The National Committee to Preserve Social Security & Medicare Foundation joined with the National Organization for Women and the Institute for Women's Policy Research to call for our retirement system to catch up with the chang-

ing needs of women in the workforce. The concept of retirement must be strengthened to reflect the needs of today's generation of women – those currently in retirement, those nearing retirement, and those at the height of their wage-earning potential. Discussants - Pam Herd (confirmed); Maya Rockeymoore, Eric Kingson(invited).

## SESSION 910 (PAPER)

### ASSISTED LIVING DEFINITIONS, REPORTING AND INFORMATION SYSTEMS, AND RESIDENT EXPECTATIONS

#### EXPECTATIONS OF CARE IN ASSISTED LIVING: A RESIDENT'S PERSPECTIVE

P. Nash, V. Burholt, *Centre for Innovative Ageing, Swansea University, Swansea, Wales, United Kingdom*

There are high levels of interest in assisted living environments for older people within the UK with the creation of new, and expansion of existing 'extracare' schemes. The key assumptions behind extracare developments are that they will enable older people to live for longer in their own homes, utilising a range of care and support services, promoting their health and well-being. A mixed methodological approach was taken, using validated scales and quantitative measures with physical assessments and semi-structured interviews. The Survey of 180 older people in Wales showed, of those in receipt of care, the fittest older people (cognitively & physically) resided in extracare facilities. Further, through one-to-one interviews, extracare residents were the least sure about their future. Residents highlighted concerns about their ability to remain in place citing perceptions about the inability of facilities to meet their changing needs especially regarding cognitive decline. By 2051 it is estimated that 17% (115.4 Million) of the global population will be living with, and requiring some form of support for dementia (US Census, 2010). Of those people with dementia, increasing numbers will be living in assisted living/extracare environments. The Welsh Government pledged £41 million stating "...currently we do not know whether extracare accommodates the changing needs of both fit and frail older people.". Current findings demonstrate the need to inform both residents and policy makers about what can be expected from assisted living and whether it can indeed meet the needs of fit and frail older people.

#### PREDICTORS OF ELECTRONIC HEALTH RECORD USE IN RESIDENTIAL CARE FACILITIES: EVIDENCE FROM THE 2010 NATIONAL SURVEY OF RESIDENTIAL CARE FACILITIES

D. Dobbs, A.A. Holup, K. Hyer, H. Meng, *University of South Florida, Tampa, Florida*

To improve the quality and safety of healthcare, it is important to provide a comprehensive understanding of electronic health records (EHR) use within the long-term care industry. Little is known about EHR utilization in residential care facilities. The purpose of this study was to identify structural predictors of EHR use in residential care facilities using facility level data (n=2302) from the 2010 National Survey of Residential Care Facilities, a nationally-representative, probability sample using multivariate logistic regression analysis. Predictors included: facility size, profit status, chain membership, and staffing hours per resident day for three staff categories - registered nurses, licensed practical nurses, and certified nurse aides, and resident case-mix factors which included the percent of Caucasian residents, female residents, and residents with Medicaid as the primary payment source. Results indicated that 19.4% of residential care facilities are currently using EHRs with the most commonly reported function being the ability to record resident demographics (43.4%). Chain membership (OR=21.5, 95% CI: 1.354-2.109, p<.001), nonprofit ownership

(OR=17.3, 95% CI: 1.314-2.135,  $p < .001$ ), and resident case mix factors (percent of Caucasian residents and the percent of residents with Medicaid as the primary payment source,  $p < .05$ ) were predictive of EHR use. The findings presented here provide benchmark evidence that the majority of facilities are not using EHRs and that structural characteristics do play a role in determining the use of EHRs among residential care facilities.

### **OH, GIVE ME A HOME: THE DEBATE OVER “HOME” AND “COMMUNITY” IN THE MEDICAID WAIVER PROGRAM**

D.L. Redfoot, *Public Policy Institute, AARP, Washington, District of Columbia*

In April 2011, the Centers for Medicare & Medicaid Services (CMS) issued a proposed rule defining what qualifies as “community living” with respect to services funded by state Medicaid home and community-based (HCBS) waiver programs. The discussions and debates regarding “community living” that have ensued raise major issues around the meaning of terms like “institutional,” “community,” “home” or “aging in place” – and for that matter, “social” versus “medical model” services or “person-centered” care or “independence and autonomy” – when it comes to promoting HCBS services. While aging and disability groups use some of the same terms to promote change in long-term services and supports, all groups do not necessarily agree about how to operationalize those terms. The proposed rule specifically addressed the challenge of defining assisted living as an HCBS option. As a residential services option, assisted living has attributes in common with institutional services as well as with housing-based options. The definition in the proposed rule came under criticism from aging organizations as well as provider groups and organizations representing state governments – though it was generally supported by groups representing persons with disabilities. Data from the National Survey of Residential Care Facilities indicate that few existing facilities would meet the definition in the proposed rule. This paper reviews the debate over how to define the experiences of “home” and “community” for the purposes of the Medicaid HCBS waiver program, drawing from both the research literature on these issues and the public comments submitted in response to the proposed CMS rule.

### **PUBLIC REPORTING AND RESIDENTIAL CARE/ASSISTED LIVING: CHARTING A NEW FRONTIER?**

D. Potter, *AHRQ, Rockville, Maryland*

Public reporting refers to any effort to provide a broad audience of health care consumers with information that allows rating or comparison of providers according to certain performance standards of quality, resource use, or a combination of the two (AHRQ, 2012). Public reporting on long-term care providers has a long history; the Centers for Medicare and Medicaid Services (CMS) first released national nursing home data in 2002, state-specific efforts began earlier. National reporting on residential care assisted living (RC/AL) providers has yet to occur, although a recent national survey reports that 43 percent of RC/AL residents receive Medicaid financing (NCHS, 2011). Limited public reporting on RC/AL exists for some states (Mollica, 2006); but, facility performance information is generally provided in a non-consumer friendly format, data on resource use is scarce, and comparisons across states is difficult. In 2008, AHRQ began collaborating with the Center for Excellence in Assisted Living (CEAL) to develop an instrument that could ultimately be used for national public reporting about RC/AL providers. The instrument was developed via a voluntary consensus process involving consumers, providers, and researchers (<http://www.ahrq.gov/research/aldc.htm>). This paper provides results from a 2012 test of the instrument with providers across eight states. A particular focus is on the voluntary reporting of information on staffing, costs and services by providers. Empirical results include modeling of provider non-response. Results are compared to key state efforts on RC/AL reporting.

### **THE USE OF ELECTRONIC INFORMATION SYSTEMS IN RESIDENTIAL CARE FACILITIES**

J.A. Davis<sup>1,2</sup>, K. Zakoscielna, L. Jacobs, *1. Management and Marketing, The University of Alabama, Tuscaloosa, Alabama, 2. The Center for Mental Health and Aging, Tuscaloosa, Alabama*

Research on the use of electronic information systems (EIS) in health care is steadily increasing. Adding to this literature, this study describes the various types of EIS used by residential care facilities (RCFs). Prior research suggests that use will vary by profit status and chain affiliation. Using resource dependency theory as the conceptual framework, the study hypothesizes that chain affiliated facilities and for profit (FP) facilities will have access to the resources necessary to implement EIS. The data came from the 2010 National Survey of Residential Care Facilities (NSRCF). There were 2,302 facilities in the sample. The data were analyzed using the chi-square statistic accounting for the stratified nature of the survey. Approximately 64 percent of RCFs use EIS with FP RCFs (72%) more likely to use EIS than not for profit (NFP). However, there were no significant differences in EIS use by chain-affiliated (50%) and independent RCFs. From highest to lowest EIS use are FP/chain, FP/independent, NFP/independent, and NFP/chain. The NSRCF included 27 different types of EISs (e.g. electronic health records). FP RCFs were significantly more likely to use each of the EIS of interest than were NFP RCFs. Use by chain versus independent RCFs varied the type of EIS being analyzed. In summary, this study revealed that EIS use has penetrated the long-term care market. And providers are attempting to use various types of EIS, which includes both those focused on resident care and managerial activities. However, EIS use does not extend to electronic communication with other providers.

### **SESSION 915 (SYMPOSIUM)**

#### **CONTROVERSIES IN THE BIOLOGY OF AGING: ARE THE EFFECTS OF GROWTH HORMONE AND IGF-1 DEFICIENCY ON LIFESPAN ONLY EFFECTIVE WHEN INITIATED PRIOR TO ADOLESCENCE?**

Chair: *J. Kirkland, Mayo Clinic, Rochester, Minnesota*

Co-Chair: *J. Kirkland, Mayo Clinic, Rochester, Minnesota*

Co-Chair: *G.L. Sutphin, University of Washington, Seattle, Washington*

The goal of this symposium is to bring current controversies in the Biology of Aging to the attention of the audience. The topic for 2012 will be devoted to the effects of growth hormone and IGF-1. It is abundantly clear from studies in *C. elegans*, *Drosophila* and rodents that growth hormone and IGF-1 deficiency initiated early during life decreases age-related pathology and increases lifespan. However the relevance of these studies to lengthening human lifespan appears limited. Importantly, growth hormone and IGF-1 replacement later in life clearly improves both brain and cardiovascular function but increases the risk for cancer. The focus of this symposium is to bring speakers with highly diverse points of view together to discuss these issues, resolve controversies whenever possible and identify areas for further research.

#### **SOMATOTROPIC SIGNALING, PRE-PUBERTAL GROWTH AND LONGEVITY**

A. Bartke, O. Arum, R. Westbrook, *Geriatric Research, Southern Illinois University School of Medicine, Springfield, Illinois*

Mice with mutations producing growth hormone (GH) deficiency or resistance are small and live longer than their genetically normal siblings. In Ames dwarf mice, six weeks of GH replacement therapy started at two weeks of age accelerates growth and can reduce life expectancy (Panici, et al., *FASEB J* 24:5073, 2010). This and the report of extended lifespan in mice subjected to pre-weaning food restriction (Sun, et al., *J. Gerontol A Biol Sci* 64:711, 2009) indicate that manipulation of early growth can have a profound impact on aging and longevity. Preliminary data on insulin and glucose tolerance in juve-

nile and adult Ames dwarf mice after prepubertal treatment with GH indicate that mechanisms other than altered glucose homeostasis may be involved. We are interested in the possible role of alterations in metabolism and metabolic fuel preferences as detected by indirect calorimetry. In GH-deficient or resistant mice, oxygen consumption per unit of body weight is elevated while respiratory quotient is reduced. This may reflect primarily an increased energy requirement for thermoregulation because these differences disappear at thermoneutral temperature. Studies in Ames dwarf mice treated with GH at different stages of life history should indicate whether prepubertal and adult somatotrophic signaling influence aging by different or overlapping mechanisms. (Supported by NIA)

#### **NEW INSIGHTS INTO THE ROLE OF THE GH-IGF SYSTEM IN THE REGULATION OF LIFESPAN AND AGING-RELATED DISEASES IN HUMANS**

P. Cohen, *Pediatrics, UCLA, Los Angeles, California*

Female offspring of centenarians have higher serum IGF-I but reduced heights compared to age-matched controls, suggesting a state of IGF-resistance. The IGF1R gene of centenarians disclosed a common longevity-associated SNP and 3 novel mutations. Lymphocytes from affected individuals demonstrated a decrease in IGF-1 receptor number and signaling suggesting it is a genetic determinant of longevity in a gender specific manner. A polymorphism of the GH receptor (D3GHR) showed that homozygosity rose with age and was 4-fold more common in centenarians versus controls. d3/d3-GHR male centenarians carriers were shorter than their cohort, and had lower serum IGF-I. Patients with GHR mutations in Ecuador had a dramatically reduced cancer incidence, a moderate reduction in diabetes incidence (in the presence of an increased rate of obesity), but normal mortality rates. Our findings provide intriguing possibilities regarding genotype-specific pharmacologic interventions to enhance healthy aging and provide insights regarding the potential effects of GH/IGF replacement.

#### **AGE- AND TISSUE-SPECIFIC EFFECTS GROWTH HORMONE AND INSULIN-LIKE GROWTH FACTOR-1: IMPLICATIONS FOR AGE-RELATED DISEASE, HEALTHSPAN AND LIFESPAN**

W.E. Sonntag, A. Csiszar, Z. Ungvari, *University of Oklahoma HSC, Oklahoma City, Oklahoma*

Since the initial reports demonstrating that circulating growth hormone and insulin-like growth factor (IGF)-1 decrease with age in laboratory animals and humans, there have been numerous studies on the importance of these hormones for healthy aging. Nevertheless, the role of these potent anabolic hormones in the genesis of the aging phenotype remains controversial. Here, we review the studies demonstrating the beneficial and deleterious effects of growth hormone and IGF-1 deficiency and explore their effects on specific tissues and pathology as well as their potentially unique effects during early development. In adults growth hormone and IGF-1 have numerous beneficial/protective actions on skeletal muscle and the cardiovascular and nervous systems but decrease insulin sensitivity and increase cancer risk. These hormones have differential effects on healthspan and lifespan based on age-specific tissue dysfunction and tissue pathology evident for each species and strain. Evolving data strongly suggest that circulating levels of growth hormone and IGF-1 during development rather than levels in adult life exert a key role in regulation of lifespan in rodent models. Importantly, recent data indicate that the increase in these hormones during adolescence has beneficial effects on brain and vascular function that are manifest throughout life and may alter age-related disease incidence. Thus, tissue-specific effects of alterations in IGF-1 signaling during development should be addressed. We conclude that the perceived contradictory roles of growth hormone and IGF-1 in the genesis of the aging phenotype should not be interpreted as a controversy on whether these hormones

increase or decrease lifespan but rather as an opportunity to explore the complex roles of these hormones during specific stages of the lifespan.

### **SESSION 920 (SYMPOSIUM)**

#### **STUDIES USING BIOMARKERS TO UNDERSTAND MULTISYSTEMIC DYSREGULATION IN AGING**

Chair: *K. Bandeen-Roche, Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland*

Co-Chair: *A.A. Cohen, Université de Sherbrooke, Sherbrooke, Quebec, Canada*

Discussant: *E. Crimmins, University of Southern California, Los Angeles, California*

There is increasing evidence that multiple biological processes and systems are implicated in aging. Many researchers now believe that aging results from multi-systemic dysregulation itself, with feedback loops resulting in diffuse effects across systems. This model posits a highly complex aging process and presents numerous methodological challenges, including high dimensionality and system dynamics. However, long-term efforts at longitudinal collection of biomarkers in epidemiological studies also presents a unique opportunity to address these challenges, with the biomarkers serving, metaphorically, as multiple shadows on the wall by which we might infer the form of the underlying dysregulatory process. Here, we invite four groups who have been tackling these challenges to present their results. These exciting findings are described in the abstracts to follow. While there may be no silver bullet approach, taken together these four studies show substantial evidence for a complex, multivariate, dynamic process such as that posited by the multi-system dysregulation model.

#### **CONNECTION BETWEEN INDIVIDUAL AGING AND MORTALITY: THE RESULTS OF BIO-DEMOGRAPHIC ANALYSES**

A.I. Yashin, K.G. Arbeev, I. Akushevich, A. Kulminski, P. Stallard, D. Wu, L. Arbeeva, S.V. Ukraintseva, *Sociology, Duke University, Durham, North Carolina*

The changes in parameters of mortality or survival curves in response to genetic manipulation or exposure to external conditions are often explained in terms of changes in the rate of individual aging. Taking into account that mortality rate results from complicated interplay among aging and other processes affecting chances of death, such interpretation looks oversimplified. More appropriate interpretation requires mortality models whose parameters do describe aging related changes in biomarkers. In this paper we develop such models and show how they could be used in the analyses of longitudinal data about aging, health and longevity. The models incorporate relevant information about aging into their structure by introducing variables which influence age trajectories of biomarkers partly observed in longitudinal studies. We show that analyses of the Framingham data using such models allows for addressing new research questions about changes developing in aging human body including changes stress resistance and adaptive capacity.

#### **ELECTROLYTE DYSREGULATION IN AGING: A NEW TYPE OF DYSREGULATION IDENTIFIED BY MULTIVARIATE DISTRIBUTION ANALYSIS**

A.A. Cohen<sup>1,2</sup>, S. Yasar<sup>3</sup>, T. Fulop<sup>1,2</sup>, K. Bandeen-Roche<sup>4</sup>, Q. Xue<sup>4</sup>, J. Yong<sup>1</sup>, L.P. Fried<sup>5</sup>, L. Ferrucci<sup>6</sup>, *1. Université de Sherbrooke, Sherbrooke, Quebec, Canada, 2. Groupe de Recherche PRIMUS, Centre Hospitalier Universitaire de Sherbrooke, Sherbrooke, Quebec, Canada, 3. Johns Hopkins University, Baltimore, Maryland, 4. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, 5. Columbia University Mailman School of Public Health, New York, New York, 6. National Institute of Aging, Baltimore, Maryland*

Traditional studies of dysregulation have focused on systems such as the immune or endocrine. Here, using the Women's Health and Aging

Study II, we conducted a broad survey of 65 blood biomarkers and their longitudinal changes. We selected 16 biomarkers for further analysis based on the criterion that the deviance (i.e., distance from the population mean) increase with age. Five of these 16 were all five of the electrolytes included in the original data set: calcium, magnesium, sodium, potassium, and chloride. Deviances for these measures were not just correlated with age, but showed average positive slopes with age within individuals and predicted subsequent mortality. Joint measures of multivariate distance for these five measures together showed increasing power to detect these effects. The effects persist after control for creatinine, suggesting that the effect is not solely attributable to renal pathology. Results were successfully replicated in the InCHIANTI dataset.

#### **MULTIDIMENSIONAL RELATIONSHIPS AMONG BIOLOGICAL MARKERS AND FRAILITY: EVIDENCE FROM THE WOMEN'S HEALTH AND AGING STUDY (WHAS) II**

C.L. Seplaki<sup>1,6</sup>, A.R. Cappola<sup>2</sup>, C. Weiss<sup>4,3</sup>, Q. Xue<sup>3,6</sup>, R. Semba<sup>3,5</sup>, K. Bandeen-Roche<sup>5,6</sup>, L.P. Fried<sup>7</sup>, 1. *Department of Community & Preventive Medicine, University of Rochester School of Medicine and Dentistry, Rochester, New York*, 2. *University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania*, 3. *Johns Hopkins University School of Medicine, Baltimore, Maryland*, 4. *Michigan State University, Grand Rapids, Michigan*, 5. *Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland*, 6. *Johns Hopkins Center on Aging and Health, Baltimore, Maryland*, 7. *Columbia University, New York, New York*

Research suggests that an important part of frailty etiology is degradation in functioning spanning multiple physiological systems (Fried, Xue, Cappola et al., 2009). Improvements in our understanding of frailty require exploration of the interplay across physiological systems. We explore the multidimensional relationships among physiologic systems associated with frailty by conducting multivariate analyses of biomarkers and their associations with frailty, using data from the Women's Health and Aging Study (WHAS) II. The WHAS II is a longitudinal study of the etiology of disability comprising 436 higher-functioning women aged 70-79 at baseline living in and around Baltimore, MD. Preliminary results from a multiple correspondence analysis (MCA) using the baseline wave of WHAS II (n=278 women with non-missing information) suggest the co-occurrence of high and low levels of biomarkers spanning different systems; subsequently overlaying frailty status onto the MCA mapping highlights, for example, the co-occurrence high inflammatory and low nutritional measures with frailty.

#### **MULTI-SYSTEM DYNAMICS IN THE OLDEST-OLD: INSIGHTS AND LESSONS LEARNED FROM THE WOMEN'S HEALTH AND AGING STUDY**

R. Varadhan<sup>1</sup>, A.R. Cappola<sup>2</sup>, L.P. Fried<sup>3</sup>, 1. *Geriatric Medicine, Johns Hopkins Center on Aging and Health, Baltimore, Maryland*, 2. *University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania*, 3. *Mailman School of Public Health, Columbia University, New York, New York*

The Women's Health and Aging Study II (WHAS-II) is a prospective, observational study aimed at understanding the causes of declines in physical function of community-dwelling older women. In 1994, the study enrolled 436 high functioning women of ages between 70-79 years. During 2008 and 2009, a subset of women of ages between 84-93 years, participated in a series of experiments where the response of different physiological systems to stimuli was monitored. These experiments included oxidative phosphorylation of skeletal muscle during mild exercise using magnetic resonance spectroscopy, glucose metabolism using glucose tolerance test, HPA axis response using ACTH stimulation, and immune system response to flu vaccination. These experiments were unique for several reasons: the wide-ranging array of systems studied; stimulus-response experiments nested within a well

characterized cohort, and the participation of oldest-old women. In this talk, we will discuss the major insights from this study. We will also highlight the challenges of conducting these types of experiments nested within a prospective cohort study. We will conclude with lessons learned and some suggestions for future experimental studies in aging.

### **SESSION 925 (SYMPOSIUM)**

#### **CHARTING NEW FRONTIERS IN AGING THROUGH SHARE-ISRAEL—THE LONGITUDINAL SURVEY OF ADULTS AGED 50+**

Chair: *H. Litwin, IGDC, Hebrew University, Jerusalem, Israel*  
Discussant: *D. Weir, ISR, University of Michigan, Ann Arbor, Michigan*

SHARE-Israel is the Israeli component of the Survey of Health, Aging and Retirement in Europe. Study of aging in the Israeli context provides a unique opportunity to examine important aspects of late life, among them, the effects of cumulative lifelong trauma, the correlates of cultural diversity and the health concomitants of accessible public health care. This symposium presents a selected set of papers drawn from analyses that employ, for the first time, data from the second wave of SHARE-Israel, collected in 2009-2010. Paired with the data from the first wave, collected in 2004-2005, these analyses constitute the first longitudinal examinations stemming from this data set. The paper by Shrira considers the long-term effect of lifetime cumulative adversity on psychological impairment and physical disability across the two waves. The paper by Ayalon looks at cognitive changes over the four year period between the two waves and their population-group correlates. The work by Spalter and colleagues considers functional changes across the two waves of SHARE-Israel, taking into account the associations of potential explanatory variables. Soskolne and colleagues investigate oral health over time given the relatively high rate of forgone dental care among older Israeli adults. Finally, a paper by Achdut, Troitsky and Tur Sinai analyzes transitions into retirement, inequality and living standards. The papers and their implications will be considered by David Weir from the American Health and Retirement Study, which served as the prototype for the development of SHARE and similar longitudinal aging surveys around the globe.

#### **A DEEPER LOOK INTO THE LONG-TERM EFFECT OF LIFETIME CUMULATIVE ADVERSITY ON LATE-LIFE FUNCTIONING**

A. Shrira, 1. *The Hebrew University of Jerusalem, Jerusalem, Israel*, 2. *Tel Aviv University, Tel Aviv, Israel*

This study focused on different categories of cumulative adversity and the subjectively perceived impact of adversity on one's life. 1,248 respondents in SHARE-Israel completed the inventory of potentially traumatic events in Wave 1 and reported depressive symptoms and disability across two waves. When effects by adversity were net of each other, bereavement and physical hardships were positively related to depressive symptoms and disability in Wave 1, but war, terror, and victimization (i.e., exposure to other types of violence and sexual abuse) were not. Only physical hardships predicted Wave 2 depressive symptoms and disability. The findings were stronger when examining events perceived as having the strongest impact on one's life. In conclusion, events which assault one's physical integrity have a long-term effect on psychological and functional status at the second half of life. However, the modest effect attests that resilience to lifetime hardships is a common phenomenon among older adults.

#### **PREDICTORS OF SUCCESSFUL AGING IN THREE POPULATION GROUPS OF ISRAELIS**

L. Ayalon, *Bar Ilan University, Ramat Gan, Israel*

One of the most widely used definitions of successful aging was introduced by Rowe and Kahn (1987). Accordingly successful aging is

defined as, "avoidance of disease and disability, maintenance of high physical and cognitive function, and sustained engagement in social and productive activities" (p. 439). The present study uses this definition to evaluate the prevalence rates of successful aging in three populations of Israelis: veteran Israeli Jews, Israeli Arabs, and Jews from the former Soviet Union (FSU). Results show that veteran Israeli Jews enjoy the highest levels of successful aging in both waves of the Survey of Health Ageing and Retirement. A dramatic reduction in successful aging was evident for all three population groups. Once adjusted for demographics and health behaviors, Jews from the FSU were less likely to be classified as successful agers. Results are discussed in relation to the socio-cultural characteristics of Israeli society.

### **CHANGING FUNCTIONING IN LATE LIFE – IMPROVEMENT AND DECLINE**

T. Spalter, J. Brodsky, Y. Shnoor, *Ageing, MYERS-JDC-BROOKDALE INSTITUTE, Jerusalem, Israel*

Disability and activity limitations are the main causes for loss of independence in late life, as well as for institutionalization, hospitalization and death. However, little is known about changes in functional impairments and their causes among the elderly population. The current study depicts improvement and decline in activity limitations among 50+ year-old Israelis and examines their health and socio-cultural correlates, using longitudinal data from 2005 and 2010 Survey of Health and Retirement (SHARE) in Israel. Findings are discussed as implications for health policy as well as for interventions aimed to prevent or reverse disability.

### **PREDICTORS AND EXPLANATORY VARIABLES OF UTILIZATION OF DENTAL SERVICES OVER TIME**

G. Auslander<sup>1</sup>, V. Soskolne<sup>2</sup>, A. Soskolne<sup>3</sup>, *1. Social Work, Hebrew University, Jerusalem, Israel, 2. Bar Ilan University - Social Work, Ramat Gan, Israel, 3. Hebrew University - Dental School, Jerusalem, Israel*

Maintaining oral health is particularly important among elders, yet utilization of dental services is lower among older persons compared to younger people in most countries. This study examines factors related to utilization of dental services, using Andersen's Behavioral Model including predisposing (background variables), enabling (e.g., income, mobility) and need factors (e.g., dentate state). The study uses Israeli data from two waves of the international SHARE study (N=773). Utilization of dental services decreased from 39% in T1 to 34% in T2; only 48% respondents used dental services at both times. Oral health deteriorated (ability to bite on hard foods decreased from 67% to 61%), as did other health measures. Besides younger age, economic factors (no difficulties in making ends meet), better health and functioning status, no outside help and ability to bite were related to greater utilization at each time period. Several of these measures at T1 predicted utilization at T2.

### **LABOR MARKET TRANSITIONS AND WELL-BEING INDICATORS AMONG OLDER ISRAELIS**

A. Tur-Sinai<sup>1</sup>, L. Achdut<sup>2</sup>, R. Troitsky<sup>3</sup>, *1. Ben-Gurion University of the Negev, Beer Sheva, Israel, 2. Ruppin Academic Center, Emmek Heffer, Israel, 3. Shamoon College of Engineering, Beer Sheva, Israel*

Based on data from the two first waves of SHARE- Israel, conducted in 2004 -2005 and 2009 -2010, this study examines the extent to which individuals moved in or out of paid work and the extent to which these labor market transitions are associated with policy changes introduced in the years 2004 -2008 (delay of pensionable age and expansion of pension coverage), and with changes in pension wealth, health status, job characteristics and other background variables. In addition this study analyzed the impact of retirement on the well-being of the recent retirees by several objective and subjective indicators.

## **SESSION 930 (SYMPOSIUM)**

### **COPING AS A COUPLE: DYADIC PERSPECTIVES ON CHRONIC DISEASE IN MID TO LATE LIFE**

Chair: *R.C. Hemphill, Psychology, Kent State University, Kent, Ohio*  
Discussant: *C.A. Berg, University of Utah, Salt Lake City, Utah*

Many middle-aged and older adults coping with a chronic condition do so with the help of a spouse, yet research on chronic disease has traditionally taken an individualistic perspective that fails to consider the social context in which illness often occurs. Emerging dyadic perspectives on chronic disease suggest that one partner's illness is best understood as a shared stressor that requires behavioral and emotional adjustments from both relationship partners. This symposium presents research examining the coping efforts and well-being of chronic disease patients and their spouses across a range of disease contexts frequently encountered in mid to late life. First, Martire will discuss how marital closeness and gender impact spouses' emotional responses to pain experienced by arthritis patients. Next, Monin will consider how the attachment orientations of patients with Alzheimer's disease and of their caregiving spouses relate to partners' perceptions of patients' suffering. Barrineau will then discuss associations among the loving interactions, communication difficulties, and well-being of men with prostate cancer and their wives. Hemphill will examine how partners' perceptions of collaboration in disease management relate to marital satisfaction among patients with type 2 diabetes and their spouses. Finally, August will discuss cultural and gender differences in correlates of spouses' involvement in the dietary management of patients with type 2 diabetes. Presentations highlight the importance of considering chronic disease as a shared stressor with implications for both patients and their spouses. Our discussant (Berg) will identify themes across presentations and discuss directions for future research.

### **MARITAL CLOSENESS, GENDER, AND THE EFFECTS OF DAILY SUFFERING ON SPOUSE MOOD**

L.M. Martire<sup>1</sup>, R. Schulz<sup>2</sup>, M.P. Stephens<sup>3</sup>, J. Mogle<sup>1</sup>, F. Keefe<sup>4</sup>, *1. HDFS, Penn State University, University Park, Pennsylvania, 2. University of Pittsburgh, Pittsburgh, Pennsylvania, 3. Kent State University, Kent, Ohio, 4. Duke University, Durham, North Carolina*

Chronic illness symptoms take an emotional toll on the well spouse, but the extent to which this negative contagion occurs on a daily level and is stronger within specific types of couples is unknown. Some studies suggest that contagion is stronger when the couple is emotionally close, and that this is especially true for husbands' mood. Using a sample of 128 arthritis patients and their spouse, we tested the hypothesis that effects of pain on spouse mood would be strongest for male spouses in a close marital relationship. Participants completed a measure of dyadic closeness and reported on mood and patient pain 3 times per day for 22 days. Multilevel lagged models indicated that the effects of patient afternoon pain on spouse mood at the end of day depended on both marital closeness and spouse gender. Contrary to prediction, male spouses with high marital closeness experienced increased positive mood.

### **ALZHEIMER'S DISEASE PATIENTS' AND CAREGIVING SPOUSES' ATTACHMENT ORIENTATIONS AND THEIR REPORTS OF PATIENTS SUFFERING**

J. Monin, *Yale School of Public Health, New Haven, Connecticut*

Attachment theory is a useful framework for understanding how couples regulate emotions and maintain feelings of security in reaction to chronic illness. In this study we examined the extent to which Alzheimer's disease patients' and their spouses' attachment orientations (anxiety and avoidance) were associated with each partner's perception of the patient's suffering using the Actor-Partner Interdependence Model (Kenny, Kashy & Cook, 2006). Each partner completed a self-report measure of attachment orientation (Brennan, Clark, & Shaver, 1998) and rated the patient's physical and psychological symptoms over the

past two weeks (Schulz, et al., 2010). Data from patients were used after determining that patients were able to provide reliable responses. Results revealed that when one or both partners were high in attachment insecurity (anxiety or avoidance) reports of patient suffering were highest. These findings have implications for how clinicians develop tailored interventions and interpret symptom-reporting by spouses and patients.

#### **PERCEPTIONS OF COMMUNICATION DIFFICULTIES AND DAILY AFFECT IN COUPLES DEALING WITH PROSTATE CANCER**

M. Barrineau<sup>1</sup>, S.J. Wilson<sup>1</sup>, C.A. Berg<sup>2</sup>, 1. *Penn State University, University Park, Pennsylvania*, 2. *University of Utah, Salt Lake City, Utah*

A cancer diagnosis brings challenges for the family with loving interactions reducing difficulties in communication and promoting effective adjustment. In the current study 61 prostate cancer patients and their wives rated difficulties in their communication, the affiliation or love in their interactions and negative affect experienced across 14 days. Actor-partner interdependence models revealed that the husband's greater perception of the wife as loving was related to his report of fewer difficulties with communication surrounding cancer ( $p < .05$ ) and marginally to his wife's reports of difficulties. Difficulties in communication were also related to husbands' and wives' negative affect with the wife's report of greater communication difficulties related to her greater negative affect and to her husband's greater negative affect. The results are described in terms of the quality of the relationship as a basis for communication difficulties surrounding chronic illness and gender differences in perceptions of those communication difficulties.

#### **COLLABORATIVE COPING AND MARITAL SATISFACTION AMONG PATIENTS WITH TYPE 2 DIABETES AND THEIR SPOUSES**

R.C. Hemphill<sup>1</sup>, M.P. Stephens<sup>1</sup>, M. Franks<sup>2</sup>, K.S. Rook<sup>3</sup>, 1. *Psychology, Kent State University, Kent, Ohio*, 2. *Purdue University, West Lafayette, Indiana*, 3. *University of California, Irvine, Irvine, California*

Collaborative efforts to manage one partner's chronic disease (e.g., solving problems jointly, sharing concerns) appear to benefit the psychosocial adjustment of both relationship partners. Few studies, however, have considered the impact that collaborative coping may have on partners' relationship satisfaction over time. In this study of 126 patients with type 2 diabetes and their spouses, we used the Actor-Partner Interdependence Model to examine patients' and spouses' perceptions of collaborative coping in relation to changes in each partner's marital satisfaction over the course of one year. Interestingly, patients' perceptions of collaborative coping were related to increases in their own marital satisfaction over time, but were related to decreases in spouses' marital satisfaction. Spouses' reports of collaborative coping were not associated with changes in either partner's marital satisfaction. Findings highlight the importance of considering both partners' perceptions of coping, as they may have differential associations with partners' adjustment.

#### **CULTURAL AND GENDER DIFFERENCES IN CORRELATES OF SPOUSAL INVOLVEMENT IN A PARTNER'S DIABETIC DIET**

K.J. August<sup>1</sup>, D. Sorkin<sup>2</sup>, 1. *Rutgers University, Camden, New Jersey*, 2. *University of California, Irvine, Irvine, California*

Social network members can positively or negatively influence individuals' health behaviors, or engage in health-related social control (HRSC) or undermining, respectively. Spouses, in particular, are an important influence on the dietary behaviors of patients with type 2 diabetes, but little is known about the correlates of such influence attempts. This study accordingly examined whether relationship and disease-related factors were associated with spouses' influence attempts on their

partners' diabetic diet. Data were analyzed from a sample of 197 non-Hispanic white, Mexican-American, and Vietnamese-American older adult spouses whose partners had type 2 diabetes. Results from regression analyses revealed that perceptions of more diabetes-related worries were associated with more HRSC among white female spouses, but less undermining among Mexican-American male spouses. Higher marital quality was associated with more HRSC and more undermining among Vietnamese-American spouses. The findings from this study underscore cultural and gender differences in how spouses influence their partners' diabetic diets.

### **SESSION 935 (SYMPOSIUM)**

#### **CUTTING-EDGE INNOVATIONS IN LONGITUDINAL STRUCTURAL EQUATING MODELING FOR AGING RESEARCH**

Chair: *A.L. Gross, Institute for Aging Research, Harvard Medical School, Boston, Massachusetts*

Co-Chair: *Q. Xue, Center on Aging and Health, Johns Hopkins University, Baltimore, Maryland*

Discussant: *J. Newsom, School of Community Health, Portland State University, Portland, Oregon*

Structural equation modeling (SEM) provides a powerful vehicle for testing hypotheses using multiple outcomes simultaneously. In particular, it offers a rich array of techniques for longitudinal analysis, a staple in aging research, that features more flexibility and power than traditional bivariate regressions or ANOVA, while empowering researchers to tailor analyses to predetermined hypotheses. Presentations in this symposium provide novel substantive examples from gerontologic research that illustrate strengths and limitations of several cutting-edge longitudinal SEM designs. Roth and Bentley describe roles for latent variable modeling in randomized controlled trials. They address implementation issues when analyzing latent outcomes using the Complier Average Causal Effect (CACE) model to adjust intervention effects for non-compliance. Applications are illustrated using data from existing behavioral interventions. The second presentation by Krall and colleagues investigates bidirectional relationships between physical and cognitive function using cross-lagged autoregressive structural equation models in the Women's Health and Aging Study. Findings suggest early interventions aimed at maintaining cognitive function may prevent initial physical decline, but maintaining physical function into late-life may also be instrumental in preserving cognitive function. Gross and colleagues present findings from parallel process latent growth models of cognitive change in healthy controls and participants with MCI from the Alzheimer's Disease Neuroimaging Initiative. Findings suggest decline in non-memory functions may be an important distinguishing feature between cognitively healthy older adults and persons with MCI. Finally, Bentley and Roth note limitations in causal inferences for parallel process SEM growth models of mediation and report results of a study contrasting them with a two-stage piecewise parallel-process mediation model.

#### **INCORPORATING LATENT VARIABLE ADVANCES INTO STANDARD RANDOMIZED TRIALS**

D.L. Roth<sup>1</sup>, J.P. Bentley<sup>2</sup>, 1. *Center on Aging and Health, Johns Hopkins University, Baltimore, Maryland*, 2. *University of Mississippi, University, Mississippi*

Latent variable models offer important measurement advances that have been widely used in observational research. However, latent variable advances have not been well-integrated into randomized controlled trials (RCTs). When analyzing latent variables as outcomes or mediators, specific implementation issues include how to accomplish covariate or autoregressive adjustments and whether correlated measurement residuals will be estimated over time. Our simulations studies indicate that failing to account for these mechanisms can result in substantial



bias in estimated treatment effects. Latent variables can also be analyzed as treatment moderators. The complier-average causal effect (CACE) model estimates a latent compliance classification for controls, then tests whether a treatment works specifically for those who comply with it. Applications of these techniques will be briefly illustrated using data from previous RCTs (e.g., NYU Caregiver Intervention Trial, REACH, ACTIVE). Future randomized trials should be designed to take better advantage of latent variable measurement and modeling advances.

#### **LONGITUDINAL CHANGE IN NEUROPSYCHOLOGICAL PERFORMANCE USING LATENT GROWTH MODELS**

A.L. Gross<sup>1</sup>, J.K. Johnson<sup>2</sup>, J. Pa<sup>2</sup>, D.G. McLaren<sup>3</sup>, L.Q. Park<sup>4</sup>, J.J. Manly<sup>5</sup>,  
1. Harvard Medical School, Boston, Massachusetts, 2. University of California, San Francisco, San Francisco, California, 3. Massachusetts General Hospital, Boston, Massachusetts, 4. University of California, Davis, Davis, California, 5. Columbia University Medical Center, New York, New York

We examined cognitive change in healthy controls (n=229) and participants with mild cognitive impairment (MCI) (n=397) in the Alzheimer's Disease Neuroimaging Initiative. We modeled baseline levels and longitudinal changes over 3 years in five domains (memory, executive functioning, language, attention, visuospatial) using parallel process latent growth curve methods. Latent variables were constructed on the same scale to compare change across domains. At baseline, participants with MCI demonstrated lower performance than controls in all domains (ps<0.001). Annual rates of decline over 3 years were present in the MCI group in all domains and in the control group for memory only (ps<0.001). Within the MCI group, executive functioning declined fastest and was steeper than memory by 1.7SD annually (p<0.001). Findings suggest different patterns of cognitive decline in healthy older adults and participants with MCI. Decline in non-memory domains may be an important distinguishing feature for healthy older adults and persons with MCI.

#### **ADVANCES IN LONGITUDINAL MEDIATION MODELING**

J.P. Bentley<sup>1</sup>, D.L. Roth<sup>2</sup>, 1. University of Mississippi, University, Mississippi, 2. Johns Hopkins University, Baltimore, Maryland

Mediation modeling is frequently used, including in gerontology, to answer questions about how or why one variable exerts its influence on another variable. Rigorous longitudinal analysis methods are becoming more common to test mediation relationships. One such method uses latent growth curve (LGC) modeling, and includes parallel-process mediation models. These models fail to establish that prior changes in the mediator are related to future changes in the outcome. A model extension, the two-stage piecewise parallel-process mediation model, can be used to establish such temporal precedence. This presentation reports the results of a simulation study that demonstrates that LGC mediation models are quite sensitive to model misspecifications that fail to account for the true state of temporal precedence, suggesting that caution should be exercised in the interpretation of parallel-process mediation models. Comparisons between LGC mediation models and other longitudinal mediation models, such as autoregressive mediation models, also will be discussed.

#### **ASSESSING THE FEED-FORWARD AND FEEDBACK RELATIONSHIP BETWEEN COGNITIVE AND PHYSICAL FUNCTIONS**

J.R. Krail<sup>1</sup>, M. Carlson<sup>1</sup>, L.P. Fried<sup>2</sup>, Q. Xue<sup>1</sup>, 1. Center on Aging and Health, Johns Hopkins University, Baltimore, Maryland, 2. Mailman School of Public Health, Columbia University, New York, New York

Most previous work assessing the association between cognitive and physical function has not comprehensively assessed directions of association. Using cross-lagged autoregressive structural equation models, this study simultaneously assessed both directions of the physical-cognitive function association over time using data from the Women's Health

and Aging Study II. This study found that the cross-lagged effect of cognitive on physical function was stronger initially, with a standardized effect of Trail Making Test Part B (TMT-B) on walking speed (WS) of 0.12 (p=0.03) at year 3 compared to -0.01 (p=0.88) at year 9. Conversely, the effect of WS on TMT-B at year 3 was 0.01 (p=0.75) compared to 0.11 (p=0.03) at year 9. This study demonstrates that both directions of the physical-cognitive function association are important. Early interventions aimed at maintaining cognitive function may prevent initial physical decline; however maintaining physical function into late life may also be important in preserving cognitive function.

### **SESSION 940 (SYMPOSIUM)**

#### **DAILY EXPERIENCES AND BIOMARKERS OF FAMILY CAREGIVERS: THE EFFECTS OF HIGH AND LOW STRESS DAYS**

Chair: S.H. Zarit, Human Development & Family Studies, Penn State University, University Park, Pennsylvania

Co-Chair: D. Almeida, Human Development & Family Studies, Penn State University, University Park, Pennsylvania

Discussant: S.T. Charles, University of California-Irvine, Irvine, California

Considerable research has examined the effects of daily stressors on well-being and stress biomarkers, but most work has been conducted on adults experiencing low levels of stressors. Less is known about people with chronically high levels of daily stressors or about the effects of providing relief from those stressors. This symposium reports on the results of a study of family caregivers of people with dementia who are using adult day care (ADC). Taking advantage of a natural experiment, we compared participants on high stress days when they do not use ADC and low stress days when they use ADC. Steven Zarit and Elia Femia present an overview of the design and measures of the study. Kyungmin Kim and MaryJon Barrineau describe differences in exposure to stressors on high and low stress days and the effects on well-being and health symptoms. Laura Klein reports on the effects of ADC use on cortisol, showing that many participants display a burnout (flat) pattern of daily cortisol on high stress days, but show more normal patterns on low stress (ADC) days. Courtney Whetsel and Laura Klein examine the effects of daily stress on another stress hormone, DHEA-S, and report a lagged effect of ADC use on DHEA-S and positive emotion. Amanda Leggett and Kyungmin Kim demonstrate the relation of daily levels of cortisol to negative emotions. Taken together, these presentations break new ground in examining variability in affect and biomarkers under conditions of chronic stress. The discussant will be Susan Turk Charles.

#### **DAILY STRESS AND HEALTH OF FAMILY CAREGIVERS: OVERVIEW OF DESIGN AND MEASURES**

S.H. Zarit, E. Femia, Human Development & Family Studies, Penn State University, University Park, Pennsylvania

Research on family caregivers of people with dementia has documented substantial daily differences in stress exposure related to use of Adult Day Care (ADC). The present study builds on this observation by collecting information on 8 consecutive days that included days on which caregivers used ADC (lower stress) and days they did not (higher stress). This approach allows us to examine daily responses to stressors among people with high levels of chronic stress, and whether predictable breaks from providing care affect daily well-being and stress biomarkers. The sample was comprised of 150 family caregivers of people with dementia who shared the same household and where the person with dementia attended ADC between 2 and 5 days a week. Measures included daily stressors, positive experiences and well-being. Five saliva samples were collected across each of the 8 days to test for fluctuations in three critical biomarkers, cortisol, dehydroepiandrosterone-sulfate, and alpha-amylase.

## DAILY VARIABILITY IN STRESSORS AND WELL-BEING WITH ADULT DAY CARE USE

K. Kim, M. Barrineau, S.H. Zarit, *Human Development and Family Studies, The Pennsylvania State University, University Park, Pennsylvania*

We examine how daily stressors vary for dementia caregivers on days they use adult day care (ADC) and days they do not and the implications for health symptoms and affect. Caregivers (N = 150) were interviewed for 8 consecutive days about daily experiences, which included days they used and did not use ADC. Using MLM, we found that daily dementia-related behavior problems were lower on ADC days and non-care positive events were higher, but non-care stressors were also higher. Daily variability in both types of stressors and positive events were significantly associated with positive and negative affect. Daily health symptoms, however, were related to levels of behavior problems and positive events and to daily variability in non-care stressors. These results confirm that ADC use is associated with variability in exposure to stressors and positive events, and that this variability has implications for daily affect, but not health symptoms.

## SALIVARY CORTISOL AND CHRONIC STRESS IN CAREGIVING: EFFECTS OF HIGH AND LOW STRESS DAYS

L.C. Klein, S.H. Zarit, K. Kim, D. Almeida, C.A. Whetzel, *Penn State University, University Park, PA, Pennsylvania*

High daily stress has been found to result in increased levels of salivary cortisol marked by area under the curve (AUC) and high morning rise (MR), though people experiencing chronic stress may exhibit a burnout pattern of low AUC and no MR. We explored daily variability of cortisol in a sample of family caregivers of individuals with dementia (IWD), comparing high stress days when patient and caregiver were together and low stress days when patient attended Adult Day Services (ADS). Controlling for age, gender and mean level of MR and AUC on non-ADS days, we found that caregivers with the lowest cortisol levels showed greater morning rise on ADS days while those with higher mean cortisol showed decreases on ADS days. These findings suggest that relief from stressors through respite care restores a more normal diurnal cortisol pattern in individuals with very low levels and produces a typical stress reduction response for caregivers with normal daily patterns.

## THE RELATION OF DHEA-S TO VARIABILITY IN CHRONIC STRESS IN CAREGIVING

C. Whetzel, K. Kim, L.C. Klein, *Penn State University, University Park, Pennsylvania*

Dehydroepiandrosterone-sulfate (DHEA-S) is associated with better mood as people age, but has not been studied on people with high stress. We explored daily variability of DHEA-S in family caregivers of individuals with dementia (IWD), comparing high stress days when IWD and caregiver were together and low stress days when IWD attended Adult Day Care (ADC). Caregivers (N=130) provided 5 saliva samples a day over an 8 day period that included ADC days and days when IWD and caregiver were together. Using multilevel models that controlled for age and gender, we found a lagged effect for DHEA-S output, with higher levels following ADS use. These results are consistent with the long half-life of DHEA-S which results in a slower response to daily events. We also examined relation of AUC to well-being and found that on days where the caregiver had higher levels of DHEA-S their positive affect was also higher.

## DEPRESSIVE SYMPTOMS AND DAILY CORTISOL FOR CAREGIVERS ON HIGH AND LOW STRESS DAYS

A.N. Leggett, K. Kim, *Human Development and Family Studies, The Pennsylvania State University, State College, Pennsylvania*

We examined the association of depressive symptoms and two markers of cortisol, Area Under the Curve (AUC) and Morning Rise (MR)

for caregivers (N=149) of individuals with dementia (IWD) on low stress days when IWDs attended Adult Day Care (ADC) and high stress days when IWDs did not go to ADC. Data were gathered over 8 consecutive days. Many caregivers showed patterns of cortisol response of low or no MR and low AUC which is consistent with chronic stress. Using MLM, we found that higher individual mean depression over 8 days was associated with lower daily AUC and MR, and ADC use was associated with higher daily AUC and MR, but the ADC\*mean depression interactions were not significant. Findings indicate that higher depression is associated with the more blunted patterns of cortisol response, but changes on low stress days are not differentially found among caregivers with higher depression.

## SESSION 945 (SYMPOSIUM)

### DRIVING IN OLDER ADULTS WITH NEUROLOGICAL AND NEURODEGENERATIVE DISORDERS: A GROWING CONCERN

Chair: *A.M. Crizzle, Occupational Therapy, University of Florida, Gainesville, Florida*

Discussant: *R. Marottoli, Yale University, New Haven, Connecticut*

With an aging population also comes an increased prevalence of medical conditions that can compromise safe driving. This symposium will address, through five presentations, the impact of neurological and neurodegenerative disorders on driving in older adults. Presentations will focus on various age-related medical conditions, including Parkinson's disease (PD), Alzheimer's disease (AD) and stroke. The scope will be broad, covering topics of on-road driving performance, the influence of perceptions on self-regulation and rehabilitation interventions that may potentially improve driving ability in PD, AD and stroke. We will address these issues by examining the unique impairments associated with each medical condition (PD, AD and stroke) and its impact on driving. We will show the most frequently committed on-road errors that are common to drivers with PD and AD. First, in a sample of 100 PD drivers, we will (1) show the critical driving errors that are predictive of pass/fail outcomes on a road test; and (2) address errors of speed regulation in PD drivers by examining where and under what circumstance these errors occur. We will also show (3) driving errors that are predictive of failing a standardized road test in drivers with AD compared to healthy age-matched controls. In addressing stroke, we will (4) discuss how perceptions of driving ability can influence the decision to restrict driving post-stroke. Finally, we will discuss (5) driving rehabilitation interventions and the use of the simulator to improve driving performance in older drivers in general, and in PD, stroke and mild cognitive impairment.

### DRIVING ERRORS PREDICTING ON-ROAD OUTCOMES IN PEOPLE WITH PARKINSON'S DISEASE

S. Classen, D.N. Lanford, A.M. Crizzle, *Univ of Florida, Gainesville, Florida*

Preliminary data reveal that people with Parkinson's disease (PD) make different types and numbers of errors on the road when compared to healthy control drivers. However, identifying driving errors (type and number) have not been assessed through the process of employing a comprehensive driving evaluation by using the skills of a certified driving rehabilitation specialist (CDRS) in a large group (N=100) of drivers with PD. This study reports on the findings of the driving errors made by drivers with PD, during an on-road assessment. We will present our findings from a logistic regression model to indicate the main errors predictive of passing and failing an on-road test, as well as quantifying the total variance (R<sup>2</sup>) of passing/failing the on-road test. These findings hold promise for revealing the most common errors, open a plausible opportunity for studying mechanisms underlying such errors, and developing rehabilitation strategies for improved driver safety in PD.

## **DO SPEED INFRACTIONS PREDICT DRIVING PERFORMANCE IN DRIVERS WITH PARKINSON'S DISEASE?**

A.M. Crizzle, S. Classen, D.N. Lanford, *Occupational Therapy, University of Florida, Gainesville, Florida*

Persons with Parkinson's disease (PD) make more critical driving errors compared to healthy controls on simulator and road tests. One such error, speed regulation, is impaired in drivers with PD which may be a result of increased cognitive load. However, prior on-road studies have often not distinguished the types of speeding infractions drivers with PD make or have correlated speeding errors with clinical tests. Thus, in a sample of 100 PD drivers, the objectives are to (1) examine the types of speeding errors (over/ under speeding) and where they occur (left and right turns, straight driving); (2) examine the correlations between speeding errors and clinical tests; and (3) determine the ability of speeding errors to predict pass/fail outcomes on the road test, as assessed by a certified driving rehabilitation specialist. The findings may offer a framework for potential interventions to improve speed regulation in drivers with PD.

## **DRIVING ERRORS IN OLDER ADULTS WITH DEMENTIA: A QUANTITATIVE APPROACH TO SCORING THE ROAD ASSESSMENT**

P.P. Barco<sup>1</sup>, T.M. Meuser<sup>2</sup>, D.B. Carr<sup>3</sup>, *1. Program in Occupational Therapy, Washington University Medical School in St. Louis, St. Louis, Missouri, 2. University of Missouri-St. Louis, St. Louis, Missouri, 3. Washington University Medical School in St. Louis, St. Louis, Missouri*

Performance based road assessments have been the traditional gold standard for evaluating driver fitness. Errors, however, are often weighted differently in setting pass-fail criteria. This presentation will focus on a study of older adults with mild dementia (n=42) and healthy older adults similar in age/gender (n=41) who participated in a standardized clinical off-road and on-road driving assessment. Results will be discussed in relationship to driving errors that are more prevalent in those who failed the road test, as well as which tests of cognitive/motor function are associated with these errors. Preliminary analysis indicates that individuals who failed had significant difficulties with steering, visual scanning, lane usage/positioning, stopping, and not yielding to other vehicles. Findings will be contrasted with error patterns reported by highway patrol officers concerning crashes with drivers with dementia. Attendees will learn about the value of on-road testing and the strengths/difficulties of error standardization in scoring.

## **THE ROLE OF PERCEPTIONS ON DRIVING EXPOSURE IN OLDER POST-STROKE DRIVERS**

T. Stapleton, *Occupational Therapy, Trinity College Dublin, Dublin, Ireland*

The literature indicates older drivers reduce their driving exposure post-stroke. However, whether perceptions influence the decision to restrict and ultimately stop driving is not well understood in older drivers post-stroke. This study examined 35 older drivers with stroke (Median age of 65) who underwent an on-road driving assessment. The entire sample was considered safe to drive (100%), albeit with some restrictions (e.g., daytime only, radius from home). At six-month follow up, 87% of the sample was still driving; 53% reported similar exposure rates and 72% considered their driving ability comparable to pre-stroke, respectively. Those who reportedly reduced their driving exposure had significantly lower perceptions of their driving ability. This presentation will discuss the role of perceptions on self-reported driving exposure and perceived driving abilities. Proper planning for driving cessation is warranted in older post-stroke drivers who self-regulate as lower perceptions may mediate the process to driving cessation.

## **THE POTENTIAL OF SIMULATORS AS A REHABILITATION TOOL TO IMPROVE DRIVING PERFORMANCE IN OLDER DRIVERS WITH NEUROLOGICAL IMPAIRMENTS**

E.Y. Uc, *1. University of Iowa, Iowa City, Iowa, 2. Veterans Affairs Medical Center, Iowa City, Iowa*

The effects of neurological and neurodegenerative disorders can impair the ability to drive safely. Disorders such as Parkinson's disease (PD), Alzheimer's disease (AD) and stroke can impair perception, cognition and motor function. While most studies examine ways to identify unsafe drivers, few have examined methods to maintain and prolong safe driving. Driving simulators can help characterize patterns of driving errors that are challenging but safe compared to on-road testing. Additionally, there is preliminary evidence that driving simulators can be used as a rehabilitation strategy to improve driving performance. We will present the findings of various rehabilitation interventions that have improved driving performance and reduce crash risk in PD and stroke. We will also discuss how these findings can be extended to interventions targeting older drivers in general and those with mild cognitive impairment. Our findings will highlight the potential of simulators in the rehabilitation of older drivers with neurological/neurodegenerative disorders.

## **SESSION 950 (SYMPOSIUM)**

### **METHODS OF CREATIVE EXPRESSION AND ENGAGEMENT FOR PERSONS WITH DEMENTIA**

Chair: *L. Snyder, Shiley-Marcos Alzheimer's Disease Research Center, University of California, San Diego, La Jolla, California*  
Discussant: *R.G. Logsdon, University of Washington, Seattle, Washington*

This symposium addresses the role that the arts can play in enhancing, shaping, or facilitating quality of life and well-being for persons with dementia and their family members by providing meaningful activity, opportunity for expression or creative exploration, and shared normative activities. Mittelman provides findings from her pilot study on the benefits of a chorus for persons with dementia and their caregivers. Morhardt discusses an improvisational theatre experience for persons with early-stage dementia and its impact on quality of life. Ataie reports on qualitative data from her study using photovoice to explore issues of identity and coping in persons with early-stage dementia. Gwyther reports on a community collaboration of state level arts and Alzheimer's groups that aims to introduce people with dementia and their families to a series of arts events to promote social support and engagement. Snyder concludes with a discussion of survey data from docents who conduct arts and culture related tours for persons with dementia that reveals how these interactions can reduce negative stereotypes and assumptions about people with dementia. Together these studies affirm the enduring capacity of people with dementia to express themselves through creative engagement. Such engagement also benefits society at large by inspiring community collaborations and helping to reduce isolation and stigma surrounding dementia.

### **A PILOT STUDY OF A CHORUS FOR PEOPLE WITH DEMENTIA AND THEIR FAMILY CAREGIVERS**

M.S. Mittelman, C. Epstein, *Psychiatry, NYU Langone School of Medicine, New York, New York*

We recently instituted a chorus for people with dementia (pwd) together with their family members that rehearses weekly for periodic concerts. Eleven dyads enrolled and none dropped out. Pwd were in the mild to moderate stage of dementia. On pre-post measures, self-esteem, health related quality of life and social support improved for at least half the caregivers; self esteem, quality of life and communication with family improved for at least half the pwd. In focus groups and take-home questionnaires, caregivers consistently reported looking

forward to the rehearsals, enjoying the sense of community, comradery and lack of stigma, and that their relatives with dementia were singing at home. Pwd all said they enjoyed participating and talked with their relatives about the chorus afterwards. The pilot study revealed the difficulties of quantitative evaluation of this kind of intervention, despite the obvious pleasure it provides to participants, the chorus conductors and the audience.

### **THE MEMORY ENSEMBLE: AN IMPROVISATIONAL THEATRE INTERVENTION FOR PERSONS WITH EARLY STAGE DEMENTIA**

D.J. Morhardt<sup>1</sup>, M.C. O'Hara<sup>1</sup>, C.M. Dunford<sup>2</sup>, *1. Cognitive Neurology and Alzheimer's Disease Center, Northwestern University, Chicago, Illinois, 2. Lookingglass Theatre Company, Chicago, Illinois*

A National Institute on Aging Alzheimer's Disease Center and a theatre ensemble partnered to create an improvisational intervention for persons with early to moderate stage dementia. Since the 7-week pilot session (N=6), two additional eight-week sessions were conducted during 2010-2011 (N=22). Pre-post measures were administered, in addition to written evaluations and documented field notes by program staff. Field notes revealed subjects experienced feelings of success and empowerment. Subjects found the intervention mentally stimulating, were better able to accept their diagnosis and cope with cognitive changes, and felt less isolated and alone. Pre-post measures revealed trend toward improved quality of life. Results suggest this is a cognitively stimulating and emotionally supportive intervention for persons with dementia.

### **'RECLAIMING WELLBEING': A PHOTOVOICE PROJECT WITH PEOPLE WITH EARLY-STAGE DEMENTIA**

J.E. Atai, *Portland State University School of Social Work, Vashon, Washington*

This study used photovoice methodology to explore how people with early-stage dementia use their perceived strength and resources to cope with the illness. Purposive sampling was used to recruit participants. Thirteen women & seven men age 57 to 90 (mean 73.4) and MMSE scores ranging from 20 to 28 (mean 25.6) participated in the project. Participants were provided with a disposable camera and invited to take photographs relevant to their wellbeing. The photographs provided the means for participants to take the lead in dialogue sessions about their coping response. Grounded theory analysis revealed that the participants perceived the adjustment to living with early-stage dementia as a process. Initially, the illness precipitated a disruption in wellbeing but over time, the participants reclaimed wellbeing while acknowledging the inconceivable notion of losing their cognitive abilities. They reconstructed identity, rebuilt relationships, recalibrated emotions, reestablished healthy living, regained control, and restored meaning and purpose.

### **AN OVERVIEW OF TWO MODELS OF COMMUNITY ARTS-BASED COLLABORATIONS FOR PERSONS WITH DEMENTIA AND THEIR CARE PARTNERS**

L. Snyder<sup>1</sup>, L.P. Gwyther<sup>2</sup>, *1. Shiley-Marcos Alzheimer's Disease Research Center, University of California, San Diego, La Jolla, California, 2. Duke Center for Aging, Durham, North Carolina*

Community collaborations that engage persons with dementia in the arts provide meaningful activity and can challenge prevailing stereotypes about this population. We present two models of such collaborations. Arts Link North Carolina connects persons with dementia to cultural experiences through a collaboration of state arts and Alzheimer's groups. A pilot calendar of arts programs offers museum and musical/theatrical small group residencies to engage persons with dementia and care partners with artists. Evaluation strategies assess reduction of stigma, isolation, and marginalization of program participants. In San Diego, California, over 50 community-based arts and culture organi-

zations provide docent-led tours for persons with dementia through Out and About – a program of the University of California, San Diego Shiley-Marcos Alzheimer's Disease Research Center. A survey of docents reveals ways in which conducting tours for this population can change prevailing stereotypes about the abilities of persons with dementia, contribute to greater awareness, and reduce stigma.

## **SESSION 955 (SYMPOSIUM)**

### **NEW FRONTIERS IN TECHNOLOGY USE TO MONITOR, ENGAGE, AND STRENGTHEN OLDER ADULTS**

Chair: *S.L. Szanton, Johns Hopkins University, Baltimore, Maryland*  
Discussant: *L.N. Gitlin, Johns Hopkins University, Baltimore, Maryland*

Technology is increasingly penetrating through to all age groups. As technology use increases in older adults, so does the opportunity to use it to improve their lives. These possible improvements include understanding older adult technology use to improve it, using technology to monitor their physical activity, and using technology to increase their activity. This symposium will provide a range of perspectives on technology with older adults. The first presenter reports results that show the degree to which spatial problem solving relates to successful internet searches for health information among highly educated older adults controlling for health literacy, education and internet use. The second presentation reports results from a pilot trial of a modified Nintendo Wii gaming system with disabled older adults. Feasibility, acceptability, strength and balance improvements will be reported as well as its potential for use as a tele-health device which can communicate with caretakers and health care providers. The third presenter will report use of a precise tracking device to capture low-intensity activity, such as shuffling or very slow walking. Even this low level of activity was associated with less mobility difficulty and more lower-extremity strength, which are important factors for preserving mobility and daily functioning. The fourth presenter will report data on mobility profiles for 15 older adults who wore tracking devices for 5 days including time in the home, number of trips outside the home and frequent visiting of community locations. Dr. Laura Gitlin at Johns Hopkins University will discuss the implications of these four studies.

### **THE IMPORTANCE OF COGNITIVE STYLE FOR ONLINE HEALTH LITERACY: EVIDENCE FROM THE ONLINE HEALTH STUDY**

E.M. Agree, *Population, Family, and Reproductive Health, JHSPH, Baltimore, Maryland*

Despite rapid growth in internet use, older people often report difficulty using the internet to find health information. In this study, we examine the relationship of cognitive style to success using the Internet to answer health-related questions. From 2009-2010, at Johns Hopkins and Stanford Universities, 330 subjects ages 35-90 performed online searches for health information. Measures of health literacy, cognition, health status, and computer experience were collected. The sample is 56% female, highly educated (91% with a BA); and have good health literacy (mean REALM=127). The Group Embedded Figures Test (GEFT) was used to assess spatial problem solving. Results show that, controlling for education, Internet use, and health literacy, GEFT score is strongly associated with greater success, but does not eliminate the disadvantage of the oldest participants (age 70+) in successfully obtaining online health information. Findings suggest that spatial analytic skills may modify age-related difficulty in finding online health information.

## LOW INTENSITY ACTIVITY IS ASSOCIATED WITH BETTER PHYSICAL FUNCTION

V.R. Varma, E. Tan, T. Wang, Q. Xue, L.P. Fried, C.L. Seplaki, T. Seeman, M. Carlson, *Center on Aging and Health, Johns Hopkins University, Baltimore, Maryland*

Evidence suggests that recommended levels of physical activity may represent unrealistic targets for many older adults to adopt, particularly older, African American adults who may experience a lack of physical activity opportunities due to environmental and neighborhood characteristics. While the current physical activity guidelines focus on moderate to vigorous-intensity physical activity, low-intensity activity may yield health benefits. Using a sensor placed on the ankle that can directly measure intensity and frequency of activity per minute, we observed that higher levels of low-intensity activity were associated with less mobility difficulty and better lower-extremity strength. Our findings suggest that more precise measurements of low-intensity levels of physical activity, which may be very prevalent in older adults, were associated with better function in cross-section. The metrics developed to measure patterns of physical activity further suggest that increasing levels of low-intensity physical activity represents an achievable target by which to promote significant health improvements.

## ENRICHING MEASURES OF OLDER ADULTS' LIFESTYLE ACTIVITY AND DAILY INTERACTION WITH THEIR SOCIAL ENVIRONMENT

M. Carlson, V.R. Varma, G. Harris, A. Adam, A. Zhan, *Center on Aging and Health, Johns Hopkins University, Baltimore, Maryland*

We report on the results of a successful pilot study of life style activity conducted over five days in 15 neurocognitively and functionally well-characterized older, community-dwelling adults using portable devices to continuously collect GPS location in combination with accelerometry and daily diaries. We developed individual mobility profiles using the following metrics: 1) amount of time spent in and outside the home, 2) total distance travelled away from home per day, 3) number of trips outside the home, and, 4) "hot spots" of frequent activity using ArcGIS to identify community locations frequently visited, including religious centers, stores, malls, and park spaces. Our results confirm feasibility, adherence, and fidelity in obtaining real-time information about individuals' daily interaction with their social environment. This information allows us to develop a richer picture of the amounts and types of activities that are beneficially linked to cognitive and functional health and quality of life.

## SESSION 960 (SYMPOSIUM)

### NEW PERSPECTIVES ON LONELINESS

Chair: C. Victor, *Brunel University, London, United Kingdom*

Co-Chair: M. Sullivan, *Brunel University, London, United Kingdom*

Discussant: K.M. Bennett, *Liverpool University, Liverpool, United Kingdom*

There is now a significant body of work from a range of different countries examining the prevalence of loneliness amongst older people. Studies conducted in Britain, North America, Australia and Northern Europe consistently report rates of significant loneliness amongst the general population aged 65+ in the range of 5-10% with a further 20% categorised as 'sometimes' lonely. There are also a range of studies indicating that loneliness is associated with a range of negative physical and mental health outcomes including mortality and with elevated health service utilisation. Researchers have also sought to examine key socio-demographic correlates of loneliness such as age, gender and ethnicity. In this session we examine the prevalence and risk factors for 'special' populations of older people that are under-represented in our general population surveys. Thus we focus upon examining loneliness amongst relatively neglected populations of older people such as those living alone, minority populations and those living in rural areas.

## LONELINESS AND LIVING ALONE IN OLDER AGE: AN INVITATION TO STEP INTO THE MESO AND MACRO LEVEL OF ANALYSIS

E. Portacolone, *San Jose State University, Berkeley, California*

Living alone in older age is often associated with loneliness. This paper invites social gerontologists to adopt a broader perspective. The author invites social gerontologists to move from the study of the subjective-micro experience of loneliness to the analysis of meso and macro factors possibly associated with loneliness. The invitation stems from the findings of a two-year ethnography of 47 San Franciscans over 75 living alone. The adoption of a multi-focus (micro/subjective, meso/cultural institutional, and macro/political economic) lens pointed to the possible role of tangible and intangible resources in influencing someone's loneliness. Whereas the micro level is concerned with the subjective evaluation of social engagement, opening up the frame allows a reflection on the reasons behind the scarcity of some resources related to social engagement. It also allows the reflection on other facets of loneliness indirectly related to social engagement, such as being unequipped to cope with several compounding challenges.

## LONELINESS AMONGST ETHNIC MINORITY ELDERS: PRELIMINARY RESULTS OF A SURVEY IN ENGLAND AND WALES

C. Victor<sup>1</sup>, V. Burholt<sup>2</sup>, 1. *Brunel University, Uxbridge, United Kingdom*, 2. *Swansea University, Swansea, United Kingdom*

For those aged 65+ in Britain research has consistently reported the prevalence of loneliness at approximately 8-10%. There is limited evidence examining the prevalence of loneliness amongst older people from ethnic minorities. We report the prevalence of loneliness, measured using both a self-report measure and the de Jong Gierveld scale, for those aged 65+ years using data from a direct interview survey of 600 people from the key minority groups growing old in Britain (Indian, Pakistani, Bangladeshi, African Caribbean, and Chinese). We draw explicit comparisons for these groups with the prevalence of loneliness reported for the general population and with older people in their countries of origin. Preliminary analysis demonstrates an overall prevalence of 17%. The highest rate of loneliness at 22% was demonstrated by the Pakistani population with only those from those from the Indian population reporting a prevalence rate of 9% which approximately to the national norm.

## TESTING THE COGNITIVE DISCREPANCY THEORY: THE IMPACT OF RURALITY AND DEPRESSION ON LONELINESS

V. Burholt<sup>1</sup>, T. Scharf<sup>2</sup>, 1. *Centre for Innovative Ageing, Swansea University, Swansea, United Kingdom*, 2. *National University of Ireland, Galway, Galway, Ireland*

Previous research on loneliness tends to provide a posteriori explanation of analytical findings. By contrast, this paper develops an a priori conceptual model and uses individual (health and psychological), social and environmental factors to hypothesize a pathway from poor health to loneliness in later life. The conceptual moderated-mediation model is validated using a nationally representative dataset of older people living in the Republic of Ireland (n=8178) to test the cognitive discrepancy theory. Loneliness is the dependent variable. Health is the independent variable which we hypothesize impacts on achieved levels of social interaction through its influence on mobility and social resources (mediators between health and loneliness). We hypothesize that rural environments will amplify any difficulties associated with mobility or accessing social resources (i.e. moderating pathways between health and the mediators) and that depression influences the desired level of social contact and support (i.e. moderating pathways between the mediators and loneliness).

## NEW DEVELOPMENTS IN LONELINESS INTERVENTIONS: RESEARCH AND PRACTICE

N. Stevens, *Radboud University, Nijmegen, Netherlands*

A recent meta-analysis of loneliness interventions concluded that interventions aimed at influencing social cognitions were more effective than those aimed at improving social support or contact. No difference in effects of group versus individual interventions were found, technology was only effective in non-randomized studies. Also interventions worked better for males than females. Since the meta-analysis was published, new intervention studies have appeared. These include a bereavement visiting program, a telephone befriending scheme for socially isolated elders, programs providing elders opportunities for playing Wii regularly and for using video conferencing to enhance family visits with nursing home residents, and psychosocial group rehabilitation for lonely older persons. Some of interventions are in line with the meta-analysis whilst others are not; issues raised include qualitative versus quantitative measures of effects of an intervention, the importance of understanding for whom effects are positive, neutral or possibly negative, and the importance of gender

## OLDER IMMIGRANTS IN CANADA: SOCIALLY INTEGRATED OR CONFRONTED WITH FEELINGS OF LONELINESS?

J. Gierveld<sup>1,3</sup>, S. Van der Pas<sup>2</sup>, N. Keating<sup>3</sup>, J. Fast<sup>3</sup>, 1. *Netherlands Interdisciplinary Demographic Institute (NIDI), The Hague, Netherlands*, 2. *Department of Epidemiology and Biostatistics, EMGO Institute for Health and Care, VU University Medical Center, Amsterdam, Netherlands*, 3. *Department of Human Ecology, University of Alberta, Edmonton, Alberta, Canada*

Canada is one of the main migrant receiving countries. This study aimed at exploring the social integration versus loneliness of older immigrants in Canada, as compared to older adults born in the country. We used data from the Canadian General Social Survey, Cycle 22 (N older adults = 4345). Dependent variable is the 6-item De Jong Gierveld loneliness scale. Determinants of loneliness included: sex, age, educational level, subjective health, region of birth, age at arrival, the network of familial and non-familial relationships, as well as satisfaction with the communication with network members. Results showed that immigrants are significantly lonelier than older adults born in Canada. Multivariate analyses identified the most important determinants of loneliness, but at the end, the level of loneliness of older immigrant adults in Canada was still significantly higher than the level of loneliness of the non-immigrant older population.

## SESSION 965 (SYMPOSIUM)

### OUTCOMES OF AGE DIFFERENCES IN EMOTIONAL GOALS

Chair: *H. Fung, Department of Psychology, Chinese University of Hong Kong, Hong Kong, China*

Discussant: *D. Isaacowitz, Northeastern University, Boston, Massachusetts*

Socioemotional theory argues that as people age, they shift their focus from knowledge-related goals to emotionally meaningful goals. Affect Valuation Theory further postulates that the type of emotions that people seek, known as ideal affect, may differ across age and culture. Although both of these theories have received empirical support, the consequences of such age differences in emotional goals on the everyday life of older adults have not been adequately studied. To fill in this gap, this symposium reports four papers that examine the outcomes of age differences in emotional goals from different perspectives. Jiang and colleagues address this question from the perspective of ideal affect. They examine how the discrepancy between actual and ideal affect may be differentially related to subjective well-being and depression among young, middle-aged and older adults. Then, Sims and Tsai link these

age differences in ideal affect to decision making. They examine whether age differences in ideal affect predict preferences for health care options. Next, Fung and You investigate the outcomes of age differences in goals from the perspective of physiology. They examine how approach-avoidance social motives influence anger-related physiological responses under different relationship contexts among younger and older adults. Finally, Yeung and colleagues study age differences in goals in the workplace. They compare conflict styles between younger and older workers and assess their impacts on work-related outcomes and psychological well being. Our discussant, Derek Isaacowitz, will discuss the above findings in terms of the theoretical and practical significance of studying age differences in goals.

## ANGER RESPONSES IN RELATIONSHIPS: IMPACTS OF AGE AND APPROACH-AVOIDANCE MOTIVES AMONG HONG KONG CHINESE

H. Fung<sup>1</sup>, J. You<sup>2</sup>, 1. *Chinese University of Hong Kong, Hong Kong, Hong Kong*, 2. *Department of Psychology, University of Houston, Houston, Texas*

The experimental study investigated age difference in anger responses under relationship contexts and how such difference would be shaped by approach-avoidance motives among Hong Kong Chinese females. After priming approach-avoidance social motives, we asked 69 older and 102 younger females to recall the anger-eliciting events that occurred in kinship or friendship, and assessed their subjective feelings and cardiovascular reactivity. Results indicated that, when recalling anger-eliciting events in friendship, older females reported higher low-arousal positive affects and displayed longer inter-beat interval (IBI) in the approach-priming condition than in the avoidance priming condition, but such an effect was absent among younger females. When recalling anger-eliciting events in kinship, younger females showed lower heart rate (HR) in the approach-priming condition than in the avoidance-priming conditions, but no such effect was found among their older counterparts. These findings have implications for understanding the biopsychosocial mechanisms underlying the health effects of negative interpersonal events.

## AGE DIFFERENCES IN IDEAL AFFECT: DO OLDER PEOPLE VALUE THE SAME AFFECT AS YOUNGER PEOPLE?

D. Jiang<sup>1</sup>, M. Sit<sup>1</sup>, H. Fung<sup>1</sup>, J.L. Tsai<sup>2</sup>, 1. *Psychology, Chinese University of Hong Kong, Hong Kong, Hong Kong*, 2. *Stanford University, Stanford, California*

Socioemotional selectivity theory argues that people prioritize emotionally meaningful goals as they get older. Ideal affect may be considered to be the emotionally meaningful goal that people seek with age. The present study examined age differences in ideal affect among 321 Hong Kong Chinese aged 18 to 89 years. Controlling for actual affect, Hong Kong Chinese valued low arousal positive states (LAP; e.g., calm, relaxation) more than high arousal positive states (HAP; e.g., excitement, enthusiasm) across the three age groups (i.e., younger, middle-aged, and older people). Controlling for the demographics and health, the discrepancy between ideal and actual affect accounted for SWB but not depression in older people; SWB and interpersonal depression in middle-aged people; and emotional depression but not SWB in younger people. The results suggest that although ideal affect may not differ much across adulthood, it regulates SWB and depression differently among different age groups.

## DO OLDER AND YOUNGER EMPLOYEES HANDLE WORKPLACE CONFLICTS DIFFERENTLY?

D. Yeung<sup>1</sup>, H. Fung<sup>2</sup>, D. Chan<sup>2</sup>, 1. *City University of Hong Kong, Hong Kong, Hong Kong*, 2. *Chinese University of Hong Kong, Hong Kong, Hong Kong*

Socioemotional selectivity theory stresses that older adults focus more on emotionally meaningful goals when they perceive future time

as increasingly limited (Carstensen, 2006). When handling conflict with social partners, older adults' emphasis on emotional goals may motivate them to concern more for other parties, instead of personal interest. It is speculated that the way individuals handle workplace conflicts would be guided by their goal orientation. This study examined conflict styles and motivational orientation between younger and older employees and assessed their impacts on work-related outcomes. The sample consists of 300 Chinese executive employees. Preliminary analyses showed that as compared with younger counterparts, older employees were less likely to use dominating and comprising conflict strategies at work. They also exhibited stronger cooperation and less competition motivation in the conflict situations. The effects of age-related differences in conflict styles and motivations on work-related outcomes and psychological well-being would be also discussed.

#### **AGE DIFFERENCES IN CHOOSING EMOTIONALLY-FRAMED HEALTH CARE OPTIONS ACROSS CULTURES**

T. Sims<sup>1</sup>, J.L. Tsai<sup>1</sup>, M.K. Goldstein<sup>1,2</sup>, 1. *Stanford University, Stanford, California*, 2. *VA Palo Alto Health Care System, Palo Alto, California*

Evidence suggests that in an effort to enhance positive affect, older adults attend more to, prefer, and are more motivated by positively (versus negatively) framed health information compared to younger adults. Research has also shown cultural and age-related variation in the type of positive affect people want to feel (e.g., calm and excitement). In a series of studies converging these two lines of research, we examined preferences for positively framed physicians that promote feeling calm or excitement. We compared young, middle aged and older adults in two cultural contexts, European American (EA) and Chinese American (CA). We predicted that older adults would prefer the calm physician more than younger adults across cultures. Moreover, we predicted that CAs would prefer the calm physician more than EAs. Consistent with our hypothesis, older CAs were more likely to choose the calm physician than younger. Contrary to our expectation, we found no age differences in physician preference among EAs. We discuss implications for optimizing health care utilization across the life span and reducing health disparities.

#### **SESSION 970 (SYMPOSIUM)**

##### **UNDERSTANDING OLDER MEN'S PERSPECTIVES ON DEPRESSION AND SUICIDE IN PRIMARY CARE: RESULTS FROM THE MEN'S HEALTH AND AGING STUDY (MEHAS)**

Chair: *L. Hinton, University of California Davis, Sacramento, California*

Discussant: *P.A. Arean, University of California San Francisco, San Francisco, California*

Older men are less likely to be treated for depression and more likely to commit suicide compared with older women. Primary care is a critical site for treatment of depression and prevention of suicide in older adults. However, there are important gaps in our knowledge about how older men experience depression and suicidal ideation, their preferences for treatment in primary care settings and how best to assist older men with suicidal ideation. This symposium will present findings from the Men's Health and Aging Study (MeHAS) to address these gaps in our knowledge. MeHAS is a mixed-method study funded by the National Institute on Mental Health that examined barriers and facilitators of depression care among age 60 and above men white Hispanic and Mexican-origin men in primary care settings in California's Central Valley. Over 360 older men were screened and a subsample of 108 with clinical depression and/or depression treatment were identified, 77 of whom successfully completed a follow-up in-depth interview. The four presentations in the symposium include 1) an overview of the MeHAS design and methods including the complementary use of both qualitative and structured approaches in the in-depth interview, 2) a qualita-

tive analysis of men's depression attributions, 3) a qualitative analysis of what stops older men from committing suicide and 4) a quantitative analysis of older men's depression care preferences, including similarities and differences among older white Hispanic and Mexican-origin men. Each presentation will highlight practical implications of the findings for primary care based treatment of depressed older men.

##### **DESIGN, METHODS AND COMPLEMENTARY USE OF QUANTITATIVE AND QUALITATIVE APPROACHES IN THE MEN'S HEALTH AND AGING STUDY (MEHAS)**

L. Hinton, *Psychiatry and Behavioral Sciences, University of California, Sacramento, California*

Older men are more likely than older women to receive treatment for their depression and are also at increased risk for suicide. The Men's Health and Aging Study (MeHAS) is an NIMH funded study examining barriers and facilitators of depression care for older men in primary care settings. In this paper, we present the design and methods of MeHAS, highlighting the complementary use of both qualitative and quantitative methods. Quantitative methods in MeHAS included a survey and structured elicitation of treatment preferences (i.e. conjoint survey). Qualitative methods in MeHAS included in-depth qualitative interviews with older men (n=77) and with primary care physicians (n=17). To illustrate the strength of the combined use of both quantitative and qualitative methods in this study, we will present data on convergence of results from analyses of both qualitative and quantitative data around the theme of family involvement in older men's depression care.

##### **CAUSAL ATTRIBUTIONS OF DEPRESSION AMONG WHITE-NON-HISPANIC AND MEXICAN-ORIGIN OLDER MEN**

E. Apesoa-Varano, *Betty Irene Moore School of Nursing, UC Davis, Sacramento, California*

Research has examined causal attribution models in a variety of illnesses. However, we know little about what depressed older men attribute their depression to, especially Mexican-origin men (MO). By causal attributions we mean the way in which the men experiencing illness symptoms identify and describe the source/s or cause/s of their illness. The aims of this study are to a) describe the illness attributions of depressed older men, and b) compare the illness attributions of depressed White-non-Hispanic (WNH) and Mexican-origin older men. In-depth semi-structured interviews with 77 (WNH=47, MO=30) depressed older men recruited for the Men's Health and Aging study (MeHAS) were analyzed per standard qualitative techniques. We found that the most commonly identified depression attributions are 1) declining physical health, 2) economic problems, 3) lack of and/or conflictive social relationships, 4) substance use, and 5) caregiving. The cross-ethnic comparison showed that MO men did not identify substance use and caregiving as causes of their depression while WNH men did. These findings have implications for building social-behavioral models of depression attribution.

##### **OLDER MEN'S PERSPECTIVES ON WHAT HAS STOPPED THEM FROM SUICIDE AND HOW TO HELP OTHERS**

S. Vannoy<sup>1</sup>, M. Park<sup>1</sup>, J. Unutzer<sup>1</sup>, L. Hinton<sup>2</sup>, 1. *University of Washington, Seattle, Washington*, 2. *University of California, Davis, Davis, California*

Older men have the highest rates of suicide in the U.S. Little is known about how depressed older men think about suicide and what could be done to prevent suicide in their peers. Our paper fills this gap by identifying practical ways to prevent suicide behaviors. The data consisted of 76 face-to-face, in-depth interviews with depressed older men. We focused on two research questions: a) what stopped older men from completing suicide and b) what can be done to help suicidal older men. Participants were also asked if they had ever spoken to their primary care provider (PCP) about suicide and whether or not they would be

offended if their PCP inquired about suicide. We identified ten categories of what stopped older men from committing suicide and six categories for what can be done to help suicidal older men. The findings of these analyses yield useful information to guide PCPs in exploring suicide risk with their older, adult male patients.

#### **DEPRESSION TREATMENT PREFERENCES OF OLDER WHITE AND MEXICAN AMERICAN MEN**

M.D. Johnson<sup>1</sup>, E. Apesoa-Varano<sup>2</sup>, J. Hay<sup>3</sup>, J. Unutzer<sup>4</sup>, L. Hinton<sup>2</sup>, 1. *West Los Angeles VA, UCLA, Los Angeles, California*, 2. *UC Davis, Davis, California*, 3. *University of Southern California, Los Angeles, California*, 4. *University of Washington, Seattle, Washington*

To guide development of patient centered programs that would encourage depressed older men to enter and remain in treatment, we examined preferences for depression care and strategies to enhance treatment acceptance among older white and Mexican origin male primary care patients. 63 (45 white, 18 Mexican origin) older men were recruited at the time of their primary care visit. All met SCID criteria for major depression in the past year and/or were receiving depression treatment. Participants completed a conjoint analysis survey assessing preferences regarding depression treatments, providers, and treatment enhancements. White men were more likely to prefer medication over counseling, while Mexican origin men were less likely to prefer medication compared to counseling. Both white and Mexican origin men preferred treatment that included family involvement and treatment for insomnia. White men also preferred treatment by telephone. Findings could inform development of patient centered depression treatment programs for older men.

### **SESSION 975 (PAPER)**

#### **AGING AND SEXUALITY**

##### **ATTITUDES TOWARD EXTRAMARITAL SEX IN THE CONTEXT OF SPOUSAL ALZHEIMER'S DISEASE**

A.S. London<sup>1,2</sup>, J. Wilmoth<sup>1,2</sup>, 1. *Sociology, Syracuse University, Syracuse, New York*, 2. *Aging Studies Institute, Syracuse, New York*

We use data from the National Social Life, Health, and Aging Project (NSHAP), a representative sample of adults aged 57 to 85 years, to examine how attitudes toward extramarital sex when a spouse has Alzheimer's disease compare to attitudes toward extramarital sex when a spouse has a chronic illness and general attitudes about extramarital sex. Overall, favorable attitudes toward extramarital sex are more likely when a spouse has dementia or a chronic illness: 67.3% reported that extramarital sex in the context of spousal dementia was always wrong, 14.9% reported it was almost always wrong, 8.6% reported it was wrong only sometimes, and 9.2% reported it was not wrong. The comparable percentages for when a spouse has a chronic illness were 67.3%, 15.2%, 7.8%, and 9.8%, while for extramarital sex generally, they were 80.9%, 14.7%, 3.0%, and 1.8%. In ordered logistic regression analyses, the odds of having more favorable attitudes toward extramarital sex were consistently higher among those reporting: college education or more; income of \$50,000 or more; prior incarceration; and being currently divorced/separated or never married. The odds of having less favorable attitudes were consistently higher among Protestants, Catholics, and persons affiliated with "other" religions (compared to those with no religious affiliation) and among those who reported that their religious beliefs were important in their daily lives. Caregiving for a spouse was not significant. The results are discussed in relation to demographic trends, popular discourses, and implications for providers who work with persons with Alzheimer's disease and their spouses.

#### **THE IMPACT OF SEXUAL INTEREST ON HEALTH OUTCOMES IN OLDER ADULTS**

C. Sharpe, S.S. Reynolds, *USF School of Aging Studies, Tampa, Florida*

The literature on sexuality in older adults suggests that a healthy sex life is an important component of successful aging, including maintenance of physical health. In this cross-sectional study of 3800 men and women age 39-85, we use the US National Health Measurement Study to examine the effect of sexual interest on older adults' health. Health outcomes include arthritis, back pain, coronary heart disease, depression, diabetes, and sleep disorders. Independent variables include sexual interest, socio-demographics, medications and self-reported health and disability factors. Logistic regression results indicate that low sexual interest is associated with increased risk of back pain, coronary heart disease, depression, and sleep disorders, but not arthritis or diabetes. The most consistent other factors were fatigue, black race, medications, and ADL impairment. Further research on other measures of sexual desire, activity, and satisfaction are needed to fully understand the importance of sexuality for older adults' health.

#### **IN THE SHADOW OF SEXUALITY: SOCIAL SUPPORT AND HEALTH CHALLENGES IN THE LIVES OF OLDER, AFRICAN AMERICAN SEXUAL MINORITIES**

M.R. Moore<sup>1</sup>, R. Andersen<sup>2</sup>, 1. *University of California, Los Angeles, Los Angeles, California*, 2. *University of California, Los Angeles, Los Angeles, California*

This paper seeks to broaden the focus of aging research by examining the interaction of racial group membership and sexual orientation as it relates to dimensions of social support. It analyzes participant-observation, focus group and in-depth interview data from an NIH Diversity Supplement study of 40 African Americans who were born before 1955 and who self-identify as lesbian, gay, bisexual, or same-gender-loving. While past studies of aging in Caucasian lesbians and gay men have assumed that homophobia results in geographically distant relationships between gay people and their kin, findings from this work suggest that some African American sexual minority elders live in close proximity to family members and sustain closer relationships with kin than we have previously assumed. However, they also maintain a particular type of silence and discretion around their sexual orientation. This silence has the consequence of making them appear more available to family members as sources of economic and social support. Because they keep their intimate relationships private and in a separate realm of their lives, extended kin perceive them as single, stable, and particularly available to care for others. These kin may not be aware of the supports sexual minority elders in their families need. Instead of receiving social support from family, some seniors are consistently and predominantly providing resources and care to family members (i.e., taking in elderly parents or nephews and nieces when adult siblings are incapacitated). While prior research on social support has assumed this relationship operating through a one-way exchange with gay elders as the recipients of support, an examination of these systems among older African Americans suggests that we must also consider ways that social support operates as an exchange in the opposite direction, or as a multi-directional exchange. Despite sexual minority status, many older gay racial minorities report close relationships with family members but remain distant in the types of information they are willing to share about their lives. They provide substantial instrumental support to kin but may not receive sufficient emotional support to mitigate experiences of loneliness and social isolation that increase with age. These findings have important implications for how we conceptualize "open" and "hidden" expressions of gay sexuality in older cohorts, the relationships aging sexual minorities have with kin and others in their racial communities, and the development of interventions to address health inequities for this population.



## RELATIONSHIP POWER & CONTROL AMONG SINGLE HETEROSEXUAL MIDLIFE WOMEN: CORRELATES OF CONDOM USE & TRADITIONAL GENDER ROLE IDEOLOGY

P.P. Brown, 1. *Sociology and Gerontology, Miami University, Oxford, Ohio*, 2. *University of Central Missouri, Warrensburg, Missouri*

Sexual relationship power (SRP) and relationship control (RC) are thought to be related to traditional gender role ideology and are important in negotiating condom use in unmarried, heterosexual couples. Presently, there are increasing numbers of unmarried middle-aged adults who may have not had access to information about the benefits of condom use in preventing the spread of STIs. Linear regression analyses were conducted to answer the following research question: what variables contribute to the ability to predict SRP and RC for single middle-aged heterosexual women? Variables contributing to the prediction of SRP were higher decision-making dominance (DM) and higher scores on the Sex Role Egalitarianism Scale (SRES), while higher income, higher education, and consistent male condom use were weakly or not at all related to higher SRP. Variables contributing to the prediction of RC were higher SRP and SRES while higher education, consistent male condom use, and higher income were not related to higher RC. The data supported the concept that more egalitarian attitudes and higher control over DM predicts higher SRP-RC, while the data did not support previous research indicating that higher income and education is indicative of higher SRP-RC. The data also indicated that consistent male condom use is not related to SRP-RC, contradicting previous beliefs and research.

## SESSION 980 (PAPER)

### COGNITIVE INTERVENTIONS

#### A RANDOMIZED CONTROLLED TRIAL OF COGNITIVE TRAINING IN MIDDLE AGED AND OLDER ADULTS

F.D. Wolinsky, M.W. Vander Weg, M. Howren, M.P. Jones, M.M. Dotson, *College of Public Health, University of Iowa, Iowa City, Iowa*

Background: Age-related cognitive decline is common, affects multiple cognitive functions, and begins by age 45, if not sooner. These declines may result in substantial difficulties and disabilities in everyday life, making the identification of interventions that delay, prevent, or reverse cognitive decline clinical and public health priorities. Methods: We randomized 681 participants within two age strata (50-64 vs. > 65) to a four-arm controlled trial using three modes of delivering a second-generation visual speed of processing (VSP) cognitive intervention (on-site with vs. on-site without booster training vs. at-home training) compared to attention control training using a computerized cross-word puzzle program. Six neuropsychological tests were assessed at baseline and one year later. General linear models for repeated measures were used to evaluate main effects for treatment group and age strata, as well as their two-way interaction. Results: Among the 620 (91%) participants with complete data, all VSP delivery modes had statistically significant small to medium effect size improvements on the Useful Field View, Trail Making A and B, and Symbol Digit Modalities Tests of divided attention (faster completion times or more correct symbol-digit matches). Effect sizes were comparable across the three VSP delivery modes and for both age strata. Conclusion: This study demonstrated that 10 hours of well-tolerated and enjoyable VSP training delivered either on-site or on a home PC using a complex video game resulted in important improvements in cognitive function among 50-87 year olds. Wide spread implementation of this VSP training appears feasible and may reverse age-related cognitive decline.

#### OLDER ADULTS' SUBJECTIVE ENGAGEMENT WITH A HOME-BASED VIDEO GAME TRAINING PROGRAM

P. Belchior<sup>1</sup>, M. Marsiske<sup>2</sup>, 1. *McGill University, Montreal, Quebec, Canada*, 2. *University of Florida, Gainesville, Florida*

Introduction: This study examined older adults' Flow experience (or engagement with) a home-based video game training program. Flow has been defined as an optimal psychological state thought to occur when people are able to meet the challenges of a given task or activity with appropriate skills, and accordingly feel a sense of well-being, mastery, and heightened self-esteem. Methods: Thirty six participants, mean age 73 years (range = 65 to 86 years), took part in this study. Participants were randomly assigned to two different conditions: 1) computer-based training (Insight by PositScience) in visual attention or 2) video game practice (i.e., Crazy Taxi). Both training conditions were home based; participants were asked to engage for 12 weeks (minimum of 5 hours a week). The outcome measure, the Flow Questionnaire, was completed at the end of each training session, although it was only required three times a week. Participants each provided between 36 and 84 flow ratings. Results: A linear growth model revealed that both groups experienced significant increase in Flow over the period ( $p < .001$ ), but a Group X Time interaction revealed that participants in the Crazy Taxi group experienced more increase in Flow ( $p < .001$ ), "catching up" to the initially higher Insight group. Discussion: The findings are consistent with Csikszentmihalyi's Flow theory. The Insight training program provides clear feedback and is adaptively adjusted to individual's level, allowing participants to experience game mastery from the beginning. Crazy Taxi game is less structured, but with practice mastery experiences increase, leading to increases in Flow. The results are encouraging regarding older adults' continued motivation for and subjective experience with ongoing mental exercise.

#### IMPACT OF COGNITIVE TRAINING ON GAIT AND BALANCE: RESULTS FROM THE HEALTHY BRAIN, HEALTHY BODY PILOT STUDY

R. Smith-Ray, S.L. Hughes, T. Prohaska, *Univ of Illinois at Chicago, Chicago, Illinois*

Fall-related injuries are the 5th most common cause of death for older adults (Rubenstein, 2006). Risk factors for falls include impairments in gait, balance, and cognition including memory and attention (American Geriatric Society, 2001). This randomized controlled trial (RCT) tested whether cognitive training of executive functions over 10 weeks improves gait and balance in older adults. Participating residents of independent living facilities were randomly assigned to a cognitive training intervention or measurement-only control. Measurements were completed at baseline and 10 weeks. Primary outcomes included 10-meter walk test, 10-meter walk with cognitive distraction, and Timed Up and Go (TUG; proxy measure of balance). Secondary cognitive outcomes included Useful Field of View (UFOV) processing speed (UFOV-PS), divided attention (UFOV-DA), and selective attention (UFOV-SA), inhibition (California Older Adults Stroop Test), and visuospatial working memory (Corsi blocks forward and backward). Data were analyzed using one-way ANOVA models with change scores. The 51 participants were on average age 81.7, white (96%) and female (78%). Participants who completed the intervention experienced significant improvements in UFOV-PS [ $F(1,44) = 5.72, p = 0.021$ ] and UFOV-DA [ $F(1,41) = 9.55, p = 0.004$ ] and marginally significant improvements in TUG [ $F(1,36) = 3.44, p = 0.072$ ] and UFOV-SA [ $F(1,40) = 2.49, p = 0.123$ ] compared to participants who did not complete the intervention. This RCT demonstrates that cognitive training not only leads to improvements in cognitive tasks related to executive functions but also balance. Training aspects of cognition related to balance and gait may be a promising approach to falls prevention.

## THE MEMORY GAME: AN IPAD-BASED INTERACTIVE REMINISCENCE PROGRAMME TO AID THOSE WITH DEMENTIA

T.V. Wright<sup>1,2</sup>, M. Mulvenna<sup>1</sup>, 1. *Art & Design Research Institute, University of Ulster, Belfast, United Kingdom*, 2. *University of Texas Institute of Medical Humanities, Galveston, Texas*

In 2010, our pilot research project titled *The Art of Memory* (<http://trail.ulster.ac.uk/activities/art-of-memory/>), based at the University of Ulster, identified older peoples' attitudes to using photographs displayed on iPad tablets to reminisce as opposed to taking a photographic card-based approach. While the central findings of this research are discussed elsewhere (Mulvenna, Doyle, Wright et al 2011), the research provided the foundations for developing "The Memory Game": a visual media computer-based system for reminiscing. The 'game' designed to support the memories of people with dementia and has the added benefit of decreasing the caregivers' burden. When playing the game, the computer programme hyperlinks images, music, movie and news clips via a chronological timeline in the form of quiz. The overall aim is to encourage older people to engage in reminiscing in a way that is both engaging and fun. With material designed specifically for their age-group, the quiz element of the game is not so much goal-driven - taking part, recalling and discussing past events and memories are the key concerns. The paper examines central issues concerning visual images as stimulants for reminiscing and recall. It extends the narrative potential of studying the processes of reminiscence, particularly in the digital multi-media context and when the material is to be broadcast via mobile media devices.

## SESSION 985 (PAPER)

### MANAGING CHRONIC DISEASE

#### PERSONAL AND SOCIAL DETERMINANTS OF DIABETES SELF-CARE BEHAVIORS AMONG AGING MEXICAN AMERICANS IN THE TEXAS-MEXICO BORDER REGION

M.L. Smith<sup>1,2</sup>, X. Wang<sup>4</sup>, N. Mier<sup>3</sup>, G. Carrillo-Zuniga<sup>3</sup>, N. Garza<sup>3</sup>, M.G. Ory<sup>2</sup>, 1. *College of Public Health, The University of Georgia, Athens, Georgia*, 2. *Texas A&M Health Science Center School of Rural Public Health, College Station, Texas*, 3. *Texas A&M Health Science Center School of Rural Public Health, McAllen, Texas*, 4. *University of Texas - Pan American, Edinburg, Texas*

**Background.** Self-care practices are essential to disease control and positive health outcomes. Older Hispanics are disproportionately affected by diabetes, but little is known about predictors of diabetes self-care behaviors among this group. **Objectives.** The current study identifies personal characteristics, social factors, and health indicators associated with diabetes self-care behaviors (i.e., those related to diet and physical activity) among underserved, aging Mexican Americans living in the Texas-Mexico border region. **Methods.** Data were analyzed from 249 Mexican Americans with diabetes aged 60 years or older who lived in Hildago County, Texas (one of the 10 poorest counties in the United States). Two multiple linear regression models were used to evaluate independent variable effects on two self-care activities scales, measuring the frequency in which participants performed 3 diet-related and 2 physical activity-related self-care behaviors, respectively. **Results.** On average, diet-related summary scores were 3.16 points higher among Hispanic adults who received diabetes education, relative to those not receiving such education ( $B=0.20$ ,  $P=0.03$ ). Average diet-related scores were 2.90 points higher among participants who reported high family support levels, compared to those with low family support levels ( $B=0.21$ ,  $P=0.03$ ). On average physical activity-related scores were 3.31 points higher among participants with a high school diploma or more education, relative to those with less than a high school education ( $B=0.24$ ,  $P=0.01$ ). **Conclusion:** Diabetes management strategies targeting diet among Hispanic seniors at the border region should be

designed to incorporate programmatic and social-related supports. Further investigation should investigate the range of factors surrounding self-care behaviors among this population.

#### OLDER RURAL AFRICAN AMERICANS AND TYPE 2 DIABETES: A CULTURAL APPROACH

I. Canty Williams, S.W. Utz, K. Reid, R.A. Jones, I. Hinton, G. Yan, *School of Nursing, University of Virginia, Charlottesville, Virginia*

Type 2 diabetes is an increasing public health problem affecting 25.8 million Americans, with a prevalence of 26.7% for those over the age 65. Diabetes disproportionately affects African Americans who have a nation-wide prevalence of 13.3% versus 8.7% among adults. One out of every three Medicare dollars is spent on people with diabetes. The purpose of this feasibility study was to test a culturally-tailored intervention to promote effective diabetes self-management among rural African Americans. A series of eight 2-hour sessions were held in a community center for subgroups of 6-8 older adults ( $N=32$ ), using videotaped vignettes to promote problem-solving for improved self-management. Outcomes were measured at baseline, 3, 6 and 12 months post-baseline. Primary outcomes were long-term blood glucose average (HbA1c), cardiovascular risk, and general physical/mental health. Secondary outcomes were goal-achievement, and scores on problem-solving, self-efficacy and daily self-care actions. Mixed-effect models were used to analyze changes in all outcome variables over time. Results indicate trends toward clinically significant reductions in HbA1c, cardiovascular risk, and improved mental health. Physical health did not improve, likely due to multiple chronic conditions and aging. Significant secondary outcomes were goal achievement and increased knowledge about diabetes ( $p<.01$ ). Analyses also revealed a possible ceiling effect for self-efficacy, and problem-solving. Results of this research will help to inform researchers as to the kind of intervention that is effective in promoting better diabetes management to reduce complications and improve quality of life among African Americans who experience a high burden of the disease.

#### RISK AND PROTECTIVE FACTORS ASSOCIATED WITH DIABETES-RELATED DISTRESS: IMPORTANCE OF EARLY DIABETES MANAGEMENT

J. Wardian, F. Sun, *Ste 720, Arizona State University, Phoenix, Arizona*

**Background:** Diabetes is a common problem in older adults (20% vs 7.8% of the general population). Health care professionals (HCP) are tasked with providing resources to assist patients toward self-management that results in healthier outcomes. Psychosocial issues have an effect on diabetes self-care that is not fully understood by HCP. This cross-sectional study seeks to understand the effect of demographic factors, psychological orientations, social support, and diabetes management behaviors on diabetes-related distress. **Methods:** This study uses BEAD project data collected from 267 adults (Mean age = 57.9.  $SD=13.6$ ) with type 2 diabetes, diagnosed from 1 to 5 years ago. The Diabetes Distress Scale (DDS) is a validated 17-item scale that measures emotional distress, physician related distress, regimen distress, and interpersonal distress. **Results:** Hierarchical regression was conducted in four stages. The final model including demographics, psychological factors, social support, and self-care behaviors explains 49.1% of the variance in DDS [ $F(10, 201)=19.37$ ,  $p<.001$ ]. Significant factors related to lower DDS were older age, higher self-efficacy, positive thinking, higher levels of HCP support, and a healthy diet. **Discussion:** This study would help HCP to know what to focus on when trying to reduce diabetes-related distress. Diabetes-related stress may diminish as people live with it longer, but deteriorated physical or cognitive health associated with aging are potential risks for older diabetes patients. Support is significant in reducing DDS and assisting person with diabetes to engage in self-care management. Diabetes education may want to include

cognitive behavioral therapy as a means of increasing self-efficacy and reducing negative thinking.

### PERCEIVED VERSUS ACTUAL FACTORS ASSOCIATED WITH ADOPTION AND MAINTENANCE OF EVIDENCE-BASED PHYSICAL ACTIVITY PROGRAMS

C. Der Ananian<sup>2</sup>, P. Desai<sup>1</sup>, R. Smith-Ray<sup>1</sup>, R. Seymour<sup>1</sup>, S.L. Hughes<sup>1</sup>, 1. Center for Research on Health and Aging, Univ Illinois, Chicago, Illinois, 2. Arizona State University, Phoenix, Arizona

Despite the need to increase the availability of evidence-based (EB) physical activity (PA) programs for people with arthritis (Brady et al., 2009), little is known about effective ways of translating and diffusing these programs. This study used qualitative methods to examine factors related to the adoption and maintenance of EB PA programs in two states. Fit and Strong! is a PA/ health behavior change program for older adults with osteoarthritis. We conducted focus groups (n=6) with decision makers who were potential adopters of Fit and Strong! prior to their offering the program. We then conducted in-depth interviews (n=18) with key informants from organizations that adopted the program. Both sets of participants were asked to identify barriers and facilitators to the adoption and maintenance of PA programs in general and Fit and Strong!, specifically. Four perceived and five actual generic factors were identified. Both contemplators and adopters identified client interest/need as the primary factor. Cost was also reported but ranked higher for contemplators than program adopters. Participants identified four perceived vs. two actual factors as associated with program-specific adoption. Space was identified by both groups. Actual generic factors associated with adoption included client interest, safety and effectiveness, evidence, cost, and appeal to multiple user groups. Actual generic factors associated with maintenance included client interest, enrollment, instructor satisfaction, instructor retention and cost. Differences found between respondent groups indicate that EB programs should craft different marketing messages to address barriers and facilitators perceived and experienced by providers engaged in specific stages of translation.

### CHRONIC PAIN AND PARENT-CHILD RELATIONS IN LATER LIFE: DOES IT MAKE A DIFFERENCE?

C. Riffin<sup>1</sup>, K. Pillemer<sup>1</sup>, J. Suiitor<sup>2</sup>, C. Reid<sup>3</sup>, 1. Cornell University, Ithaca, New York, 2. Purdue University, West Lafayette, Indiana, 3. Weill Cornell Medical College, New York, New York

Chronic pain is a debilitating and pervasive health concern, particularly among older adults. Both researchers and clinicians acknowledge that pain conditions do not occur in isolation, but rather, exact a toll on the individual sufferer and family system at large. Surprisingly, no research has explored the effects of older parents' chronic pain symptoms on their adult children. To address this gap in the literature, this study employed a within-family design to investigate the impact of mothers' self-reported pain on parent-child relationship quality and on adult children's depressive symptoms. Data for these analyses come from the Within-Family Differences Study (WFDS), a two-wave study of mothers (aged 65-75) and their adult children. Analyses were based on 734 children of mothers who responded to the question, "In the past 30 days, on how many days did you cut down on your usual activities because of this pain?" Multilevel analyses revealed an adverse association between mothers' pain and the child-parent relationship ( $\beta = -.23$  SE = .09,  $p = .03$ ). In addition, a significant pain by frequency of contact interaction also emerged for relationship quality ( $\beta = .263$ , SE = .116,  $p = .01$ ). As hypothesized, mothers' pain predicted adult children's depressive symptoms ( $\beta = -.622$ , SE = .355,  $p = .08$ ). Results held after controlling for children's sociodemographic characteristics, the amount of help they provided their mother during an illness and their perception

of mother's functional limitations. Implications of these findings for future research on the impact of pain in later-life families are discussed.

## SESSION 990 (SYMPOSIUM)

### BUILDING A PLATFORM FOR RESEARCH: THE CANADIAN LONGITUDINAL STUDY ON AGING

Chair: S.A. Kirkland, Community Health and Epidemiology, Dalhousie University, Halifax, Nova Scotia, Canada

Discussant: A.V. Wister, Simon Fraser University, Vancouver, British Columbia, Canada

Over the next twenty years, the Canadian Longitudinal Study on Aging (CLSA) will generate a wealth of information that will contribute to the advancement of the science of aging and policy development. The study will collect information on the changing biological, medical, psychological, social, and economic aspects of people's lives in order to understand how, individually and in combination, they influence the maintenance of health and well-being, and the development of disease and disability as people age. The CLSA will be one of the most comprehensive studies of its kind undertaken to date. Its large sample, multidisciplinary focus, and longitudinal design will provide research opportunities unprecedented in Canada and internationally. In 2009 the CLSA partnered with Statistics Canada to develop the Canadian Community Health Survey (CCHS) in Healthy Aging and launch the CLSA. In 2010, recruitment of the Tracking cohort began with funding from the Canadian Institutes of Health Research. In 2011, with funding from the Canada Foundation for Innovation, the infrastructure for eleven Data Collection Sites across Canada was created to conduct participant health assessments in the Comprehensive cohort. In 2012, recruitment of the Comprehensive cohort began. The objectives of this Symposium are to: 1) Provide an update on the progress of the study and milestones achieved to date; 2) Report on key methodological aspects of recruitment and sampling, outcomes ascertainment, and biobanking of biological samples; and 3) Give researchers an understanding of the scope and potential of the CLSA as a platform for research on aging.

### SETTING THE STAGE FOR A RESEARCH PLATFORM ON AGING

S.A. Kirkland<sup>1</sup>, C. Wolfson<sup>2</sup>, P.S. Raina<sup>3</sup>, L. Griffith<sup>3</sup>, M. Oremus<sup>3</sup>, 1. Community Health and Epidemiology, Dalhousie University, Halifax, Nova Scotia, Canada, 2. McGill University, Montreal, Quebec, Canada, 3. McMaster University, Hamilton, Ontario, Canada

The Canadian Longitudinal Study on Aging is following 50,000 men and women aged 45-85, for 20 years. Data collection methods include telephone and face-to-face interviews, physical assessments, biological samples, and linkage to administrative databases. The first wave of recruitment for the Comprehensive cohort and the second wave of recruitment for the Tracking cohort are currently underway. The CLSA has engaged in a number of "firsts" in Canada, including: establishing the first known coordinated approach to the Research Ethics Board approval process for a national multi-site observational study using an online documentation process; designing web-based open-source computer software applications – Mastodon, Sabretooth and Beartooth – enabling paperless data collection and integration while protecting confidentiality and managing interactions with study participants, standardized across the 11 data collection sites and four computer-assisted telephone interview sites; and working with data stewards across all 10 provinces to facilitate linkage to administrative health data of a national scope.

**BUILDING A PLATFORM OF RESEARCH ON AGING:  
DEVELOPMENT OF CHRONIC DISEASE  
ASCERTAINMENT ALGORITHMS FOR THE CANADIAN  
LONGITUDINAL STUDY ON AGING (CLSA)**

M. Oremus<sup>1</sup>, R. Postuma<sup>2</sup>, L. Griffith<sup>1</sup>, P. Raina<sup>1</sup>, C. Wolfson<sup>3</sup>,  
S.A. Kirkland<sup>4</sup>, 1. *McMaster University, Hamilton, Ontario, Canada*,  
2. *McGill University Hospital Centre, Montreal, Quebec, Canada*, 3.  
*McGill University, Montreal, Quebec, Canada*, 4. *Dalhousie  
University, Halifax, Nova Scotia, Canada*

The CLSA research platform will allow researchers to investigate the incidence and prevalence of chronic diseases. In the absence of a physician examination, the CLSA will use algorithms to combine participants' questionnaire-based, anthropometric, and clinical data to ascertain the presence of chronic diseases. For example, ruling in or ruling out diabetes mellitus will depend on whether participants report a physician diagnosis of diabetes, use diabetes medications, and have a glycosylated hemoglobin value of  $\geq 48$  mmol/mol. The CLSA's Clinical Working Group conducted a systematic review to identify existing algorithms for use in the CLSA. The working group found suitable algorithms for all except seven chronic diseases (i.e., diabetes mellitus, parkinsonism, chronic airflow obstruction, hand osteoarthritis [OA], hip OA, knee OA, and ischemic heart disease [IHD]). The CLSA developed algorithms for these diseases and recruited 176 participants to validate the algorithms. Most estimated sensitivities and specificities were  $\geq 80\%$ .

**SAMPLING AND RECRUITMENT IN THE CANADIAN  
LONGITUDINAL STUDY ON AGING**

L. Griffith<sup>1</sup>, H. Shannon<sup>1</sup>, P.S. Raina<sup>1</sup>, C. Wolfson<sup>2</sup>, S.A. Kirkland<sup>3</sup>, 1. *Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Ontario, Canada*, 2. *McGill University, Montreal, Quebec, Canada*, 3. *Dalhousie University, Halifax, Nova Scotia, Canada*

The Canadian Longitudinal Study on Aging (CLSA) is recruiting 50,000 Canadians aged between 45 and 85 for a 20-year study. Obtaining a representative sample of Canadians can be challenging. Ideally, we would take a simple or stratified sample from a list of the population, but identifying a single sampling frame that will meet all of our needs is not practicable. The CLSA researchers have considered several options for sampling including recruitment from 1) participants of a large population-based survey conducted by Statistics Canada, the Canadian Community Health Survey on Healthy Aging, 2) provincial health registries, and 3) random digit dialling (RDD). Each of these potential sampling frames has strengths and weaknesses and a unique set of challenges for operationalization. We will describe the issues associated with using each of these sampling frames and how partial samples using different selection methods will be combined to comprise the CLSA baseline cohort.

**A NOVEL SOFTWARE INFRASTRUCTURE FOR LARGE  
EPIDEMIOLOGICAL STUDIES**

P.D. Emond, D. Inglis, P.S. Raina, *Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Ontario, Canada*

Novel software infrastructure has been created to manage data collection logistics for the Canadian Longitudinal Study on Aging. The software includes: a participant relationship manager (PRM), data bank, computer-assisted telephone interviewing (CATI) software and computer-assisted personal interviewing (CAPI) software. The PRM centralizes the study's interactions with participants and is responsible for recruitment and preservation of confidentiality. It maintains identifying data and consent status while facilitating communication between software components. The CATI software coordinates the collection of telephone questionnaire responses from participants at one of four call centres. The system schedules interviews, tracks their status and reports on their progress until completion. The CAPI software coordinates the collection of questionnaire responses and physical measurements from participants at one of 11 data collection sites. It schedules in-home and

site interviews, integrates medical devices and facilitates biospecimen collection. Finally, the data bank manages and stores data collected from the CATI and CAPI systems.

**SESSION 995 (SYMPOSIUM)**

**DEVELOPING RESEARCH METHODS TO FACILITATE A  
RESEARCHER / PARTICIPANT RELATIONSHIP**

Chair: A. Kydd, *Health, Nursing and Midwifery, University of the West of Scotland, Hamilton, United Kingdom*

Discussant: H. Wilkinson, *University of Edinburgh, Edinburgh, United Kingdom*

In keeping with the conference theme, this symposium showcases qualitative research methods that have been selected and adapted with the focus on developing a trusting relationship with vulnerable groups. These individuals are those who are hard to access as participants, yet demographics clearly show that the oldest old and those with dementia make up an increasingly larger number within developed populations. In charting new frontiers the voices of these vulnerable groups need to be heard. Robson's (2002) advice that the best method is that which serves to answer to the research question is agreed, but this symposium also reminds researchers that the methods need to be those that provides a facilitative relationship with the participant. Studies such as Steeman et al (2007) state that when participants feel safe with a researcher, they are more likely to relate their experiences in a less guarded and more relaxed manner. This is of great importance when interviewing frail older people and those who have cognitive deficits as their fears of being thought incapable are high (Mac Quarrie, 2005). The papers from the UK, USA and Japan illustrate issues arising from accessing vulnerable participants; ethical directives on accessing people newly diagnosed with dementia; using story theory to provide dialogue with people on dialysis and with couples – one of whom has dementia; gaining trust through frequent visits in an observer-participant role to a care home and interviewing an Amish community. Each paper outlines the strengths and limitations of qualitative methods used.

**ENHANCING QUALITY AND INTEGRITY OF RESEARCH  
GUIDED BY STORY THEORY**

D.J. Hain, *Christine E Lynn College of Nursing, Florida Atlantic University, Boca Raton, Florida*

Story-path approach was used to encourage older adults undergoing hemodialysis to share stories of the health challenge of making lifestyle change. This paper will discuss strengths, limitations and potential strategies when using this method of inquiry. Strengths: Participants appreciated someone cared enough to listen and shared information never shared before. Story theory provided the foundation for identifying health challenges, allowing for shared dialog of possible intervention to resolve health challenges. Limitations: Some participants didn't think they had a health challenge, when the researcher thought differently; making it difficult to be open to the perceptions of the participants rather than attach my own meaning to their stories. Per participants' request data collection was changed; limiting privacy. Strategies: The researcher used reflexive thought to bring conscious awareness of self and not influence the stories. Data collection started within the first 30 minutes of dialysis and a screen was used to provide privacy.

**THE COUPLES LIFE STORY METHOD**

M. Ito<sup>1</sup>, R. Campbell<sup>2</sup>, Y. Kurokawa<sup>3</sup>, B. Ingersoll-Dayton<sup>4</sup>, B. Spencer<sup>4</sup>, 1. *Human care Research Team, Tokyo Metropolitan Institute of Gerontology, Itabashi-ku, Tokyo, Japan*, 2. *University of Tokyo, Bunkyo-ku, Tokyo, Japan*, 3. *Sophia University, Chiyoda-ku, Tokyo, Japan*, 4. *University of Michigan, Ann Arbor, Michigan*

In Japan, the co-residence rate of older people and their children is decreasing. Over 80% of older people say they prefer to receive caregiving from their spouse. Caring for a spouse with dementia can be very

stressful and increase feelings of burden. The couples life story method helps couples review their life together from the first time they met to the present using photographs to stimulate conversation. We used a life story board to conduct interviews with couples over 4-5 sessions lasting 1 to 2 hours each (n = 10 couples). Pre-and post questionnaires for each spouse were used before and after the tape-recorded sessions; a life story book was produced for each couple. We found this method is effective in reconfirming or revising their feelings for each other. We plan to adapt the couples life story method for use in professional training and in nursing homes.

#### **ISSUES CONCERNING PARTICIPANT OBSERVATION WITH FRAIL OLDER ADULTS**

A. Kydd, *Health, Nursing and Midwifery, University of the West of Scotland, Hamilton, United Kingdom*

Participant observation is a complex and potentially intrusive method of gathering data. Yet many texts on methodologies refer to participant observation without elaborating on the ethical, moral and personal dilemmas that might face the researcher. The degrees of participation and observation are not clear and it is up to the researcher to determine how to conduct this type of research. This paper outlines a twelve-month study, which involved a nurse researcher acting as an observer-participant in a hospital ward of frail older people awaiting a place in a care home. Some of the problems encountered are discussed and include; entering the field and gaining acceptance, deciding on the researcher's role and how much time each visit should take, taking sides between the staff and patients, reporting without betraying those who agreed to participate and finally deciding how and when to say goodbye.

#### **COMMUNITY BASED PARTICIPATORY RESEARCH METHODOLOGY AS A FRAMEWORK FOR COLLABORATING WITH AN AMISH COMMUNITY TO CONDUCT RESEARCH ABOUT THE CARE OF OLDER ADULTS**

H.M. Farrar, J.S. Wilson, *University of Oklahoma, Oklahoma City, Oklahoma*

Amish communities in the United States are increasingly utilizing Western healthcare resources to promote the health and well-being of their community members. Discussions between the researcher and an Elder of an Amish community in northeastern Oklahoma identified a mutual interest in research about the care of older adults. There is limited research about caring for older adults in Amish communities to inform culturally sensitive healthcare practices. The Amish community of northeastern Oklahoma has no experiences working with the research community, which in addition to cultural sequestration and minority population status increases their position as a vulnerable population. This paper will outline the Principles of Community Based Participatory Research (CBPR), which promotes a framework for collaboration in the promotion of equality during the course of the research, ensuring that the Amish community would receive an equal share of the benefits of the research without bearing a disproportionate burden.

#### **THE ETHICAL CHALLENGES OF INVOLVING PEOPLE NEWLY DIAGNOSED WITH DEMENTIA IN THE RESEARCH PROCESS**

S. Holland, A. Kydd, G. Ellis, *University of the West of Scotland, Ayr, Ayrshire, United Kingdom*

There is growing recognition of that people with dementia can provide a unique expertise in research studies. This information can be used to enhance quality of care and tailor services to meet the needs of clients. Nevertheless, research in this area of practice is limited. As a result decisions, regarding what is best practice in dementia continue to be steered by health professionals and Government drivers. The need for further research which focuses on the viewpoint people with dementia is well recognised. However, as Wilkinson (2003) and McKeowan et al. (2010)

identify, people with dementia remain "difficult to reach" within the world of research in part due to the presence of cognitive impairment but also as a result of the scrutiny of research involving people with dementia by ethics committees. This paper will discuss the ethical challenges encountered during the involvement of people newly diagnosed with dementia in the research process.

### **SESSION 1000 (SYMPOSIUM)**

#### **DISENTANGLING THREATS TO ENERGETIC EFFICIENCY AND CAPACITY IN THE BALTIMORE LONGITUDINAL STUDY OF AGING**

Chair: E.M. Simonsick, *National Institute on Aging, Baltimore, Maryland, Johns Hopkins University School of Medicine, Baltimore, Maryland*

Discussant: L. Ferrucci, *National Institute on Aging, Baltimore, Maryland*

The specific mechanisms that govern age-and disease-related slow or slowing gait are not well-understood, but emerging work suggests that both the energetic cost of walking and energetic capacity (i.e., fitness) play central roles. This symposium examines the relationship between several physiologic parameters associated with gait speed to evaluate their contribution to the energetic cost of and energetic capacity for walking using data on up to 500 men and women aged 60 years and older participating in the Baltimore Longitudinal Study of Aging (BLSA). The BLSA constitutes a continuous enrollment cohort of initially healthy well-functioning individuals evaluated every 1-4 years depending on age during a 2-3 day clinic stay. Energetic cost of walking (ml O<sub>2</sub>/kg/meter) was assessed during a 2.5 minute usual paced corridor walk using a portable metabolic analyzer (Cosmed k4b2). Energetic capacity (i.e., available energy) was determined from oxygen consumption during a 400m walk done as quickly as possible and maximal treadmill testing. Both balance and strength deficits were associated with greater energetic cost of and diminished capacity for walking. Knee pain and restricted knee range of motion when walking independent of pain were also associated with greater walking cost. Metabolic parameters including indicators of glucose and adipokine dysregulation were associated with both available and maximal energetic capacity; findings regarding walking cost were mixed. Together these findings provide good evidence that musculo-skeletal, biomechanical and metabolic impairments contribute to both greater cost of walking and reduced energy availability – double jeopardy – for aging individuals and identify several potential intervention targets.

#### **PERCEIVED AND OBSERVED BALANCE AND THE ENERGETIC COST OF AND CAPACITY FOR WALKING**

E.M. Simonsick<sup>1,2</sup>, J.A. Schrack<sup>1</sup>, A.Z. Moore<sup>1</sup>, L. Ferrucci<sup>1</sup>, *1. National Institute on Aging, Baltimore, Maryland, 2. Johns Hopkins School of Medicine, Baltimore, Maryland*

Despite the primacy of balance in functional independence, scant empirical research has examined the association between instability and the energetic cost of and capacity for walking. In over 500 men (52%) and women aged 60+, those with reported instability walking on a level surface, poor standing balance and inability to successfully execute a narrow (20cm) 6m walk exhibited: (1) higher energy consumption per meter during 2.5 minutes of normal walking of 5.4%, 11.1% and 14.5%, respectively and (2) lower fitness capacity (10.6% for all) during a 400m endurance walk test than persons without these problems (p<.01 and p<.004, respectively) in models controlled for age, race, sex and obesity. Findings indicate older persons with balance instability, especially those failing the narrow walk, experience both increased energetic cost and diminished capacity for walking – a double-pronged threat to mobility – and argue for balance evaluation and training in mobility intact older adults.

## IMPAIRED GLUCOSE METABOLISM AS AN INDICATOR OF WALKING EFFICIENCY

J.A. Schrack, E.M. Simonsick, A.Z. Moore, K.S. Gravenstein, C.W. Chia, L. Ferrucci, *National Institute on Aging, Baltimore, Maryland*

Impaired glucose metabolism is associated with reduced physical performance and mobility limitation in older adults. Poor walking efficiency is associated with slower gait speed, a predictor of disability and death in older adults. Despite these accepted associations, the relationship between glucose metabolism and walking efficiency is unknown. To examine whether impaired glucose metabolism is associated with walking efficiency, we assessed the relationship between reported diabetes medication use, fasting and two hour blood glucose, HbA1c, and energy expenditure per meter during 2.5 minutes of customary and 400 meters of peak walking (ml/kg/m) in 482 (49% female) BLSA participants aged 60 and older. Medication use predicted customary and peak walking efficiency ( $p < 0.01$ ) independent of potential confounders. Neither fasting blood glucose, nor two hour glucose, nor HbA1c predicted walking efficiency after accounting for medication use. Accordingly, these findings suggest impaired glucose metabolism may contribute to functional efficiency in older adults.

## LEPTIN AND ENERGETIC CAPACITY IN OLDER ADULTS

C.W. Chia, J.A. Schrack, K.S. Gravenstein, J.M. Egan, E.M. Simonsick, L. Ferrucci, *National Institute on Aging, Baltimore, Maryland*

Leptin, secreted by adipocytes and a marker of body fat, plays a role in the regulation of energy intake and expenditure. However, scant research has examined the relationship between leptin and energy capacity, especially in older adults. In BLSA participants aged 60 and older, fasting plasma leptin concentrations were available in 457 participants (53% men) who underwent treadmill stress test and 243 participants (57% men) who underwent 400m fast-paced corridor walk. Leptin is negatively associated with peak energetic capacity as measured by  $VO_{2max}$  during treadmill ( $\beta = -0.122$ ,  $P = 0.006$ ) and  $VO_2$  during 400m walk ( $\beta = -0.205$ ,  $P = 0.015$ ) in models controlled for age, sex and total body fat (by DEXA). These findings suggest that higher leptin is associated with reduced energetic capacity (i.e., fitness) in older individuals. Therefore, leptin may be a surrogate marker of energy capacity that is independent of body fat.

## GAIT LAB PARAMETERS, KNEE PAIN AND THE ENERGETIC COST OF NORMAL WALKING

S. Ko<sup>1</sup>, E.M. Simonsick<sup>2</sup>, J.A. Schrack<sup>2</sup>, L. Ferrucci<sup>2</sup>, *1. Mechanical Engineering, Chonnam National University, Yeosu, Republic of Korea, 2. National Institute on Aging, National Institutes of Health, Baltimore, Maryland*

Knee pain is common in older adults and is associated with altered gait characteristics; it remains unclear whether pain and/or biomechanical alterations impact walking efficiency. This study examines the energetic cost of usual walking and gait parameters ascertained in a gait lab [3D motion capture system with 10 cameras and 20 anatomical markers] in persons aged 60-96 years with ( $n=57$ ) and without knee pain ( $n=222$ ) enrolled in the BLSA. Participants with knee pain exhibited 11.5% higher energetic cost than participants without pain ( $p < 0.001$ ) controlling for age, sex and BMI. Higher energetic cost was associated with reduced knee range of motion (ROM) overall and in participants with pain ( $p < 0.001$ ) and with greater ankle ROM in participants without pain ( $p = 0.001$ ). Results indicate both knee pain and compensatory strategies contribute to increased energetic costs of walking and suggest pain management and flexibility training may improve walking efficiency.

## MUSCLE STRENGTH AND THE ENERGETIC COST OF AND CAPACITY FOR WALKING IN OLDER ADULTS

A.Z. Moore<sup>1</sup>, E.M. Simonsick<sup>2</sup>, J.A. Schrack<sup>2</sup>, E. Metter<sup>2</sup>, L. Ferrucci<sup>2</sup>, *1. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, 2. National Institute on Aging, Baltimore, Maryland*

Muscle strength has been associated with walking speed and physical disability in older adults. Lower strength may lead to suboptimal

gait or necessitate compensation from other systems leading to higher energetic cost and decreased mobility. The cross-sectional relationship between muscle strength and energy expenditure was evaluated in 486 BLSA participants aged 60 or older (mean = 72.8 years) with data on energetics, maximum grip strength and anthropometric measurements. Grip strength was positively associated with fitness capacity, assessed as average energy expenditure per minute, during 400 meters of walking at peak speed in models adjusted for age, sex, height, weight and body composition ( $p < .05$ ). Greater strength was also associated with lower energetic cost, average energy expenditure per meter, during 2.5 minutes of customary speed walking ( $p < .01$ ). These results support the hypothesis that lower strength may contribute to functional limitations through both biomechanical and metabolic inefficiency.

## SESSION 1005 (SYMPOSIUM)

### FATIGABILITY IN OLDER ADULTS: DETERMINANTS, CONSEQUENCES AND FUTURE DIRECTIONS

Chair: *N.W. Glynn, Epidemiology, University of Pittsburgh, Pittsburgh, Pennsylvania*

Co-Chair: *K. Avlund, University of Copenhagen, Copenhagen, Denmark*

Discussant: *B. Eldadah, National Institute of Aging, Bethesda, Maryland*

Fatigue, defined as "a subjective lack of physical and/or mental energy that is perceived by the individual to interfere with usual or desired activities", is a common complaint among older adults. Fatigability, a newer concept, is a characteristic of an individual that describes how fatigued one gets in relation to defined activities. Understanding fatigability can provide insight into the extent to which fatigue may interfere in the disablement pathway. The determinants, consequences and future direction of this stimulating novel area of research will be explored in this symposium. The determinants of fatigability will be examined using Danish data with Dr. Manty evaluating the prevalence and associated health factors of indoor mobility-related fatigability among nonagenarians and Dr. Ekmann examining the impact of fatigability as a predictor of subsequent poor general health and ischemic heart disease. The consequences of fatigability will be presented by Dr. Manini who will explore the impact of performance and perceived fatigability (during a 400m walk and steady-state treadmill test at a fixed duration and speed) in older adults who self-report severe fatigue. Mr. Santanasto will also examine the consequences by evaluating the impact of fatigability versus fatigue in relation to physical performance and performance fatigability. Finally, Dr. Glynn will present the development and initial validation of a novel tool to measure fatigability in older adults. The discussion, led by Drs. Eldadah and Simonsick, will critically review current research, and focus on important issues for future directions of fatigability among older adults.

### FATIGABILITY IN NONAGENARIANS: PREVALENCE AND UNDERLYING FACTORS

M. Manty<sup>1,2</sup>, A. Ekmann<sup>1,3</sup>, M. Thinggaard<sup>3,4</sup>, K. Christensen<sup>3,4,5</sup>, K. Avlund<sup>1,2,3</sup>, *1. Section of Social Medicine, Department of Public Health, University of Copenhagen, Copenhagen, Denmark, 2. Center for Healthy Aging, University of Copenhagen, Copenhagen, Denmark, 3. Danish Aging Research Center, Universities of Odense, Aarhus and Copenhagen, Odense, Denmark, 4. Unit of Epidemiology, The Danish Twin Registry, University of Southern Denmark, Odense, Denmark, 5. Department of Clinical Genetics, Odense University Hospital, Odense, Denmark*

The aim of this study was to evaluate the prevalence and associated health factors of indoor mobility related fatigability among nonagenar-

ians. The study is based on a sample of 92-93-year old persons (n=1181) who were independent of help in indoor mobility. Fatigability was defined as a subjective feeling of fatigue when transferring or walking indoors. Other standardized assessments include self-report measures of medical history, and performance-based assessments of walking speed and maximum hand grip strength. In total, every fourth (26%) of the participants reported fatigability when transferring or walking indoors and fatigability was more common among participants living in sheltered housing as compared to those living independently (32% vs. 23%,  $p < .001$ ). Cardiovascular diseases, musculoskeletal pain, medications, walking speed and depressive symptoms were independently associated with fatigability. Fatigability in very basic everyday mobility is relatively common in non-disabled nonagenarians. The results indicate important associations between fatigability and potentially modifiable health factors.

### FATIGABILITY PREDICTS POOR GENERAL HEALTH AND IHD IN OLDER ADULTS

A. Ekman<sup>1,2</sup>, I. Petersen<sup>4</sup>, M. Manty<sup>1,3</sup>, K. Christensen<sup>4,2,5</sup>, K. Avlund<sup>1,2,3</sup>, 1. Section of Social Medicine, Department of Public Health, University of Copenhagen, Copenhagen, Denmark, 2. Danish Aging Research Centre (DARC), University of Odense, Aarhus and Copenhagen, Odense, Denmark, 3. Centre for Healthy Aging (CESA), Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark, 4. Unit of Epidemiology, The Danish Twin Registry, University of Southern Denmark, Odense, Denmark, 5. Department of Clinical Genetics, Odense University Hospital, Odense, Denmark

The aim of this study was to investigate the predictive value of fatigability for ischemic heart disease (IHD) and poor general health in healthy individuals aged 70+. Fatigability was measured with the Mob-T Scale at intake assessments in 1995, 1997, 1999 or 2001 within a healthy cohort (n=1969). IHD incidence (first hospitalization due to IHD or death due to IHD) was traced through registers until end of 2010. Poor general health (loss to follow-up, hospitalized due to IHD, self reported IHD related diagnoses or mobility disability) was measured by questionnaires at 2- and 4-year follow-up. Individuals without fatigability had a higher chance of staying healthy at 2- and 4-year follow-up; OR=1.45 (CI95%: 1.08-1.93), OR= 1.55 (CI95%: 1.11-2.16), respectively and individuals with fatigability had a higher hazard of IHD (HR=1.47 (CI95%: 1.08-2.00)). It is suggested that fatigability in older healthy adults is an early predictor for subsequent poor general health and IHD.

### PERFORMANCE AND PERCEIVED FATIGABILITY IN OLDER ADULTS WHO SELF-REPORT SEVERE FATIGUE

T. Manini, M. Lorow, M. Lewis, A. Joseph, University of Florida, Gainesville, FL

We conducted a case-control study of older adults who had perceived severe fatigue (N=29, 71.3±4.9 yrs) and controls without fatigue (N = 33; 72.2±4.6 yrs). Participants completed a long distance rapid-paced walking test and graded exercise test on a treadmill. Fatigued participants walked at slower pace (1.14 ± 0.14 vs. 1.0 ± 0.18 m/sec,  $p = 0.01$ ) and reported slightly higher fatigability while walking (max RPE: 0.52 ± 1.3 vs. 1.67 ± 1.6), although the rating indicated a low level of exertion ("weak"). Peak oxygen consumption attained during the treadmill test was similar between groups (19.6 ± 5.5 vs. 19.2 ± 4.9 ml/kg/min). Fatigued participants reported a more rapid increase in RPE during the treadmill test ( $p = 0.04$ ), but maximal exertion was similar between groups. Self-report severe fatigue is marginally associated with worse physical performance and perceived fatigability during performance tests.

### PERCEIVED FATIGABILITY IS ASSOCIATED WITH MOBILITY AND PERFORMANCE IN OLDER ADULTS

A.J. Santanasto<sup>1</sup>, E.M. Simonsick<sup>2</sup>, L. Ferrucci<sup>2</sup>, J.A. Schrack<sup>2</sup>, R. Boudreau<sup>1</sup>, A.B. Newman<sup>1</sup>, N.W. Glynn<sup>1</sup>, 1. *Epidemiology, University of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *National Institute on Aging, Bethesda, Maryland*

Fatigability (i.e., fatigue related to defined activities) rather than fatigue (i.e., low energy) may be important in the disablement pathway. A new Activity-Anchored Fatigability Survey (AAFS, higher score=higher fatigability) and past month energy level (lower score=higher fatigue) were compared in relation to physical performance and performance fatigability (Rating of Perceived Exertion (RPE) at end of 5 minute, 0.67m/s treadmill walk) in a subset of Baltimore Longitudinal Study of Aging participants age 73.7±8.5yrs, N=167. AAFS was associated with fast-paced 400m walk time ( $r=0.34$ ,  $p < 0.0001$ ), usual gait speed ( $r=-0.27$ ,  $p=0.002$ ), and 10 chair stand time ( $r=0.23$ ,  $p=0.01$ ) after age, sex, race, obesity, and smoking adjustment. Lower energy level was inversely associated with fast-paced 400m walk time ( $r=-0.17$ ,  $p=0.03$ ) only. AAFS discriminated between high (RPE≥10) vs. low performance (RPE≤9) fatigability, adjusted mean difference = 27.2±6.7,  $p < 0.0001$ . Fatigability rather than global fatigue may be more insightful when examining underlying factors in the disablement pathway.

### DEVELOPMENT OF A NOVEL SURVEY TO MEASURE PERCEIVED FATIGABILITY IN OLDER ADULTS

N.W. Glynn<sup>1</sup>, A.J. Santanasto<sup>1</sup>, R. Schulz<sup>2</sup>, S. Beach<sup>2</sup>, R. Boudreau<sup>1</sup>, E.M. Simonsick<sup>3</sup>, A.B. Newman<sup>1</sup>, 1. *University of Pittsburgh - Center for Aging and Population Health, Pittsburgh, Pennsylvania*, 2. *University of Pittsburgh - Center for Social and Urban Research, Pittsburgh, Pennsylvania*, 3. *National Institute on Aging, Bethesda, Maryland*

There is no validated tool that measures perceived fatigability in older adults. Currently published surveys often contain activities infrequently performed by older adults, do not consider a situational, standardized context, and lack a measure of intensity, which can lead to self-pacing bias. The Activity-Anchored Fatigability Survey (AAFS) was designed to address the shortcomings and based activities (both physically and mentally fatiguing tasks) on those most frequently reported in aging epidemiologic studies. The 26-item pilot survey asked responders to indicate their level of physical and mental fatigue separately on a 0-5 scale, with 0=no fatigue and 5= extreme fatigue. The survey was mailed to 2671 enrollees of two local aging research registries. Thirty-eight percent of surveys were returned (N=1012) with mean age 75.4±6.7 yrs (range 61-94), 59% female, 5% black. Initial psychometric validation and future directions for refining this novel tool to capture perceived fatigability in older adults will be presented.

## SESSION 1010 (SYMPOSIUM)

### NURSING CARE OF OLDER ADULTS INTEREST GROUP SYMPOSIUM: USE OF TECHNOLOGY TO SUPPORT HEALTHY AGING

Chair: K.A. Gretebeck, School of Nursing, University of Michigan, Ann Arbor, Michigan

Co-Chair: P. Cacchione, University of Pennsylvania, Philadelphia, Pennsylvania

Discussant: P. McNeese, University of Alabama, Birmingham, Alabama

Technology is becoming an increasingly important vehicle used to support healthy aging for older adults across settings. The development and testing of new technology and translation of these innovations into the necessary settings or markets are important for healthcare

providers, caregivers and the aging population. The purpose of this presentation is to discuss four different research programs that used technology to support healthy aging with application to nurses and health-care professionals. Specifically, the presentations will discuss: 1) use of telecommunications for remote monitoring of older adults with chronic disease; 2) technology designed to improve health outcomes through measurement of night time activity; 3) decisional support tools developed to facilitate patient discharge planning; and 4) development of a network of non-wearable motion and bed sensors to detect changes in health status. The development, testing and translation of these technologies will also be discussed. Lastly, Dr. McNees, an expert in technology innovations, will be the discussant for this session.

#### **LESSONS LEARNED FROM A DECADE OF TELEHEALTH RESEARCH IN OLDER ADULTS WITH CHRONIC ILLNESS**

B.J. Wakefield, *University of Missouri, Columbia, Missouri*

Chronic disease rates are increasing, and older adults are at higher risk for developing chronic disease. Use of telecommunications technology to provide remote monitoring for people with chronic disease is becoming increasingly accepted as a means to improve patient outcomes and reduce resource use. Data provided through this type of monitoring enable clinicians to provide close surveillance so earlier intervention may be implemented when clinical parameters are out of control or when data indicate additional health information or support is needed. Using findings from the literature and the author's six funded studies evaluating use of remote monitoring of older adults in the home setting, this presentation will focus on lessons learned about implementation of these technologies in the lives of older adults. Lessons will address technical, clinical, human factors, acceptability and satisfaction, and cost issues. The presentation will conclude with recommendations for next steps for research and clinical implementation.

#### **COMMERCIALIZING INVESTIGATOR-DEVELOPED TECHNOLOGY**

M. Rowe, *University of South Florida, Tampa, Florida*

The purpose of this paper is to describe the process of developing technology designed to improve health outcomes and taking that technology to commercialization. A night home monitoring system, CareAlert, was developed to assist in-home caregivers manage nighttime activity in a care recipient with dementia. In clinical trials of the device, there was an 86% reduction in nighttime events with the use of CareAlert over a 12-month period. There was strong caregiver satisfaction and improvement of caregiver quality of life. The next challenge was device commercialization and this is occurring through the origination of a small business and partnership with business experts. Information will be presented on intellectual property protection, articulation with Intellectual Property offices at the University, licensing, small business origination and design/manufacture of a product. This presentation will highlight the critical role nurses can play in designing technology to improve health outcomes.

#### **PUTTING NURSING DATA TO WORK: BUILDING DECISION SUPPORT FROM THE EHR**

K.H. Bowles, M. Rosenberg, S. Potashnik, M.D. Naylor, *University of Pennsylvania, Philadelphia, Pennsylvania*

The growing implementation of electronic health records (EHRs) provides an important opportunity for nurses to demonstrate value from our rich documentation. This session will demonstrate how a research team is "putting nursing data to work" to build decision support for discharge planning. De-identified data created from nursing admission assessments and nursing documentation throughout the hospital stay was used to create case studies of older adults describing their health status during the hospital stay. Interdisciplinary teams of doctors, nurses, social workers, and physical therapists evaluated the cases and determined the need for referral to home care, skilled nursing facility, inpa-

tient rehabilitation, nursing home, or hospice. The finished product will be imbedded in the EHR of two hospitals and prospectively tested for its impact on referrals, readmissions, and ED use. The team will share the lessons learned and suggest what nurses can do to advance the use of nursing data in research.

#### **HEALTH ALERT SYSTEM OF NON-WEARABLE SENSORS FOR ELDERLY**

M.J. Rantz, M. Skubik, R. Koopman, G.L. Alexander, L.J. Phillips, C.M. Galambos, *University of Missouri, Columbia, Missouri*

The University of Missouri Eldertech Research Team at TigerPlace, independent elder housing designed for aging in place, has developed a network of non-wearable motion and bed sensors that detect changes in health status (impending acute illness or exacerbation of chronic illness) before symptoms that prompt clinical evaluation are reported. We successfully used this information in a one year prospective study to alert health care providers so they could assess the situation and initiate early treatment to improve functional independence. Intervention participants (n=20) showed significant improvements (as compared to control group (n=21)) for SPPB gait speed score at quarter 3 (p=0.030), left hand grip at quarter 2 (p=0.02), right hand grip at quarter 4 (p=0.05), and functional ambulation profile of the GAITrite at quarter 2 (p=0.05). Technological methods such as these could be widely adopted in elder housing, long term care settings, and in private homes to help elders remain independent.

#### **SESSION 1015 (PAPER)**

#### **ADDRESSING THE QUALITIES AND PROPERTIES OF FRAILTY**

#### **THE PSYCHOMETRIC PROPERTIES OF THREE SELF-REPORT SCREENING INSTRUMENTS FOR IDENTIFYING COMMUNITY-DWELLING FRAIL ELDERLY**

S. Metzeltin<sup>1</sup>, R. Daniels<sup>2</sup>, E. van Rossum<sup>2,1</sup>, A. Beurskens<sup>2</sup>, W. van den Heuvel<sup>3</sup>, L. de Witte<sup>2,1</sup>, G.I. Kempen<sup>1</sup>, *1. CAPHRI School for Public Health and Primary Care, Maastricht University, Maastricht, Netherlands, 2. Zuyd University of Applied Sciences, Heerlen, Netherlands, 3. University Medical Centre Groningen, Groningen, Netherlands*

**BACKGROUND:** Valid screening instruments are needed to identify frail elderly. This study aims to evaluate the psychometric properties of three instruments: the Groningen Frailty Indicator (GFI), the Tilburg Frailty Indicator (TFI) and the Sherbrooke Postal Questionnaire (SPQ). **METHODS:** A questionnaire was sent to 687 community-dwelling elderly ( $\geq 70$  years). Internal consistency, construct validity and scalability of instruments were evaluated. After 1-year follow-up predictive validity regarding development of disabilities, hospital admission and mortality was tested. **RESULTS:** The response rate was 77%. Prevalence estimates of frailty ranged from 40% to 59%. Cronbach's alpha for the GFI, TFI and SPQ was 0.73, 0.79 and 0.26, respectively. The cumulative scalability of the three instruments was inadequate (Loevinger's H: 0.09-0.30). Scores on the three instruments correlated significantly with each other and with disability. Adjusted odds ratios showed that the risk of developing disability is more than double (GFI, 2.62; TFI, 2.00; SPQ, 2.49) for frail elderly compared to the non-frail group; those identified as frail by the TFI and SPQ had more than twice the risk of being admitted to a hospital. Sensitivity and specificity for the development of disability were 71% and 63% (GFI), 62% and 71% (TFI) and 83% and 48% (SPQ), respectively. Regarding mortality, sensitivity for all tools was about 70% and specificity between 41% and 61%. For hospital admission, SPQ had the highest sensitivity (76%). **CONCLUSIONS:** All three instruments have the potential to identify



frail elderly, but their scalability and predictive power is not yet sufficient. Further research is needed.

### USING STRUCTURAL EQUATION MODELLING TO DETECT MEASUREMENT INVARIANCE IN A MEASURE OF FRAILTY

B. King-Kallimanis, G.M. Savva, R. Kenny, *The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland*

The measurement of the frailty syndrome in older people is controversial. Using data from the Survey of Health, Ageing and Retirement in Europe (SHARE, N=30,555) and The Irish Longitudinal Study on Ageing (TILDA, N=5,986) we explore the measurement properties of frailty with the goal of optimising frailty assessment according to Fried's phenotype definition. We examine whether this definition can be conceptualised as a single underlying latent variable in both TILDA and SHARE, and test the assumption of measurement invariance across the 11 countries included in the first wave of SHARE. We use confirmatory factor analysis (CFA) to assess our measurement model, and multi-group CFA to assess measurement invariance in SHARE. The same measurement model satisfactorily fit both the TILDA and SHARE data. With respect to measurement bias across countries, configural invariance held, and the fit of the model was satisfactory ( $SB\chi^2(48) = 93.38$ ,  $p = 0.001$ ), suggesting that a single latent factor model for frailty is appropriate. The inclusion of equality constraints on the factor loadings and thresholds, led to significant model deterioration ( $SB\chi^2_{diff}(33) = 234.83$ ,  $p < 0.001$ ). Many equality constraints for Spain and several of those associated with Greece, and Austria were non-tenable, violating the assumption of measurement invariance. In conclusion, while a single latent variable model for the Fried frailty phenotype is tenable, the factor loadings and thresholds are not invariant across countries, suggesting that direct comparisons of the prevalence of frailty across countries may not be appropriate.

### IMPROVING THE PHENOTYPE: EFFECTS OF PHYSICAL TRAINING ON FRAILTY STATUS. A RANDOMIZED CONTROLLED TRIAL

K.A. Hauer, M. Schwenk, T. Zieschang, P. Oster, *Geriatric Research, Bethanien-Hospital at the University of Heidelberg, Heidelberg, Germany*

Background: Clinical assessments for frailty have largely been used in longitudinal ageing studies to determine predictive validity of constructs. Interventional studies have rarely targeted the modification of frailty status. Objective: To determine the effect of a standardized training program on frailty status in frail, multi-morbid geriatric patients (n=130). Methods: Frailty status and issues of Fried's phenotype of frailty were documented at baseline, after a 3-month- training and a 3-months-follow. A progressive strength and functional training (intervention) was compared to an unspecific low-intensity group training (control) in a post-ward rehabilitation program. Results: The intervention significantly increased 3 out of 5 frailty items as used by Fried compared to the control group during intervention: maximal strength (One Repetition Maximum leg press):  $p < 0.001$ ; functional performance (5-chair rise):  $p < 0.001$ , and physical activity level (physical activity questionnaire for the elderly):  $p < 0.001$ . Between group differences largely remained in the follow up period. Body mass index as well as perception of fatigue did not change in both study groups. When scored according to a modified Fried phenotype for frailty, the standardised intervention improved overall frailty status in the intervention group compared to the control group adjusted for baseline values ( $p = 0.0029$ ). Between group differences remained significant during follow up:  $p = 0.0127$ . Conclusion: Study results demonstrate that a highly intensive, standardized training program improved frailty status as defined by a modified Fried's phenotype in frail, multimorbid, geriatric patients.

### COMPARING THE FEASIBILITY, SENSITIVITY, AND SPECIFICITY OF EIGHT FRAILTY SCALES

O. Theou, T.D. Brothers, M.R. Rockwood, A.B. Mitnitski, K. Rockwood, *Geriatric Medicine, Dalhousie University, Halifax, Nova Scotia, Canada*

Introduction: Several definitions have been proposed to quantify frailty. It is not clear which is the most effective. The purpose of this study was to operationalize frailty using eight scales and compare their ability to predict all-cause mortality. Methods: Twelve countries participated in the first wave of the Survey of Health, Ageing, and Retirement in Europe. Frailty was operationalized for 30,025 participants aged 50+ years (13,700 men, 16,325 women) using eight scales: the Clinical Frailty Scale (CFS), the Edmonton Frail Scale, a 70-item Frailty Index (FI), a 44-item Frailty Index based on a Comprehensive Geriatric Assessment (FI-CGA), a frailty phenotype, the "FRAIL" scale, the Groningen Frailty Indicator, and the Tilburg Frailty Indicator. Results: Frailty was successfully operationalized for each scale in 87.2% (frailty phenotype) to 99.2% (CFS) of cases. After a mean 4.4 years, the mortality rates for FI, FI-CGA, and CFS were similar between included and excluded cases (e.g. FI-CGA 9% vs 9.8%). In the remaining scales, the mortality rate was 2-3 times higher in excluded cases than in included ones (e.g. Tilburg 8.7% vs 25.6%). Among the frailest participants, the highest mortality rates were predicted in the CFS (26.4%) and FI (24.6%) and the lowest rates in the frailty phenotype (18.3%) and Tilburg (18.9%). ROC analysis showed that the area under the curve ranged from 0.64 ("FRAIL" scale) to 0.74 (FI, Edmonton). Conclusion: CFS and FI are the most feasible (least missing data), while FI is the most sensitive and specific scale for predicting mortality.

### OBESITY AND PHYSICAL FITNESS AS LONG-TERM PREDICTORS OF FRAILTY –THE 22-YEAR MINI-FINLAND FOLLOW-UP SURVEY

S. Stenholm<sup>1</sup>, T.E. Strandberg<sup>2,3</sup>, K. Pitkälä<sup>4</sup>, P. Sainio<sup>1</sup>, M. Heliö vaara<sup>1</sup>, S. Koskinen<sup>1</sup>, 1. National Institute for Health and Welfare, Turku / Helsinki, Finland, 2. University of Helsinki, Department of Medicine, Helsinki, Finland, 3. University of Oulu, Institute of Health Sciences, Oulu, Finland, 4. University of Helsinki, Department of General Practice, Helsinki, Finland

This study examines the effect of midlife obesity on development of frailty over 22-years of follow-up. Data are from 1122 men and women aged 30 years or more at baseline participating in the population-based Min-Finland Health Examination Survey (1978–80) with follow-up measurement in 2000–01. Based on multinomial logistic regression, baseline overweight and obesity strongly predicted pre-frailty (OR 1.42, 95% CI 1.06–1.92; OR 2.23, 95% CI 1.33–3.73) and frailty (OR 2.12, 95% CI 1.05–4.31; OR 3.89, 95% CI 1.47–10.34) in comparison to not frail at the follow-up. Models were adjusted for age, sex, education, life style factors and chronic diseases. Moreover, good physical fitness at midlife was found to diminish the negative effect obesity on frailty. In conclusion, development of frailty may start as early as in midlife and obesity is one of the underlying causes.

### SESSION 1020 (PAPER)

#### OLDER ADULT HOSPITALIZATIONS & ACUTE CARE ISSUES

#### DIFFERENCES AMONG HOSPITAL STAFF IN BARRIERS TO WALKING OLDER HOSPITALIZED ADULTS

C. Bianchi, N.M. Watson, *University of Rochester, Rochester, New York*

The purpose of this study was to identify differences in barriers to walking hospitalized older adults among different types of hospital staff – providers (MDs, NPs, PAs), therapists (PTs/OTs), nursing staff (RNs/LPNs), and nursing assistants (NAs). More than half of hospitalized older adults lose function by the second day of hospitalization as

a result of decreased mobility. A survey for hospital staff was developed to identify perceived barriers to walking hospitalized older adults according to professional licensure. Strong psychometrics were established for the survey. It was administered to staff in one acute care hospital via email. Responses were anonymous. A 30% response rate was obtained (n=175). Significant differences in certain aspects of knowledge, beliefs and confidence were found between staff. Significantly more NAs thought that older patients with endurance problems should have a PT consult before getting out of bed or walking (knowledge barrier) (p=.004). Significantly more therapists believed that older patients who do not want to walk should have their walking limited (belief barrier) (p=.043). Significantly more providers than other staff lacked confidence in their ability to show families how to safely walk older patients (confidence barrier) (p=.000). Thus, the risk for hospitalized older adults to lose their independence and suffer serious complications (e.g., pressure ulcers, injury, infections, as well as premature institutionalization and/or death) appears high and warrants an interdisciplinary solution. Understanding such differences among hospital staff in terms of barriers to walking could help focus efforts to increase activity level and decrease deconditioning of this vulnerable population.

### HOSPITALIZATION AS A TURNING POINT FOR SLEEP MEDICATION USE IN OLDER ADULTS

A. Zisberg<sup>1</sup>, E. Shadmi<sup>1</sup>, G. Sinoff<sup>2,3</sup>, N. Gur-Yaish<sup>4,1</sup>, E. Srulovici<sup>1</sup>, T. Shochat<sup>1</sup>, 1. Department of Nursing, Faculty of Social Welfare & Health Sciences, Haifa University, Haifa, Israel, 2. Department of Geriatrics, Carmel Medical Center, Haifa, Israel, 3. Department of Gerontology, Faculty of Social Welfare & Health Sciences, Haifa University, Haifa, Israel, 4. Center for Research and Study of Aging, Haifa University, Haifa, Israel

Background: Use of sleep medications as a result of hospitalization among older adults is common and has been shown to result in chronic use and adverse effects. Objectives: To examine changes in pre to post hospitalization sleep medication use as a function of in-hospital use. Design: Prospective cohort study in the medical services of a large Israeli teaching hospital. Participants: 485 acute medical patients age 70 and older. Measurements: Sleep medication use was assessed by patient interviews on patterns of use prior to, during, and at one and three months after discharge. Post-discharge using patterns, given in-hospital discontinuation or initiation, were assessed. Logistic regressions were modeled separately for discontinuation and for initiation of sleep medication use at each follow-up. Results: Of those who used sleep medications prior to admission, 37 (18% of 206 prior users) discontinued use during the hospital stay. Discontinuation was associated with adjusted odds ratio (AOR) of 3.91 (95% confidence interval (CI): 1.64-9.30) for non-use at one month follow-up. Of those who did not use sleep medications prior to admission 39 (14% of 279 non-prior users) initiated use during hospitalization. Hospital initiation of sleep meds was associated with an AOR of 4.65 (95% CI: 1.95-11.09) for post-discharge use. Similar results were obtained for the three-month follow-up, reaching significance levels only for the discontinuation group. Conclusions: In-hospital discontinuation and initiation of sleep medications are related to post-discharge sleep medication use patterns. Thus, in-hospital sleep medications prescribing policies should acknowledge the potential for changes in sleep medication regimen.

### BECOMING A STEP BEHIND: ACUTE CARE OF OLDER PATIENTS WITH COGNITIVE IMPAIRMENT

A. Nilsson<sup>1</sup>, B.H. Rasmussen<sup>1</sup>, D. Edvardsson<sup>1,2</sup>, 1. Umeå University, Umeå, Sweden, 2. La Trobe University, Melbourne, Victoria, Australia

Objectives: Older patients with cognitive impairment often receive acute care not fully corresponding to their multidimensional needs. Person-centred care (PCC) has emerged as a model for high quality care of older people that holistically attends to biopsychosocial needs of peo-

ple with beneficial outcomes. However, it appears difficult to implement, deliver and sustain PCC in acute care settings. The aim of this study was therefore to explore barriers for PCC of older patients with cognitive impairment in acute care. Methods: A total of 110 hours ethnographic style observations were conducted at a cardiologic ward in Sweden. Data analysis was inspired by the principles of grounded theory and based on different types of observations and interviews. Results: Data analysis is under progress and the final results will be presented at the conference. Preliminary results show that barriers to PCC exist on several levels in acute care settings, namely; the organizational, environmental, and the individual staff and team level. Consequences of not providing person-centered care included patient suffering, family exclusion, and staff frustration. A theoretical model of barriers for PCC, its causes, and consequences will be presented. Conclusions: Providing PCC of older patients with cognitive impairment in acute care is complex and requires a well-developed structure of facilitating factors at several levels. Change processes, strategies and interventions must target underlying workplace and organizational factors as well as individual staff and their attitudes.

### A TOOL TO PREDICT RECOVERY, DEPENDENCE OR DEATH IN OLDER ADULTS WHO BECOME DISABLED DURING HOSPITALIZATION

D.E. Barnes<sup>1,2</sup>, R.M. Palmer<sup>2</sup>, R.H. Fortinsky<sup>4</sup>, J. Boscardin<sup>5,2</sup>, K. Kirby<sup>5,2</sup>, K. Mehta<sup>5,6</sup>, S.R. Counsell<sup>7</sup>, C. Landefeld<sup>5</sup>, 1. Psychiatry and Epidemiology & Biostatistics, University of California, San Francisco, San Francisco, California, 2. San Francisco Veterans Affairs Medical Center, San Francisco, California, 3. Eastern Virginia Medical School, Norfolk, Virginia, 4. University of Connecticut Health Center, Farmington, Connecticut, 5. Division of Geriatrics, University of California, San Francisco, San Francisco, California, 6. Stanford University, Stanford, California, 7. Indiana University, Indianapolis, Indiana

Background: Many older adults who are living independently become dependent in one or more activities of daily living (ADLs: dressing, bathing, transferring, toileting, eating) during hospitalization, and their prognosis is unclear. The goal of our study was to develop a tool to predict the probabilities of recovery, continued dependence or death in older adults who become ADL dependent during hospitalization. Methods: We performed a retrospective cohort study of 449 adults age  $\geq 70$  years who were fully independent two weeks prior to hospitalization and were discharged with at least 1 ADL dependency. Multinomial logistic regression was used to develop a prognostic model for simultaneously predicting the three outcomes of recovery, disability or death. Discrimination of the final model was assessed for each outcome based on the c statistic. Results: During the year following hospitalization, 36% of participants recovered, 27% remained dependent and 37% died. The final prognostic model included age, sex, number of instrumental activities of daily living (IADL) dependencies prior to hospitalization, number of ADL dependencies at discharge, dementia, cancer, number of other chronic conditions, reason for admission, and creatinine levels. Discrimination was good to excellent for all three outcomes based on the c-statistic (recovery: 0.81, dependence: 0.72, death: 0.78). Conclusions: This tool can be used to estimate the probability of recovery, dependence or death in elders who become dependent during hospitalization. This information may help guide care planning and discussions with patients and family members regarding likely prognosis. A web-based calculator is being developed.

### AVOIDABLE HOSPITALIZATIONS AND THE ARKANSAS AGING INITIATIVE

C.J. Beverly<sup>1</sup>, R.E. McAtee<sup>1</sup>, J. Wayne<sup>1</sup>, G.P. Mays<sup>2</sup>, 1. College of Nursing, University of Arkansas for Medical Sciences, Little Rock, Arkansas, 2. University of Kentucky, Lexington, Kentucky, Kentucky

The Arkansas Aging Initiative (AAI) was established in 2001 and is an infrastructure with the mission to improve health outcomes of older

Arkansans through interdisciplinary primary care and innovative education programs targeting older adults, the community and health care professionals, and influence health policy at the state and national level. This study examined the impact of the AAI on potentially avoidable hospital admissions measured by AHRQ's "Prevention Quality Indicators" (PQIs). A quasi-experimental design was employed using a pre-post design to evaluate readmissions from AAI related physicians compared to non-AAI related physicians and before-and-after implementation of the AAI. The project utilized Arkansas Hospital Discharge Data for a 10 year period ending in 2010. A total of 1,621,766 hospitalizations of patients age 65 or older who resided in the five AAI service areas were studied. Overall, the AAI had a significant ( $P < 0.0001$ ) positive impact on potentially "Avoidable Hospitalizations". Four regions had a positive impact on avoiding admissions for angina without a procedure, three regions avoided admissions for adult asthma and uncontrolled diabetes and other regions reduced admissions for COPD, hypertension, UTI, dehydration, CHF, and short-term diabetic complications. Compared to other hospitals in the service area, the hospitals affiliated with the AAI had significant improvements in a least one quality measure indicator after establishment of the AAI. Further research is needed to discern further impact of the AAI, especially one to examine the specific effects from the educational activities.

## SESSION 1025 (PAPER)

### PHYSICAL ACTIVITY & EXERCISE

#### ASSOCIATION BETWEEN LIFESTYLE AND PHYSICAL ACTIVITY LEVEL: VALIDATION OF SIMPLIFIED ACTIVITY RECORD

Y. Yamada, E. Yamagata, K. Yokoyama, Y. Okayama, M. Kimura, *Kyoto Prefectural University of Medicine, Kyoto, Japan*

**Background:** Physical activity level (PAL) is associated with all-cause mortality in the elderly. However, few studies have attempted to clarify the relationship between lifestyle and PAL in the elderly. The aim of this study was to examine the determinants of PAL in the elderly in terms of behavioral pattern and exercise intensity and validate the simplified physical activity record (sPAR). **Methods:** Thirty-two healthy, elderly individuals, aged 64-87 years, participated in the study. Doubly labeled water (DLW) and basal metabolic rate were used to measure total energy expenditure (TEEDLW) and PAL (PALDLW). Physical activity was recorded using the sPAR and tri-axial accelerometry. **Results:** PALDLW was significantly correlated with PAL estimated by sPAR ( $r = 0.588$ ,  $P < 0.001$ ). A good agreement between TEEDLW ( $1860 \pm 373$  kcal/d) and TEE estimated by sPAR ( $1854 \pm 377$  kcal/d) was observed with a mean difference of  $-6 \pm 221$  kcal/d ( $r = 0.825$ ,  $P < 0.001$ ). PALDLW was significantly and positively correlated with the duration of 1) standing housekeeping, 2) gymnastics, tai chi and stretching, and 3) swimming, hill climbing and jogging, and negatively correlated with the duration of 1) sleeping and rest, 2) daily life sedentary activities, and 3) slow walking ( $P < 0.05$ ). **Conclusions:** The results suggest that the sPAR is useful for the assessment of non-exercise activity thermogenesis such as housekeeping and sedentary activities and various sports activities. The sPAR provides valid estimates of TEE and PAL in the elderly.

#### EXERCISE TRAINING FOR OLDER ADULT QUICKNESS

C.A. Knight, M. Bellumori, *Kinesiology and Applied Physiology, University of Delaware, Newark, Delaware*

Slowing is among the most visible signs of aging but exercise recommendations do not explicitly target this impairment in mobility. We tested a novel exercise intervention that targets neural correlates of quickness and is appropriate for many older adults due to the safety of seated exercise, moderate cardiovascular demand and avoidance of high musculoskeletal loads. Fourteen adults (65-79 years) participated in a 6-

week program. Twice-weekly sessions included stationary recumbent bicycling at the lowest resistance settings. In 30 minutes of cycling at preferred cadence (PC), participants performed ten 20-second bouts of high cadence cycling (PC + 20%) with 1-minute recovery between bouts. Fast cadences progressively increased per individual progress (+38 revolutions per minute,  $p < .01$ ). The rate of force development scaling factor (RFD-SF), a measure of the neural control of quickness, improved 53% in the knee extensors ( $p < .01$ ). That this measure also improved 28% in untrained elbow extensors ( $p < .001$ ) suggests that the program stimulates central rather than localized adaptations. The timed up and go (-21%,  $p < .001$ ), 6-meter walk (-20%,  $p < .001$ ) and 9-hole peg test (-16%,  $p < .001$ ) improved. Improvements were mostly retained after four weeks and changes in control subjects were generally small and non-significant. While the improvements in mobility are promising, the improved 9-hole peg test further supports central adaptations. The activity-specific balance confidence scale (5.4%,  $p = .1$ ) and SF-36 (6.2%,  $p = .07$ ) exhibited positive trends, which were consistent with positive comments from participants. Continued work on this topic may warrant the addition of quickness training to exercise recommendations for older adults.

### PHYSICAL ACTIVITY, ALLOSTATIC LOAD, AND CANCER: RESULTS FROM THE NHANES STUDY

M. Peterson<sup>1</sup>, M.C. Morey<sup>1</sup>, C.F. Pieper<sup>2</sup>, A. Abernethy<sup>2</sup>, *1. Geriatrics, Duke/VA Medical Centers, Durham, North Carolina, 2. Duke Medical Center, Durham, North Carolina*

**PURPOSE:** Physical activity (PA) is advocated to older adults for primary and secondary prevention of cancer. Reducing allostatic load (AL) may be one beneficial mechanism. Our aim was to determine associations between meeting PA guidelines, AL, and history of cancer diagnosis in older adults. **METHODS:** Data were from 3382 male and female participants in the NHANES study (2007-10). Using previous methodology, AL was defined as positive for  $\geq$  three of nine components (systolic BP; diastolic BP; pulse; BMI; total cholesterol; HDL; hemoglobin; C-reactive protein; albumin). Meeting PA guidelines was defined as  $\geq 150$  minutes/week of moderate intensity PA by self-report. All-site, colon, skin, prostate, breast and reproductive cancer history were self-reported. Logistic models were constructed, by gender and cancer site, AL x PA interactions were entered into models. **RESULTS:** No AL x PA interactions were observed in men. Meeting moderate PA guidelines was associated with greater odds of all-site cancer history (Adj OR=1.35; 95%CI 1.03-1.80), controlling for AL, age, race, and education. In women, a significant AL x PA interaction was observed with breast cancer. Compared to no AL and low PA, meeting PA guidelines and having AL was associated with greater odds of breast cancer (Adj OR=1.35; 95%CI 1.03-1.80). **CONCLUSIONS:** Meeting PA guidelines was associated with increased odds of all-site and breast cancer history, respectively, in men and women. AL was not a deterrent to meeting PA guidelines in breast cancer. We speculate that a diagnosis of cancer, perhaps combined with multiple poor health indicators, may foster a healthier lifestyle.

### EVALUATING THE FITBIT MOTION TRACKER® IN RESIDENTIAL CARE/ASSISTED LIVING RESIDENTS

L.J. Phillips, N.E. Markis, *Nursing, Univ Missouri, Columbia, Missouri*

Slow gait patterns, common in residential care/assisted living (RC/AL) residents, compromise accurate measurement of walking behavior. This study examined the usability and concurrent validity of an economical accelerometer, the Fitbit Motion Tracker®, for measuring steps/day in RC/AL residents. Elders enrolled in an ongoing longitudinal study ( $n = 119$ ), Physical Activity and Disability in Residential Care/Assisted Living Residents, completed the Short Physical Performance Battery (SPPB) and wore the Fitbit for three days at baseline data collection. The associations between recorded steps/day and gait parameters were estimated for subjects with valid Fitbit data (at least two days of wear  $\geq 8$  hours/day). The total sample was 84% female with

a mean age of 84.8 (SD=8.2) years. For participants with valid Fitbit data (n=90), mean steps/day were 1520 (SD=1495; range 52–7613). Eighty-nine of the 90 persons with valid Fitbit data were able to complete the 4-meter (m) walk. Average gait speed was .62 m/sec (SD=.23) and stride length was 15.5 inches (SD=4.45). Steps/day were significantly correlated with gait speed ( $r=.37$ ,  $p<.001$ ) and stride length ( $r=.35$ ,  $p=.002$ ), but not with age, height, or weight. Faster gait and longer stride was associated with greater steps/day. Residents often forgot to wear the device as scheduled, but enlisting RC/AL staff to supervise Fitbit wear may improve compliance and reduce missing data. The Fitbit may be less accurate for slower walkers. A pilot study is planned to compare the accuracy of ankle versus hip Fitbit placement for step detection in elders with slow gait patterns.

#### **ASSOCIATIONS BETWEEN WALKING, NEIGHBORHOOD, AND DEPRESSION SYMPTOMS AMONG OLDER ADULTS**

D. Julien<sup>1</sup>, L. Gauvin<sup>2,3,4</sup>, L. Richard<sup>1,4,5</sup>, Y. Kestens<sup>2,3,4</sup>, H. Payette<sup>6,7</sup>. 1. *IRSPUM, Institut de recherche en santé publique de l'Université de Montréal, Montreal, Quebec, Canada*, 2. *CRCHUM, Centre de recherche du Centre hospitalier de l'Université de Montréal, Montreal, Quebec, Canada*, 3. *Département de médecine sociale et préventive, Université de Montréal, Montreal, Quebec, Canada*, 4. *Centre de recherche Léa-Roback sur les inégalités sociales de santé de Montréal, Université de Montréal, Montreal, Quebec, Canada*, 5. *Faculté des sciences infirmières, Université de Montréal, Montreal, Quebec, Canada*, 6. *Centre de recherche sur le vieillissement, Centre de santé et des services sociaux, Institut universitaire de gériatrie de Sherbrooke, Sherbrooke, Quebec, Canada*, 7. *Département des sciences de la santé communautaire, Université de Sherbrooke, Sherbrooke, Quebec, Canada*

**Background.** Neighborhood characteristics have been associated with walking for either utilitarian or recreational motives and depression. Walking has been linked with lower depression. Unfortunately, little is known about the interrelationships among this constellation of variables. **Aim.** To investigate associations between walking for utilitarian or recreational purposes, greenness, proximity to parks, and proximity to local services/amenities, and depression symptoms among older adults. **Method.** The sample consisted of participants aged 65 years or older ( $n = 377$ ). The Geriatric Depression Scale was used to assess depression symptoms. Questions pertaining to walking from the International Physical Activity Questionnaire were used to assess walking. Neighborhood variables were derived from geographic information systems. Logistic regression analyses were performed, entering walking and neighborhood variables as predictors of depression symptoms controlling for age, sex, marital status, education, income, country of birth, stressful events, number of chronic illnesses, and physical activity other than walking. The study design was cross-sectional. **Results.** More frequent episodes of utilitarian and recreational walking were significantly associated with fewer depression symptoms independent of other covariates. Surprisingly, participants living further away from parks reported fewer depression symptoms. **Discussion.** The fact that both walking for utilitarian and recreational motives were additively related to fewer depression symptoms suggests that the associations between walking and depression are driven to a greater extent by frequency of walking episodes than by purpose of walking episodes (whether utilitarian or recreational). The unforeseen associations between proximity to parks and depression could be explained by unmeasured variables such as park amenities.

#### **SESSION 1030 (SYMPOSIUM)**

##### **AGING-FRIENDLY COMMUNITIES: DO THEY PROMOTE EMPOWERMENT AND INCLUSION?**

Chair: J.G. Gonyea, Boston University, Boston, Massachusetts

Discussant: P. Stafford, Indiana University, Bloomington, Indiana

A key challenge facing policymakers is meeting the desire of the vast majority of Americans to stay in their own homes and communi-

ties as they age. This consumer preference, coupled with a growing belief among policy analysts that aging-friendly communities can be cost-effective, suggests a near-imperative that we as a nation move in this direction. WHO (2002) defines an aging-friendly city as one that “adapts its structures and services to be accessible to and inclusive of older people with varying needs and capacities.” Central to most definitions are themes of empowerment and inclusion, including the promotion of a paradigm shift from a view of elders as passive service recipients to being seen as active participants and leaders. Yet, an unanswered question is whether aging-friendly efforts actually do promote empowerment and inclusion. Because to date many of these communities have been supported largely through resident, neighborhood and private sector resources, a particular challenge to the model lies in its ability to take root in low income communities and communities of color. Being able to do so would establish the model’s empowerment potential and speak to the core policy criterion of social inclusion. In this symposium, presenters explore these issues through analyses of: 1) the consumer-directed “Village Model” trend, 2) the New York City “Aging Improvement Districts” model, 3) a Boston Elder Nutrition, Food and Income Security Neighborhood-based Program,” and 4) a broader policy discussion of public and private sector roles in promoting aging-friendly communities and the growing divide between affluent and poor localities.

##### **THE POLITICS OF AGING-FRIENDLY COMMUNITIES IN THE US: NARROWING OR WIDENING THE DIVIDE?**

J.G. Gonyea<sup>1</sup>, R. Hudson<sup>2</sup>. 1. *Social Work, Boston Univ, Boston, Massachusetts*, 2. *Boston University, Boston, Massachusetts*

Despite near universal agreement that there is a demographic imperative for our nation’s cities and towns to become more “aging friendly,” surveys consistently reveal that the majority of U.S. municipalities have not yet started to plan for their future aging populations. Moreover, the recent economic downturn has slowed or stalled many communities’ efforts. The reality is that the implementation of “aging-friendly community” initiatives has occurred largely in affluent communities, places in which seniors typically possess greater human and social capital. A policy concern is whether this will result in a greater divide between wealthier and poorer communities (and seniors) or can we assume there will be a “ripple effect” in which these models will spread to less affluent communities (seniors)? In this presentation, we explore this question as well as policy actions and tools states might use to promote the expansion of aging-friendly communities, including raising the issue’s visibility and fostering multisectorial partnerships.

##### **THE “VILLAGE” MODEL: DOES IT PROMOTE SOCIAL INCLUSION OR SOCIAL EXCLUSION?**

A.E. Scharlach<sup>1</sup>, J.K. Davitt<sup>2</sup>. 1. *Social Welfare, University of California, Berkeley, California*, 2. *University of Pennsylvania, Philadelphia, Pennsylvania*

This presentation describes findings from two national surveys of “Village” programs –membership organizations designed to enhance older adults’ service access, social connections, and ability to age in place. Survey results indicate that Villages typically engage members in a variety of empowerment roles, including organizational development (83%), governance (77%), and peer support (47%). Village membership underrepresents community diversity, with fewer than 10% of Village members non-White or Hispanic. Although 60% of Villages offer discounted memberships, efforts to attract a socio-economically diverse membership have met with limited success. Findings suggest that existing Villages may promote empowerment and inclusion among members, many of whom already are relatively socially-advantaged, while most Villages do relatively little to enhance the well-being of less-resourced older individuals and communities. Implications for modifying the Village model to better serve a broader range of older adults will be discussed, along with recommendations for future research.

## AGING IMPROVEMENT DISTRICTS: EMPOWERMENT THROUGH INCLUSION

R. Finkelstein, S. Roher, *The New York Academy of Medicine, New York, New York*

Aging Improvements Districts are designed to enable older adults to publicly identify local issues of concern and work effectively with a broad coalition of public and private stakeholders to make desired changes. The model, developed by Age-friendly NYC, has been piloted in three diverse neighborhoods: a predominantly African-American community undergoing gentrification; a low income community with a majority of Latino residents; and an upscale, primarily white neighborhood which includes thousands of poor older adults. A comparison of these three Aging Improvement Districts offers insights about various strategies utilized to promote inclusion, broaden social networks, and leverage social capital to further the agenda of older neighborhood residents. Objective: After attending this activity, participants will be able 1. To discuss how race, ethnicity, and income profiles influenced strategies in three Aging improvement Districts; 2. To analyze how 'inclusion' was operationalized in different neighborhoods.

## REDUCING FOOD AND ECONOMIC INSECURITY AMONG ELDERLY: ASSESSING COMMUNITY-BASED MODELS FOR CHANGE

A. Bookman, W. Leutz, L.E. Bercaw, *Heller School for Social Policy and Management, Brandeis University, Waltham, Massachusetts*

This presentation is based on data from a university-community partnership project in three low-income neighborhoods in Boston. The project centers on delivery of a training curriculum to low-income elders who are meet certain indicators of food insecurity. The curriculum, called "Food Dollars" is designed not only to advance healthy eating, but also to empower elders by giving them the tools and information they need to improve their access to publicly funded benefits which will help them afford to shop, cook and eat healthy food. Data from the evaluation of the project will critically look at the impact of this curriculum on enrollees, and assess the effectiveness of this model of elder empowerment and improved nutrition actually reduces hunger and food insecurity. It will also examine whether the issue of food insecurity has been adequately addressed in various efforts at creating aging-friendly communities in low-income neighborhoods.

## SESSION 1035 (SYMPOSIUM)

### ECONOMICS OF CAREGIVING: PAYING FOR AN INVALUABLE RESOURCE

Chair: *C.E. Bishop, Heller School for Social Policy and Management, Brandeis University, Waltham, Massachusetts*

Discussant: *S.C. Reinhard, AARP Public Policy Institute, Washington, District of Columbia* Discussant: *C.E. Bishop, Heller School for Social Policy and Management, Brandeis University, Waltham, Massachusetts*

With a sixth of older adults in need of hands-on or supervisory care from another person, the work of caregiving has never been more important. Analysis of the Health and Retirement Survey (HRS) data reveals that adult children providing care and/or financial assistance to aging parents, estimated at a quarter of this population, endure substantial lost wages and Social Security benefits. Seeking causal patterns, a cross-lagged panel model using HRS data investigates differential impacts for men and women of labor-force participation on caregiving and of caregiving on labor-force participation. Older adults receiving long-term services and supports from paid direct care workers may experience poor quality when workers turn over; an analysis of the relationship between unemployment rates and turnover highlights the impact of wages and local labor market factors for these workers. Discussants will outline public policies that can address issues for care providers and recipients.

## A RECIPROCAL RELATIONSHIP BETWEEN CAREGIVING AND LABOR FORCE PARTICIPATION OF FAMILY CAREGIVERS: A LONGITUDINAL CROSS-LAGGED PANEL ANALYSIS

Y. Lee, K. Kim, *University of Pittsburgh, Pittsburgh, Pennsylvania*

Since most previous research on the consequences of caregiving and labor force participation used cross-sectional designs, the direction of the relationship between caregiving and labor force participation remains ambiguous. It is unclear whether caregivers leave the labor force due to care demands, or whether unemployment predates the initiation of caregiving, and thus, unemployed individuals assume caregiving roles. To explore the reciprocal relationship between caregiving and labor force participation, we conducted a cross-lagged panel model using 3 waves of Health and Retirement Study and structural equation modeling. Caregiving had negative impact on labor force participation for females; whereas labor force participation had negative impact on caregiving for males. The direction of the relationship between caregiving and labor force participation was different between males and females. Findings have implications that while females leave the labor force due to care demands, males assume care responsibilities when they are not in the labor force.

## THE EFFECT OF CUTTING WAGES FOR PERSONAL CARE AIDES DURING A RECESSION

C. Howes, *Economics, Connecticut, New London, Connecticut*

Personal care aides (PCAs) are currently the fastest growing occupation in the United States. Various estimates put their annual national turnover rate at 40 to 60 percent. Turnover of California's consumer-directed PCA workforce is about 30 percent. As states consider strategies to reduce Medicaid costs during the recession, the question arises of whether it is possible to cut wages during periods of high unemployment without increasing turnover and harming consumers. In prior research using cross-sectional data I have found little effect of local unemployment rates, controlling for other co-determinants of turnover (Howes 2004). Using monthly individual level data for March 2001 through December 2009 from a California administrative database, I measure the interactive effect of unemployment and compensation on turnover. After attending this session participants will be able to discuss methods of measurement and the effect on turnover of cutting wages for personal care aides during a recession.

## CAREGIVING COSTS TO WORKING CAREGIVERS: DOUBLE JEOPARDY FOR BABY BOOMERS CARING FOR THEIR PARENTS

J. Migliaccio, *MetLife Mature Market Institute, Westport, Connecticut*

The MetLife Study of Caregiving Costs to Working Caregivers: Double Jeopardy for Baby Boomers Caring for Their Parents analyzes data from the 2008 panel of the National Health and Retirement Study (HRS) combined with estimates to determine the extent to which older adult children provide care to their parents, the roles gender and work play in that caregiving, and the potential cost to the caregiver in lost wages and future retirement income as a result of their support. Nearly 10 million adult children over the age of 50 care for their aging parents. These family caregivers are themselves aging as well as providing care at a time when they also need to be planning and saving for their own retirement. Estimates for total cost impact of caregiving on the individual female and male caregiver of lost wages and Social Security benefits are provided.

## SESSION 1040 (SYMPOSIUM)

### HOW TO LIVE ON WHEN CONTROL FAILS

Chair: *J. Baars, University of Humanistic Studies, Haarlem, Netherlands*

Most work in gerontology has to do with trying to identify problems more clearly, solving them or improving problematic situations so that

the quality of the lives of aging persons will be improved. Modern accomplishments regarding medical treatment, hygiene, care facilities or pensions have indeed led to better lives for many aging persons in Western societies. The basic orientation of such work is to find, improve and impose control. When control fails, the usual answer is to try to expand it: more research, more effective therapies, more surveillance or better policies. To a certain degree this all remains important. Yet, instead of focusing on how aging can be transformed, influenced, improved, it might also be that there is something to learn from aging experiences. The confrontation with realities that cannot be controlled has been at the core of aging experiences and at the core of the wisdom traditions. This symposium presents some reflections about the profundity of the inevitable encounter with what cannot be controlled and how we still might live on in a meaningful way. Tom Cole will reflect on the challenges to the identities of old men in the face of fading control. Harry Moody will discuss the modernist ideal of individual control-autonomy. Andrew Achenbaum will contrast the historical perspectives on the future with demographical forecasts and Jan Baars will approach aging as a process of living in time, between the vulnerability and creativity of life on one side and the desire for control on the other.

### **AGING AS LIVING BETWEEN VULNERABILITY AND CONTROL**

J. Baars, *University of Humanistic Studies, Haarlem, Netherlands*

Aging can be seen as a process of living in time, between the vulnerability and creativity of life on one side and the desire for control on the other. The experience of change and its uprooting effects have led to the most dominant concept of time: chronometric time. Modern science and the many forms of technology have improved living conditions for many people in Western societies. Yet, it appears that we have neglected to develop ways to confront the uncontrollable in a meaningful way, although this is one of the fundamental conditions of human life which may intensify in aging. This leads us back to the wisdom traditions which developed in situations where control over nature outside and within humans was hardly developed.

### **GETTING BY WITH A LITTLE HELP FROM MY FRIENDS**

H. Moody, *AARP, Washington, District of Columbia*

I will argue that the ideal of individual autonomy, as represented in practices such as advance directives, is misguided. Priority for personal autonomy reflects, from a developmental viewpoint, the experience of midlife and locus of control, while from a philosophical viewpoint, it represents the hegemony of individual consciousness, inaugurated by Descartes and reaching fruition in Locke, Kant and Adam Smith. This modernist ideal systemically ignores the wider social context, as demonstrated by the global financial crisis of 2008. This concept of individual autonomy has been attacked by postmodern critics of "Foundationalism" (Heidegger, Foucault, Rorty, etc.) and, more recently, it has been much discredited by the empirical findings of behavioral economics. The experience of old age dependency represents an experiential erosion of the autonomy ideal, creating perplexity for bioethics. But instead of linking "dignity" with "autonomy," I argue for shifting our analysis to social networks and support systems. Consent remains important, but, given the lived experience of dependency, it will inevitably be negotiated consent. In the words of the Beatles: "I get by with a little help from my friends."

### **FRAILTY: A CHALLENGE TO MANHOOD IN OLD AGE**

T. Cole, *McGovern Center, University of Texas Houston School of Medicine, Houston, Texas*

Gerontology has been slow to study old men as men. This paper poses the question of how frailty affects old (over 70) men's identity as men, that is, their perceptions of their own masculinity. Using selected memoirs, essays and autobiographies from the last 50 years, the paper

explores men's reactions to and perceptions of declining strength, sexual potency, ability to function independently, etc..... Do they tell stories of decline? Of love? Of spiritual growth? Has the issue of gender identity faded in importance? Or, are they interested in proving that they are men? Is so, what does manhood mean to them?

## **SESSION 1045 (SYMPOSIUM)**

### **POLICIES TO SUPPORT THE HEALTH OF VULNERABLE OLDER ADULTS: ANALYSIS AND CONTROVERSIES**

Chair: *D. Alley, University of Maryland, Baltimore, Maryland*

Discussant: *W.F. Benson, Andersen Benson Consulting Services, LLC, Silver Spring, Maryland*

Eliminating health disparities and improving the health of all older adults are key policy goals. However, policymakers face a variety of challenges in implementing policies to improve health and achieve health equity, including designing policies that address the needs of an increasingly diverse older population and finding ways to reach vulnerable older adults. The Health & Aging Policy Fellowship program, funded by The Atlantic Philanthropies, is a 9-12 month opportunity for professionals in health and aging to participate directly in the policy arena. This symposium features presentations from a multidisciplinary group of current and former fellows with experience in both the legislative and executive branches and at both local and federal levels. Dr. Herrera will discuss an analysis of the reach of Older Americans Act caregiver services into racial and ethnic minority communities and identify opportunities for greater engagement. Dr. Perez will describe a project that takes into account the cultural needs of community residents and partners in a predominantly Hispanic community, to help guide local environmental policy change that promotes healthy aging. Dr. Dong will describe the Elder Justice Act and highlight opportunities to leverage the principles of community-based participatory research to address elder abuse in minority populations. Finally, Dr. Miles will discuss Medicaid's role in reducing health disparities across the lifespan, highlighting controversies about Medicaid expansion under the Affordable Care Act. Each of these fellows brings a unique research, policy, and practice perspective to addressing the needs of vulnerable older adults.

### **HEALTH POLICY AND COMMUNITY ADVOCACY: PUSHING THE ISSUES OF ELDER ABUSE**

X. Dong, M.A. Simon, *Rush University, Chicago, Illinois*

Elder abuse is a pervasive public health issue, and estimates suggest that 10% of US older adults experience some form of abuse, neglect or exploitation. Despite National Research Council and 2010 NIA-NAS State-of-the-Science recommendations, vast gaps exist in our current understanding of elder abuse. Unified national policy could be an important approach to advance the field of elder abuse and to provide much needed momentum to propel scientific knowledge, practice and policy. In this session, we will highlight the epidemiology of elder abuse and describe the current Elder Justice Act. This discussion will emphasize the complexities of elder abuse at the community level, especially given the rapidly increasing diversity of the aging population. We will provide examples of community advocacy to bring elder abuse awareness in a Chicago Chinese population and to leverage the principles of community-based participatory research methodology to advance the issues of elder abuse.

### **MEDICAID AND THE AFFORDABLE CARE ACT (ACA): ACCESS TO HEALTHCARE ACROSS THE LIFE SPAN**

T. Miles, *University of Georgia-Athens, Athens, Georgia*

Given the polarizing rhetoric surrounding the ACA, its provisions to strengthen Medicaid support for all ages have received less attention. Understanding the Medicaid's inter-generational value is essential for gerontologists. Medicaid not only supports institutional and community-based services, but also provides more than 50 percent of U.S.

maternity care. In March 2012, we await the Supreme Court ruling on two critical provisions in the ACA. Almost everyone is familiar with the Individual Mandate, which requires all citizens to obtain health insurance. The other critical provision is the Medicaid Expansion in 2014, which opens eligibility to a broad group of US citizens. In the period before the expansion, states are required to maintain an eligibility standard for the next two years. This requirement poses a challenge to cash-strapped states. If the Supreme Court rules this provision unconstitutional, the entire structure of Medicaid may destabilize – limiting access to care across the life span.

### **EFFECTIVENESS AND REACH OF OLDER AMERICANS ACT CAREGIVER SERVICES TO LATINO AND AFRICAN AMERICANS**

A.P. Herrera<sup>1</sup>, R. George<sup>2</sup>, J. Angel<sup>2,3</sup>, K. Markides<sup>4</sup>, F. Torres-Gil<sup>5</sup>, *1. University of Maryland, Baltimore County, Health Administration and Health Policy, Department of Sociology and Anthropology, Baltimore, Maryland, 2. University of Texas, Austin, School of Public Affairs, Austin, Texas, 3. University of Texas, Austin, Department of Sociology, Austin, Texas, 4. University of Texas, Medical Branch, Galveston, Texas, 5. University of California, Los Angeles, School of Public Affairs, Los Angeles, California*

Home- and community-based services are cost-effective alternatives to institutionalization, but underused by minority seniors despite greater disability. We studied 1,749 Hispanic, African-American and White Older Americans Act Title III caregiver service users in 2009. We examined racial/ethnic variation in the effectiveness of services, unmet needs, and reach to the most vulnerable. Compared to White care recipients, Hispanics and African-Americans were more likely to be disabled, poor, reside in urban areas, and have Medicaid. Hispanics had the highest percentage of unmet care needs, while caregiver services were less effective at helping African-Americans remain living at home independently. Minorities utilizing OAA caregiving services sought instrumental caregiver support through community agencies and were drastically more educated than demographically similar national cohorts. Greater efforts to reach less educated, limited-English proficient, and disabled minority seniors in urban areas and community agencies may reduce unmet needs and increase effectiveness of caregiver services in maintaining independent living.

### **THE IMPORTANCE OF CULTURE IN ENVIRONMENTAL POLICY CHANGE STRATEGIES TO PROMOTE HEALTHY AGING**

A. Perez, *Arizona State University College of Nursing & Health Innovation, Phoenix, Arizona*

In Arizona (2001 – 2010), the population of individuals ≥ 65 years old grew at a rate of 82%, the fastest growth of any age group; older Hispanics account for 59% of this growth. By 2030, older adults are expected to represent almost 12% of the U.S. population; older Hispanics represent a large segment of this group. Not all older adults are benefiting equally from scientific advances. In particular, a growing body of research documents the importance of age-friendly built environment policies. Emerging information emphasizes how to design and implement such strategies in culturally diverse neighborhoods. This project, funded through a Health and Aging Policy Fellowship supported by Atlantic Philanthropies in partnership with the Healthy Aging Program at the CDC, describes community-based participatory methods working with residents and community partners to identify, and adopt strategies to guide local environmental policy change promoting healthy and vital aging while attending to the community's cultural needs.

## **SESSION 1050 (SYMPOSIUM)**

### **THEORETICAL INNOVATION IN ENVIRONMENTAL GERONTOLOGY: SOCIAL CONSTRUCTION, THE LIFE COURSE AND THE NEGOTIATION OF PLACE**

Chair: *K. Diaz Moore, Architecture, University of Kansas, Lawrence, Kansas*

Discussant: *R. Rubinstein, University of Maryland, Baltimore, Maryland*

The passing of M. Powell Lawton a decade ago triggered a renewed focus on theoretical development within environmental gerontology. These four presentations each reflect advancement at different levels of theory. Diaz Moore and Geboy will present the Ecological Model of Place for the Aging (EMPA), an accommodative heuristic designed to produce both hypotheses and propositions as well as guide action-taking. The EMPA makes lateral connections between Weisman's Model of Place and a core environmental psychology theory entitled the Theory of Place. Wahl's presentation examines how our understanding of aging-environments interactions may be enhanced by considering inter-linkages between: Bronfenbrenner's ecology of human development; Baltes & Baltes' model of selective optimization and compensation; and Carstensen's socio-emotional selectivity theory. Oswald and colleagues will present a new four domain model of perceived housing and suggest new, salient theoretical constructs for further consideration. Golant's presentation will focus on the new theory of Residential Normalcy which enhances the understanding of person-environment fit through careful consideration of the coping mechanisms selected to be employed to maintain comfort, competence and a sense of control. After attending this session, participants will be able to explain the main trajectories of theoretical development within environmental gerontology and formulate possible policy/program implications that stem from them.

### **THE ECOLOGICAL MODEL OF PLACE FOR THE AGING: PURPOSE, ACTIVITY AND THE NEGOTIATION OF PLACE EXPERIENCE**

*K. Diaz Moore<sup>1</sup>, L. Geboy<sup>2</sup>, 1. Architecture, University of Kansas, Lawrence, Kansas, 2. Architectural and Organizational Change Advisor, Milwaukee, Wisconsin*

This presentation presents the Ecological Model of Place for the Aging (EMPA), an integrative and accommodative heuristic model which draws upon Lawton's Ecological Model of Aging, Weisman's Integrative Model of Place, Wahl and Lang's Socio-Physical Place Over Time (SPOT) theory, and connecting it with Canter's Theory of Place, a core theory within environmental psychology. The core construct is place defined as a socio-physical milieu circumscribed by a Physical Setting to which an implicit Program of shared expectation is tied in relation to which People enact their chosen Activities for a given purpose(s). The potential utility of the EMPA is both in its ability to inform meaningful multi-level hypotheses as well as inspire systemic action-taking. Attendees will be able to describe and define the Ecological Model of Place for the Aging and its use as a heuristic to inform research and action-taking.

### **COPING STRATEGIES BY OLDER PERSONS TO ACHIEVE RESIDENTIAL NORMALCY**

*S. Golant, Geography, University of Florida, Gainesville, Florida*

A major focus of environmental gerontology is to optimize the fit or congruence between aging persons and their physical and social environments. The most cited model of environmental congruence continues to be Lawton's ecological theory of aging. Although it recognizes the importance of adaptive behaviors, it leaves unspecified the coping mechanisms by which older persons respond to adverse or stressful environmental conditions. This is an important omission given that human development and life-span theorists consistently argue that older persons who age successfully or optimally are those who have the resilience

to manage, change, or eliminate the threats or assaults to their well-being. We propose an emotion-based theoretical model of environmental congruence specifying how older persons initiate accommodative (emotion-focused, secondary control) and assimilative (problem-focused, primary control) coping strategies to achieve residential normalcy, that is, to occupy a residential environment in which they feel comfortable, competent, and in control.

#### **ON CONCEPTS AND MEASURES OF PERCEIVED HOUSING IN OLD AGE**

F. Oswald<sup>1</sup>, R. Kaspar<sup>1</sup>, H. Wahl<sup>2</sup>, *1. Interdisciplinary Ageing Research, Goethe University Frankfurt, Frankfurt, Germany, 2. Heidelberg University, Heidelberg, Germany*

The aim of this presentation is to address concepts of experiential facets of person-environment (P-E) exchange in later life, as well as related quantitative measures emphasizing particular perceived housing. First, a four-domain model of perceived housing based on data from a European research project (ENABLE-AGE) is introduced. Each of the domains brings a unique perspective to the understanding of perceived housing, i.e. housing satisfaction, usability in the home, meaning of home and housing-related control beliefs. Second, we want to reconsider existing concepts for two of the four domains, i.e. control beliefs and meaning of home. Pilot data from factor analyses with 232 participants give support for alternative concepts, such as “daily independence”, “neighborhood belonging”, or “continuity and remaining in place”. The findings show the complexity of P-E experience in later life and the value of different complementary concepts, as well as the need for further theory and instrument development.

#### **AGING IN PHYSICAL-SPATIAL-TECHNICAL CONTEXTS: TOWARD A BETTER LIAISON WITH LIFESPAN DEVELOPMENTAL MODELS**

H. Wahl, *Heidelberg University, Heidelberg, Germany*

Contextual and co-constructive lifespan developmental models have been at the heart of developmental science since the 1970's. However, such a meta-perspective still has been spelled out for gerontology only in a rather unsystematic way. In this paper, I will make an attempt to link co-constructive reasoning in developmental science with aging in context, while putting the focus on the physical-spatial-technical (P-S-T) environments. To do so, I will introduce a general model of person-environment relations in aging as spelled out in Wahl, Iwarsson, & Oswald (2012; *The Gerontologist*) and create bridges with three lifespan models which build on the meta-perspective of co-construction: (1) Bronfenbrenner's ecology of human development; (2) Baltes & Baltes' model of selective optimization with compensation; and (3) Carstensen's socio-emotional selectivity theory. I will also ask for research and practice implications for forthcoming cohorts of older adults at the high as well as low end of functioning and competence.

#### **SESSION 1055 (PAPER)**

#### **MENTAL HEALTH SERVICES, WELLBEING, AND CROSS-CULTURAL PERSPECTIVES**

##### **FACTORS AFFECTING DEPRESSION AMONG ELDERLY RESIDENTS OF RESIDENTIAL CARE HOMES: A NATIONAL SURVEY IN CHINA**

Z. Ouyang<sup>1,2,3</sup>, S. Liu<sup>1,3</sup>, A.M. Chong<sup>1,3</sup>, *1. City University of Hong Kong, Hong Kong, China, 2. China Research Center on Aging, Beijing, China, 3. Centre for Behavioural and Social Research, Hong Kong, China*

Aim: China has become an aging society since 1999. About 1.16% of older Chinese aging 60 and above are now living in aged care homes. This paper examines the association between a number of personal factors and depression among older adults living in residential care

homes through a national survey. Methods: A total of 1,700 residents of residential care homes were recruited using a multistage random sampling method across China. Among them, 1,636 were successfully interviewed by trained interviewers with the use of a structured questionnaire from March to May in 2010. Findings: Nearly half (44.7%) of the respondents showed significant depressive symptoms (with a cut-off value  $\geq 5$ ) in the Chinese version of GDS-15. A hierarchical regression analysis found functional disabilities and leisure activities predicted depression and explained 18.2% of the variance of depression after controlling gender, age, marital status, educated level and income. Moreover, the relationship between functional disabilities and depression was significantly moderated by residential satisfaction. Conclusion: The study found the depression rate of residents in residential care homes in China was high, and was even higher than some findings from American studies (Kerber, Dyck, Culp, & Buckwalter, 2005; Abas et al., 1998). This study has important findings, namely leisure activities, which is seldom studied in China, would reduce depression; and that resident satisfaction could help alleviate depression associated with functional disabilities. Residential care homes in China are recommended to organize more leisure activities and programs that would promote resident satisfaction in order to enhance the residents' well-being.

#### **ASIAN NEIGHBORHOODS AND THE MENTAL HEALTH OF OLDER ASIAN AMERICANS**

D. Nguyen<sup>1</sup>, S. Park<sup>2</sup>, *1. New York University, New York, New York, 2. Kyonggi University, Suwon, Republic of Korea*

Study Aim: Applications of social capital theories with Asian Americans show social connections can improve health and mental health outcomes. Little research has extended the theories to older Asian Americans, who have many health, mental health, and social vulnerabilities. This study examines the relationship between social capital and perceived social discrimination on the depressive symptoms of community-dwelling older Asian Americans. Methods: Community-based participatory research methods were used to survey Chinese, Korean, and South Asian adults over the age of 60 living or receiving services in a large multi-Asian enclave. The study was administered as a randomized phone interview, and individually with senior-center attendees. These procedures yielded 120 completed surveys. In order to account for missing values, multiple imputation was used to test a multiple regression model that examined scores on the Patient Health Questionnaire – 9. Results: The results reveal the separate and unique contributions of two dimensions of neighborhood relationships. Elders living in Asian neighborhoods endorsed fewer depression symptoms. Meanwhile, higher levels of social capital were associated with lower levels of depression. The deleterious effects of discrimination are tempered by the benefits of neighborhood social connections. Conclusion: The social environment, role of aging in place and naturally occurring retirement communities (NORC) are vitally important for elders, irrespective of the demographic composition of the surrounding neighborhood. Implications for social capital theories and mental health promotion will be discussed.

#### **THE “LONE RANGER”: A MOTIF FOR OLDER MEN WITH SMALL SOCIAL NETWORKS**

D. Cloutier-Fisher, K. Kobayashi, *Geography and Centre on Aging, Univ of Victoria, Victoria, British Columbia, Canada*

In the gerontological literature, larger support networks are associated with better health and well-being, while having few people to rely upon during times of need or to talk with about private matters is associated with vulnerability to health declines or increased service use. This qualitative research study uses a life course perspective. In-depth, face to face interviews were conducted with 12 older men, aged 69-92 years (average age 80), who had been screened and identified as being at-risk for social isolation. Using an inductive coding framework, the thematic analysis for this study examined: (1) patterns of socialization over



the life course; (2) the meaning of kin and non-kin ties; and (3) the role of weak peripheral ties or ties to social organizations as influences on the well-being of these older men. A portrait of the myriad ways in which older men with small support systems can be characterized as both resilient and vulnerable is reflected in the motif of the "Lone Ranger." In this context, it is insufficient to argue then that small social networks increase the health risk of older males, without also seeking a more nuanced understanding of how older men themselves interpret the nature and meaning of these relationships.

#### **USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE FOR MENTAL DISORDERS AMONG BABY BOOMERS AND OLDER ADULTS**

S. Groden, A.T. Woodward, *School of Social Work, Michigan State University, East Lansing, Michigan*

This study uses data from the Collaborative Psychiatric Epidemiology Surveys to compare the use of Complementary and Alternative Medicine (CAM) for mental health problems between baby boomers and older adults. CAM refers to medical and health care systems and practices that are not part of conventional medicine (NCCAM website, 2012). One category of CAM, common within the mental health professional practice is Mind-Body, which includes guided imagery, relaxation, meditation and hypnotherapy techniques. Twenty-three percent of the respondents (n=2,263) indicated that they used some type of CAM during the last 12 months. A significantly higher percentage of baby boomers (27.9%) used CAM versus older adults (16.7%) even after controlling for sociodemographic and mental disorder variables. Among those who reported using CAM, a higher proportion of baby boomers reported using most types of CAM, including Mind-Body techniques, except for prayer or other spiritual practices (68.9% of older adults vs. 61.6% of baby boomers). Social workers, psychologists, psychiatrists and other mental health professionals who work with older adults need to be aware of CAM use amongst both cohorts for both assessment and treatment options. Other factors influencing use of CAM for each cohort will be discussed.

#### **RE-ENGAGEMENT INTO MENTAL HEALTH-CARE AMONG OLDER ADULTS: ROLE OF TREATMENT SATISFACTION ON SERVICE USE FOR RECURRENT EPISODES OF DEPRESSION**

M. Hansen, *School of Social Work, U.S.C., Los Angeles, California*

**Objective:** The study examined patient and system level factors on mental health service use for recurrent depressive episodes among middle to older aged adults. Given high rates of relapse for individuals who experience depression and related health complications with untreated mental health needs in late life, understanding factors associated with the persistent low use of mental health services by older adults is vital. **Method:** Study used 1-year and 5-year follow-up data from the Partners in Care Project (PIC), pooling a sample of adults 50 years and older, minorities and non-Hispanic Whites (n=416). Using logistic regression, analysis examined direct and moderating effects of reported treatment satisfaction with depression care and its impact on later service use for experienced mental health need. **Results:** Service use at 5-year follow-up was significant for younger segments of the sample, those who reported increased satisfaction with care after active treatment at 1-year, and high mental health need at 5-year follow-up. Though no direct effect with minority status and service use existed, treatment satisfaction positively moderated the relationship between minority status and later service use, increasing odds of use by double. **Conclusion:** Findings inform and extend the understanding of treatment satisfaction as relevant in predicting service use to manage recurrent depressive episodes in adults as they age. Profiling risk factors for under-use among minority populations such as low treatment satisfaction assists practitioners in improving methods to actively engage patients in care

to increase service use in preventing and managing depression in late life.

### **SESSION 1060 (SYMPOSIUM)**

#### **EXERCISE - CELLULAR AND MOLECULAR MECHANISMS: CAN EXERCISE ALTER AGING OR AGE-RELATED DISEASE?**

Chair: *L. Ferrucci, National Institute on Aging, Baltimore, Maryland*

Co-Chair: *L. Ferrucci, National Institute on Aging, Baltimore, Maryland*

Co-Chair: *T.N. Burks, Johns Hopkins University, Baltimore, Maryland*

Exercise is an intervention that has been shown to delay aging and age-related disease. There is intense interest at both the basic science and clinical levels related to the cellular and molecular mechanisms through which exercise has beneficial actions. This symposium will be targeted toward understanding the mechanisms for skeletal muscle decline with age and the importance of exercise as an intervention for aging.

#### **NEW INSIGHT INTO THE ROLE OF RESIDENT STEM CELLS IN ADULT SKELETAL MUSCLE HYPERTROPHY**

C.A. Peterson, *University of Kentucky, Lexington, Kentucky*

Satellite cells are the primary stem cell of skeletal muscle and are required for post-natal growth. The role of satellite cells in adult muscle fiber hypertrophy in response to resistance training remains equivocal. To address this issue, a novel mouse strain was created that enables ablation of satellite cells. Following mechanical overload, satellite cell-depleted muscle showed the same robust increase in muscle mass as observed in the control group. Unlike fiber hypertrophy, new muscle fiber formation was significantly blunted with satellite cell depletion, indicating that fiber hypertrophy and hyperplasia have different satellite cell requirements. The typical increase in myonuclei with hypertrophy was absent in satellite cell-depleted muscle, suggesting that compensatory mechanisms enable effective adult muscle fiber growth independent of satellite cells. The ability of aged muscle to activate these compensatory mechanisms in response to overload will be discussed.

#### **NON-CLASSICAL ROLE OF TROPONIN T IN SKELETAL MUSCLE**

T. Zhang, A. Birbrair, Z. Wang, J. Taylor, M.L. Messi, O. Delbono, *Gerontology and Geriatric Medicine, Wake Forest University School of Medicine, Winston-Salem, North Carolina*

In aging humans and rodents, decreased muscle mass does not fully account for the decrease in strength, indicating that atrophy only partially explains muscle weakness. Publications from our laboratory and others support the concept that aging impairs muscle activation-contraction efficiency. Troponin T (TnT) is known to mediate the interaction between Tn complex and tropomyosin (Tm), which is essential for calcium-activated striated muscle contraction. This regulatory function takes place in the myoplasm, where TnT binds Tm. However, recent findings imply other roles for the Tn-Tm complex. We propose that TnT plays a non-classical role through nuclear translocation. A pool of fast TnT3 is localized in the nuclear fraction of mouse skeletal muscle as either an intact or fragmented protein. TnT3 fragments are closely related to nucleolus and RNA polymerase activity. TnT3 fragmentation is highly regulated by aging, thus creating a possible link between the deleterious effects of TnT3 fragments and sarcopenia.

#### **INFLUENCE OF EXERCISE ON MITOCHONDRIAL FUNCTION IN OLDER ADULTS AND MICE**

M. Tarnopolsky, *Mark Tarnopolsky, Mark Tarnopolsky, Hamilton, Ontario, Canada*

Skeletal muscle in older adults show; mitochondrial DNA deletions, lower mitochondrial electron transport chain enzyme activity, and higher

oxidative stress. We have found an increase in electron transport chain enzyme activity, fewer mitochondrial DNA deletions, lower oxidative stress and higher anti-oxidant enzyme capacity in older adults following a resistance exercise training program. The potent effect of endurance exercise as a countermeasure for aging was demonstrated using the polymerase gamma mutator mouse model (POLG1 mutator) where five months of exercise training conferred nearly 100% phenotypic protection in the POLG1 animals that normally demonstrate phenotypic features seen in older adults (hair loss, muscle atrophy, cardiac hypertrophy, anemia, gonadal atrophy). Data the POLG1 model in combination with human studies has allowed us to identify several serum factors (myokines) that are involved in the overlapping and multi-systemic benefits conferred by endurance exercise that mitigate some of the effects of aging. Supported by CIHR Canada.

## SESSION 1065 (SYMPOSIUM)

### THE IL-10<sup>-/-</sup> FRAIL MOUSE AS A MODEL FOR AGE-RELATED DISEASE STATES

Chair: J.D. Walston, *Medicine/Geriatrics, Johns Hopkins University, Baltimore, Maryland*

Discussant: L.L. Dugan, *University of California, San Diego, San Diego, California*

Inflammatory pathway activation has long thought to be important in the development of multiple aging-related chronic disease states, functional decline, and frailty. The IL-10<sup>-/-</sup> mouse does not produce the anti-inflammatory cytokine IL-10 and develops a low grade inflammatory state by mid-life that influences multiple organ systems and the aging process. This mouse has been proposed as a model for frailty because of its age-related acceleration in decline in muscle strength, mild elevation in inflammatory mediators, endocrine changes, and early mortality when compared to a age and gender background strain non-frail mouse. Because of the similarities observed to human frailty, investigators have attempted to further characterize the age-related changes that might parallel those seen in human frailty and age-related disease states as well as the underlying biology that influences those changes. In this symposium, data will be presented that describes cognitive and behavioral changes and the biology that underlies that change in this mouse strain. Data that characterizes the vascular stiffness and myocardial function identified in the frail mouse and will also be described. Finally, in a finding that may help to explain accelerated loss of muscle strength in the frail mouse, data will be presented that shows significant declines in mitochondrial induced energy generation in the skeletal muscle of frail older mice compared to non-frail mouse. Taken together, these findings provide further support for the use of this mouse strain for the study of the influence of chronic inflammation on frailty and multiple age-related chronic diseases.

### BEHAVIORAL ASSESSMENT OF THE IL-10<sup>-/-</sup> MOUSE MODEL OF FRAILITY SUGGESTS IMPAIRMENTS IN EMOTIONAL LEARNING AND ANXIETY RESPONSE TO ENVIRONMENT

W. Nguyen<sup>1</sup>, E. Inui<sup>1</sup>, V. Nagarajan<sup>1</sup>, D. Lui<sup>1</sup>, G. Shekhtman<sup>1</sup>, A.J. Roberts<sup>2</sup>, J.D. Walston<sup>3</sup>, L.L. Dugan<sup>1</sup>, *1. UCSD, La Jolla, California, 2. Scripps Research Institute, La Jolla, California, 3. Johns Hopkins University, Baltimore, Maryland*

IL-10<sup>-/-</sup> mice have been proposed as model of the frailty syndrome, but a systematic assessment of neurocognitive status of these mice has not been previously performed. Here we carried out a sequence of behavioral studies aimed at assessing working memory, anxiety- and depression-like phenotypes, emotional learning, and executive function. IL-10<sup>-/-</sup> mice demonstrated significant impairment in emotional learning (an amygdala-based process) in a fear-conditioning task, enhanced anxiety (freezing) in response to a novel environment, and an inappropriate increase in time spent in an aversive environment (time-in-center on

open field testing). IL-10<sup>-/-</sup> mice also had impaired performance on the Barne's maze, which assesses the time and strategy used by the mouse to escape to a dark, safe location. Taken together, these data suggest that the IL-10<sup>-/-</sup> mice have increased anxiety, impaired processing of environmental information and deficits in executive function, features which may parallel deficits in many frail older adults.

### IL10<sup>-/-</sup> FRAIL MICE DEVELOP CARDIAC AND VASCULAR DYSFUNCTION WITH INCREASED AGE

G. Sikka<sup>1</sup>, K. Miller<sup>1</sup>, S. Jung<sup>4</sup>, C.D. Fraser III<sup>3</sup>, D. Bedja<sup>1</sup>, J.D. Walston<sup>1,2</sup>, D.E. Berkowitz<sup>1</sup>, L.A. Barouch<sup>1</sup>, *1. Johns Hopkins University, Baltimore, Maryland, 2. Johns Hopkins Bayview Medical Center, Baltimore, Maryland, 3. University of Texas Health Science Center, Houston, Texas, 4. Yeungnam University, Daegu, Democratic People's Republic of Korea*

Frailty in humans is associated with activation of inflammatory pathways, skeletal muscle decline, and cardiovascular dysfunction. Older IL10<sup>-/-</sup> mice display many characteristics of human frailty and have been proposed as a model to study the biology that underlies frailty. We hypothesized that the frail mouse would also have similar cardiovascular dysfunction to that observed in frail humans. To test this, we recorded in-vivo echocardiography, pulse wave velocity, blood pressure and conducted ex-vivo vascular force-tension myography in IL10<sup>-/-</sup> and control mice. Left-ventricular (LV) End Systolic Diameter, LV mass, and iso-volumic relaxation time were increased, while ejection fraction was reduced in old IL10<sup>-/-</sup> mice compared to control mice. Stimulation with acetylcholine in endothelial-intact aortic rings from old mice demonstrated vasoconstriction, which was reversed by COX1, COX2 and ThromboxaneA2 blockers in old IL10<sup>-/-</sup> mice but absent in young and old WT and young IL10<sup>-/-</sup> aortic rings.

### PROGRESSIVE INCREASES IN BRAIN INFLAMMATORY SUPEROXIDE PREDICT REGION-SPECIFIC DEFICITS IN CRITICAL INHIBITORY INTERNEURONS IN IL-10<sup>-/-</sup> MICE

Q. Tang, W. Nguyen, E. Inui, V. Nagarajan, D. Lui, G. Shekhtman, A. Habas, L.L. Dugan, *Medicine & Neurosciences, UCSD, LaJolla, California*

L-10<sup>-/-</sup> exhibit behavior changes associated with several brain regions; here we attempted to identify molecular and anatomic pathways which underlie these changes. Previous studies in non-frail, aged mice have shown inflammatory signaling through IL-6 produces injury to PV-positive GABAergic inhibitory interneurons critical for memory formation and recall, attentional shift, and information encoding. We now show that IL-10<sup>-/-</sup> mice have a significantly greater increase in inflammatory superoxide production than age-matched controls, accompanied by loss of PV-interneurons first in the amygdala (at 14 mos.), then hippocampus and cortex (21 mos.) These region-specific changes in inhibitory interneuron integrity would be predicted to impair executive function and attentional shift (pre-frontal cortex), emotional learning (amgdala), and spatial information processing (hippocampus), all behavioral deficits observed in aging IL-10<sup>-/-</sup> mice. Current studies are aimed at identifying the specific molecular source of superoxide and the physiological implications of PV-interneuron loss, and how these relate to the observed behavioral changes.

### SKELETAL MUSCLE CREATINE KINASE ATP KINETICS ARE IMPAIRED IN FRAIL MICE

A. Akki, A. Gupta, V.P. Chacko, H. Yang, J.D. Walston, R.G. Weiss, *Medicine, Cardiology, Johns Hopkins Medical Institution, Baltimore, Maryland*

The interleukin-10 knockout mouse (IL-10) has been proposed as a model for human frailty, a geriatric syndrome characterized by muscle weakness, because it develops an age-related increase in muscle weakness compared to control (C57BL/6J) mice. The creatine kinase (CK) reaction is the primary energy reserve in skeletal muscle (SM) providing ATP during periods of increased demand. It is not clear whether

SM CK energy metabolism is altered in frailty. We used a combination of in vivo <sup>31</sup>P nuclear magnetic resonance experiments and biochemical assays to measure the rate of CK-ATP synthesis in hind-limb SM of 23-month-old control (n=7) and IL-10 (n=6) mice. SM Phosphocreatine (20.2±0.8 vs. 16.8±0.9, μmol/g, control vs. IL-10, p<0.05) and CK-ATP flux (5.0±0.3 vs. 3.1±0.5, μmol/g/s, p<0.01) were significantly lower in IL-10 than in control mice with no difference in [ATP]. These observations demonstrate that in vivo SM ATP kinetics are depressed in a murine model of frailty.

## **SESSION 1070 (SYMPOSIUM)**

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### **A PRIMER ON THE WISCONSIN LONGITUDINAL STUDY: OVER 50 YEARS OF SOCIAL DATA AND NEWLY AVAILABLE GENETIC DATA**

Chair: *C. Roan, Sociology, University of Wisconsin, Madison, Wisconsin*

Co-Chair: *P. Herd, Sociology, University of Wisconsin, Madison, Wisconsin*

The Wisconsin Longitudinal Study is an important data source for researchers interested in examining aging in the context of the life course. The study is a sample of one in three Wisconsin high school graduates, and a selected sibling, from the class of 1957. WLS is unique among major social scientific resources for the length with which it has followed a large population-based cohort sample and that it includes siblings. Recently available DNA data can be merged with fifty years of social data. The addition of genetic data allows new analyses linking genotypic, biomedical, psychosocial, and life course outcomes in novel ways. The data cover nearly every aspect of the participants' lives from early life socioeconomic background, schooling, family and work to health, social participation, civic engagement, well-being, and cognition. The study also has a wealth of unique data including examples such as administrative IQ scores from high school, information collected from high school yearbooks that include measures of attractiveness, proxy measures for obesity, and complete lists of student activities for all respondents. Examples of administrative data include Medicare records, Social Security records, and resource data on primary and secondary schools attended by participants. This session will introduce the study to researchers who are not familiar with the data by providing an overview of the study as well as practical information on the structure of the data. Attendees will be provided with a CD containing documentation and the data.

### **HOW TO ACCESS AND USE DATA FROM THE WISCONSIN LONGITUDINAL STUDY**

*C. Roan, Sociology, University of Wisconsin, Madison, Wisconsin*

With over 15,000 analysis variables covering more than 50 years of data, new users of the WLS data may find themselves overwhelmed when looking for the measures they need to answer their research questions. I will give detailed instructions on how to use the tools and reference materials developed by WLS staff. Attendees will learn how to search for analysis variables, where to find copies of the survey instruments online, and how to download the public data. I will also explain the organizational structure of the data, variable naming conventions, and offer recommendations on how to break the data into smaller pieces if your computing resources are limited. Participants in this symposium will also learn about the differences between publically available data and data available only by application. Finally I will explain how to apply to use the genetic data and other non-public data.

### **A PRIMER ON GENETIC DATA AVAILABLE IN THE WISCONSIN LONGITUDINAL STUDY**

*C.S. Atwood, N.S. Roetker, J.A. Yonker, V. Chang, P. Herd, T. Hauser, R.M. Hauser, University of Wisconsin, Madison, Wisconsin*

The Wisconsin Longitudinal Study (WLS) is unique among major social scientific resources for the length with which it has followed a large population-based cohort sample and that it includes siblings. WLS is a premier resource for studies of social, economic, psychological, and health outcomes in the United States, and its design and findings have had world-wide influence. The addition of genetic data allows new analyses linking genotypic, biomedical, psychosocial, and life course outcomes in novel ways. WLS will be a unique resource available to all qualified researchers that is well suited for replication of findings from existing studies in a population-based sibling-design sample, investigations exploring the genotypic contribution to observed associations among phenotypic measures across domains, gene x gene interaction studies, and gene x environment interaction studies. To investigate gene x gene and gene x environment interactions using this wealth of data we have been investigating a number of sophisticated modeling techniques (e.g. recursive partitioning, random jungle, multi-factor dimensionality reduction) to examine the etiology of complex diseases and conditions.

### **WHAT'S IN THE WISCONSIN LONGITUDINAL STUDY: AN OVERVIEW OF EXISTING AND NEWLY COLLECTED 2011 DATA**

*P. Herd, UW-Madison, Madison, Wisconsin*

This presentation will provide an overview of the WLS data. Survey years include 1957, 1964, 1975, 1993, 2004 and a new data collection effort is currently in the field. The content of the WLS has changed to reflect the life course of participants: education inspired the initial data collection, familial and career outcomes focused data collection in midlife, and later rounds have shifted attention to respondent's health, cognitive status, psychological and other dimensions of well-being, non-work activities, and caregiving and social support. Some examples of non-survey derived measures include: parent earnings from state tax records (1957-60), high school IQ scores; characteristics of high schools and colleges, employers, industries, and communities of residence; archival data on high school and elementary school resources; information on social participation, facial obesity, and attractiveness from yearbooks; matches to the National Death Index and the Wisconsin State Tumor Registry; and Medicare claims data for older siblings.

## **SESSION 1075 (SYMPOSIUM)**

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### **CHARTING REACH TRANSLATIONS: LESSONS, INSIGHTS, & FINDINGS**

Chair: *D.W. Coon, Arizona State University, Phoenix, Arizona*

Co-Chair: *C. Lee, University of Miami Miller School of Medicine, Miami, Florida*

Discussant: *D. Gallagher-Thompson, Stanford University School of Medicine, Stanford, California*

A number of evidence based treatments for family caregiver distress have emerged in the last two decades; however, investigation into the effective translation and ongoing support of these interventions into community based settings is still in its infancy. Supported through competitive ADSSP grants from the U.S. Administration on Aging, this symposium focuses on the translation of REACH (Resources for Enhancing Alzheimer's Caregiver Health) and REACH II interventions from the original trials into communities across five U.S. States (Arizona, Florida, Georgia, Nevada, and North Carolina). These projects are designed to accomplish their goals through partnerships among various entities including the state units on aging, health and community-based organizations like the local Alzheimer's Association and the Area Agencies on Aging, and research institutions. This symposium also

describes how these projects incorporated aspects of the RE-AIM framework and its related tools to facilitate translation into the community as outlined in the CDC's Assuring Healthy Caregivers, A Public Health Approach to Translating Research into Practice: The RE-AIM Framework (2008). Notably, leadership implemented adaptations to foster adoption and maintenance of the interventions while also ensuring fidelity to the core elements of the original REACH or REACH II intervention. In addition to the discussion of successful outcomes, the symposium will present challenges in the translation process including: staff turnover requiring ongoing training and supervision, competing staff roles and divergent skill levels, streamlining of materials, and outreach and delivery barriers in resource rich versus resource poor environments and the need to customize recruitment messages.

### **RCI REACH: A MODEL FOR COMMUNITY AGENCY IMPLEMENTATION**

G. Alston, L. Easom, *Rosalynn Carter Institute for Caregiving, Americus, Georgia*

Resources for Enhancing Alzheimer's Caregiver Health II (REACH II) is an evidence based caregiver intervention proven to significantly reduce stress and depression. The Rosalynn Carter Institute for Caregiving translated the REACH-VA model of REACH II through their Caregiver Support Center beginning in 2009. The translation successfully decreased caregiver depression (11.7 to 9.8,  $p \leq .05$ ) and burden (18.9 to 15.7,  $p \leq .05$ ). From the lessons learned in this translation, RCI-REACH was developed. In 2010, RCI provided technical assistance for the replication of their model through the aging services network. Embedding RCI-REACH into the Coastal Georgia Area Agency on Aging has led to development of new tools (web-based data collection) and procedures (staffing models) that have improved client recruitment, data collection, and adoption. This presentation will share outcomes results from the RCI-REACH translation project as well as an overview of the model developed for implementation through the AAA.

### **COMMUNITY REACH II: MIAMI**

C. Lee<sup>1</sup>, S. Czaja<sup>1</sup>, D.M. Perdomo<sup>1</sup>, V. Stubbs<sup>2</sup>, E. Ellsworth<sup>2</sup>, G. Rodriguez<sup>2</sup>, *1. Center on Aging, University of Miami Miller School of Medicine, Miami, Florida, 2. United HomeCare Services, Miami, Florida*

There are over 50,000 cases of elders with Alzheimer's Disease (AD) in South Florida and the majority of these patients live at home and are cared for by family members. Effective interventions to reduce caregiver distress and delay nursing home placement that can be successfully implemented in community settings are warranted. This paper describes a collaborative demonstration project, Community REACH II, for caregivers of persons with AD. Community REACH II is based on the multi-component evidenced-based REACH II program. To date, 72 dyads of caregivers and care recipients have successfully completed the program. The presentation will provide an overview of the processes and challenges involved with the adaptation, implementation and sustainability of Community REACH II (e.g., session structure, staff training). Preliminary data on characteristics of the participants and reactions to the intervention by both the caregivers and United Homecare Personnel involved in the program will also be discussed.

### **CONDUCTING A MID-COURSE ASSESSMENT OF THE NORTH CAROLINA REACH INTERVENTION: LESSONS LEARNED**

M. Altpeter<sup>3</sup>, L.P. Gwyther<sup>4</sup>, S. Kennedy<sup>1</sup>, K. Derence<sup>5</sup>, T. Patterson<sup>2,1</sup>, *1. Department of Health and Human Services, NC DHHS Division of Aging and Adult Services, Raleigh, North Carolina, 2. North Carolina State University, Raleigh, North Carolina, 3. University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, 4. Duke University, Durham, North Carolina, 5. NC DHHS Division of Public Health, Raleigh, North Carolina*

This presentation will describe the results and "Lessons Learned" from the mid-course assessment of the REACH II community transla-

tion project in North Carolina. Specifically, we will introduce the methods of the mid-course assessment, which was guided by the RE-AIM framework, where adaptations were made to enhance the feasibility of adoption and maintenance while at the same time assuring fidelity to program core elements. The two-stage assessment involved both quantitative (survey) and qualitative (discussion group) components used with the program interventionists. Results revealed a need to focus on tailoring training to the experience level of trainees, streamlining and clarifying the use of materials, customizing recruitment messages for specific circumstances, addressing workload and program length, and clarifying whether flexibilities could be exercised in terms of content addressed and materials used. The nature of the mixed-method process allowed the interventionists to thoroughly assess program satisfaction and areas of concern.

### **CAREPRO (CARE PARTNERS REACHING OUT): AN EBT COMMUNITY PARTNERSHIP IN ARIZONA & NEVADA**

D.W. Coon<sup>1</sup>, T. Walker<sup>1</sup>, S. Hirsch<sup>3</sup>, S. Alloway<sup>2</sup>, J.S. Doucet<sup>2</sup>, D.A. Besst<sup>4</sup>, *1. Arizona State University, Phoenix, Arizona, 2. Aging and Disability Services Division, Las Vegas, Nevada, 3. Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, Nevada, 4. Arizona Department of Economic Security, Phoenix, Arizona*

Using the RE-AIM framework, local chapters of the Alzheimer's Association, state units on aging, and area agencies on aging partnered to translate CarePRO (an initial REACH based intervention) across Arizona and Nevada. Over 300 family caregivers of people with dementia have participated with 100% of those completing evaluations reporting overall benefit (85% benefited "a great deal"). Caregivers also reported they benefited ("some" benefit combined with "a great deal") with regard to: understanding memory loss and its impact (97%); more confidence in dealing with memory problems (98%); made their lives easier (97%); enhanced their ability to provide care (97%); and, improved the patient's life (95%). Embedding CarePRO into the community brought forth both challenges and opportunities yielding key lessons learned: frequent staff turnover requiring re-training and supervision; staff differences regarding theoretical underpinnings, past training, and interest in behavior change skills; recruitment and referral struggles across partners; and, increasingly complex caregiving situations.

## **SESSION 1080 (SYMPOSIUM)**

### **COLLABORATIVE INTERVENTIONS: THE FRONTIER OF LATE LIFE ISSUES FOR ADULTS WITH DISABILITIES**

Chair: *K.L. Culler, Psychology, Institute of Life-Span Development and Gerontology, The University of Akron, Austintown, Ohio*  
Co-Chair: *Y. Shirai, University of Arizona, Tucson, Arizona*  
Discussant: *E.F. Ansello, Virginia Commonwealth University, Richmond, Virginia*

The life expectancy of individuals with disabilities and developmental disabilities (DD) is no longer lagging behind the trends of the general population. Now aging individuals with disabilities and DD are facing late life issues such as: care giving for a parent, adjusting to the loss of a parent, addressing concerns for overall health and wellness in later life and transitioning into nursing home care in comparison to their peers. The symposium begins with a discussion of a training intervention designed to increase overall wellness for adults with cerebral palsy from Project ACT NOW and an innovative intervention (creative aerial-movement) offered in a grieving support group for adults with DD. The last intervention in this symposium describes the design and effectiveness of an organizational/educational intervention on group home support of aging adults with DD among 76 group homes, 103 group home staff and 106 residents aging with DD. Adults with disabilities may simultaneously be a care giver and care receiver. The next two papers in this symposium address this phenomenon from interviews (N=15) from sibling caregivers and interviews (N=18) from bereave-

ment counselors. Overall these interviews further emphasize the necessary involvement of caregivers in interventions tailored for future and late life planning among adults with DD. Additionally, a lack of supports for sibling caregivers of adults with DD, as well as, adults with DD care giving for others is noted within the DD and aging communities. This symposium addresses pivotal late life issues for adults with disabilities from current interventions and research.

### **GROUP HOME TO NURSING HOME: PREVENTING PREMATURE RELOCATION**

B. Bowers<sup>1</sup>, R. Webber<sup>2</sup>, C. Bigby<sup>3</sup>, 1. *Nursing, University of Wisconsin-Madison, Madison, Wisconsin*, 2. *Australian Catholic University, Melbourne, Victoria, Australia*, 3. *LaTrobe University, Melbourne, Victoria, Australia*

As life expectancy of people with intellectual disability has increased, many more people with ID are reaching old age and experiencing age related health problems. Research from several countries has documented that people with ID tend to be prematurely relocated to nursing homes, many coming from group homes. This paper describes an intervention study designed to test the effectiveness of an organizational/educational intervention on group home support of people aging with an intellectual disability. The sample includes 76 group homes, 103 group home staff, and 106 residents aging with an intellectual disability. Data were collected on group home staff knowledge about and confidence in caring for people who were aging with ID, their views on who should be moved from group homes to nursing homes, their awareness and use of health related resources in the community and on organizational policies related to support for aging residents.

### **SIBLING CAREGIVERS OF AGING ADULTS WITH INTELLECTUAL DISABILITIES**

C. Coyle<sup>1</sup>, J. Kramer<sup>2</sup>, J.E. Mutchler<sup>1</sup>, 1. *Univ Mass Boston, Boston, Massachusetts*, 2. *Institute for Community Inclusion, Boston, Massachusetts*

The increased longevity of persons with Intellectual and Developmental Disabilities (IDD) prompts a rethinking of how support will be provided in later life. Current cohorts of adults with IDD are the first to experience the frailty and death of their own parents—their original and often primary supports. In this qualitative study, 15 in-depth interviews were conducted with middle-aged and older adults who are caretakers of a sibling with IDD. Major areas of questioning included: service utilization; experiences with the transition to sibling caregiver; the role of aging; and future planning. Results of this study suggest that there is a need for education targeting family caregivers of people with IDD around aging issues, particularly in respect to planning for the future. More specialized support is needed for sibling caregivers as they age together with their sibling with IDD. Also, stronger infrastructure is needed among aging and disability specialty services providers.

### **RECIPROCITY AT END OF LIFE: WHAT IS KNOWN ABOUT ADULTS WITH DISABILITIES PROVIDING CARE TO ELDERLY PARENTS?**

M. Clute, *Social Work, Eastern Washington University, Cheney, Washington*

In 2011, at the special interest group discussion on adults with ID/DD, members began discussion of the phenomenon of care giving by adults with ID/DD for elderly parents. The discussion prompted this researcher to review her 2007 data from bereavement counselors about grieving adults with ID. Without specifically asking about this phenomenon, four clear examples of reciprocity of care of parents, grandparents, and foster parents were present in interviews of 18 participants. This finding prompted the researcher to look deeper into the literature on caregiving, examining what is documented about bi-directional caregiving for adults with ID. This issue was found to be addressed sparsely in the literature for adults with disabilities including history of mental illness.

The presenter will address the implications for health teaching and grief/death education for caregivers with disabilities; needs for tailored caregiver support for these informal providers; and an agenda for research.

### **GRIEVING SUPPORT GROUP WITH CREATIVE-AERIAL MOVEMENT FOR ADULTS WITH DEVELOPMENTAL DISABILITIES**

Y. Shirai, S.S. Koerner, L. Tomasa, *University of Arizona, Tucson, Arizona*

As the life expectancy of adults with developmental disabilities (DD) now approaches that of the general population, they often experience loss of caregivers (e.g., death of elderly parents). However, their communication challenges, due to the limited cognitive/behavioral abilities of this population, restrict their opportunities to grieve through traditional means (e.g., counseling, talking with friends). This lack of grieving opportunities could result in severe consequences (e.g., isolation, depression). Based on work from two independent research fields, sensory-integration from occupational therapy and creative expression from expressive-art therapy, this pilot-case study (n=3) introduces an innovative intervention—a five-month weekly group grieving workshop: (a) utilizing creative aerial-movement (with a one-point trapeze like swing as the main communication tool) to give adults with DD opportunities to explore, express, and process their abstract and complicated thoughts/feelings resulting from their significant loss, and (b) developing memorial rituals in their daily environment to afford closure to this group.

### **ADULTS WITH CEREBRAL PALSY TRAINING TO INCREASE OVERALL WELLNESS: PROJECT ACT NOW**

D.E. Thorpe<sup>1</sup>, R.G. McMurray<sup>2</sup>, M. Turk<sup>3</sup>, R.C. Henderson<sup>4</sup>, 1. *The University of North Carolina at Chapel Hill, Division of Physical Therapy, Chapel Hill, North Carolina*, 2. *The University of North Carolina at Chapel Hill, Department of Exercise and Sports Sciences, Chapel Hill, North Carolina*, 3. *SUNY Upstate Medical University, Department of Physical Medicine and Rehabilitation, Syracuse, New York*, 4. *The University of North Carolina at Chapel Hill, Department of Pediatric Orthopedics, Chapel Hill, North Carolina*

**Objectives:** 1) Participants will be able to identify common secondary conditions experienced by adults with CP. 2) Participants will be able to recognize appropriate forms of exercise for adults with CP in order to improve or maintain fitness goals. **Purpose:** A randomized prospective cohort of adults with cerebral palsy (CP) was investigated to determine the effects of an aquatic resistive exercise intervention on function and fitness. **Participants and Setting:** Thirty adults with CP aged 21-65 years (M =34.7) and of GMFCS Levels I-IV completed a 12-week aquatic exercise program, exercising at target heart rates. Seventeen adults with CP ages 21-45 years (M = 29.2) comprised a comparison group. **Materials/Methods:** Gross motor function, body composition, leg strength, physical activity (PA) and health-related quality of life (HRQOL) were assessed over a 9-month time period. **Results:** The sample was 55% female; 83% Caucasian, 6% Black, 9% Asian and 2% Hispanic with 38% GMFCS Level I, 30% GMFCS Level II, 19% GMFCS Level III and 13% GMFCS Level IV. PA levels were in the low category. The physical component of the HRQOL score was lower than age-matched peers. Subjects showed 100% compliance with the aquatic intervention. There were no differences between groups for BMD, LMM, composite leg strength, PA, or HRQL. Within the aquatic group, leg strength increased 53%, gross motor function increased significantly and there was a positive trend  $f(1,44) = 2.77, p = .10$  for increases in BMD. **Conclusions/Significance:** Cerebral palsy is not a

static condition. Adults with CP of varying GMFCS levels, develop secondary impairments and conditions. Aquatic exercise, at high intensities, is a feasible and effective intervention to improve gross motor function and has the potential to improve bone mineral density.

## SESSION 1085 (SYMPOSIUM)

### DESIGNING AND IMPLEMENTING AN INTERVENTION FOR OLDER ADULTS: THE PRISM FIELD TRIAL

Chair: *S.J. Czaja, Psychiatry and Behavioral Sciences, University of Miami Miller School of Medicine, Miami, Florida*

Discussant: *J. King, National Institute on Aging, Bethesda, Maryland*

The Center for Research on Aging and Technology Enhancement (CREATE) is conducting a large scale, multi-site randomized clinical trial that is evaluating the efficacy of a computer-based personal reminder, information, and social management (PRISM) system designed to support socialization and communication, memory for everyday events and improve overall quality of life of older people (aged 65+) at risk for social isolation. The computer-based system is being compared to a manual version of PRISM. This symposium will discuss the planning and design process for the intervention and challenges with the implementation of the trial. S. Czaja will present an overview of the study design and the user-centered design approach that was used for the development of the intervention. N. Charness will then present findings from focus groups and a questionnaire study that were used to gather information about technology needs and preferences and to guide the initial development of the PRISM system. W. Boot will describe two new measures of computer proficiency and user acceptance developed for the trial and present data regarding the psychometric properties of these measures. W. Rogers will discuss the Human Factors Engineering tools used in the development of PRISM and the results of the heuristic and piloting testing of the system. Finally, S. Czaja will provide data regarding the participants' perception of PRISM and discuss challenges associated with the implementation of the trial. J. King will lead a discussion of these topics and highlight some of the challenges and opportunities associated with the PRISM trial.

### AN OVERVIEW OF THE PRISM TRIAL AND DESIGN APPROACH

*S.J. Czaja<sup>1</sup>, J. Sharit<sup>2</sup>, C. Lee<sup>2</sup>, S.N. Nair<sup>2</sup>, M.A. Hernandez<sup>2</sup>, S. Fu<sup>2</sup>, 1. Psychiatry and Behavioral Sciences, University of Miami Miller School of Medicine, Miami, Florida, 2. university of miami Miller School of Medicine, miami, Florida*

The Center for Research on Aging and Technology Enhancement (CREATE) is conducting a large scale, multi-site randomized clinical trial that is evaluating the efficacy of a computer-based personal reminder, information, and social management (PRISM) system designed to support socialization and communication, memory for everyday events and improve quality of life of older people (aged 65+) at risk for isolation. The computer-based system is being compared to a manual version of PRISM. The intervention was developed using a user-centered design approach. This overview presentation will present the goals of the trial, the trial design and the design approach. The process was iterative and involved input from representative samples of older adults throughout the design cycle. The presentation will demonstrate how this type of approach can be used to guide the development of an intervention for older adults. In addition, strategies for insuring treatment adherence across the sites will be discussed.

### THE FINAL DESIGN OF PRISM, TRIAL CHALLENGES AND PARTICIPANT FEEDBACK

*S.J. Czaja<sup>1</sup>, J. Sharit<sup>2</sup>, C. Lee<sup>2</sup>, S.N. Nair<sup>2</sup>, M.A. Hernandez<sup>2</sup>, S. Fu<sup>2</sup>, 1. Psychiatry and Behavioral Sciences, University of Miami Miller School of Medicine, Miami, Florida, 2. university of miami Miller School of Medicine, miami, Florida*

The PRISM system was designed using a user-centered iterative design approach and incorporated feedback from samples of older adults. This presentation will focus on the features of the final design of the computer-based version of PRISM and will describe the instructional and technical help support systems and the comprehensive system for data management. In addition, data will be presented on the characteristics of the sample, who ranged in age from 65-98 years, and their perceptions of the system. This will include case examples of the impact of use on everyday activities such as communication and social connectivity. In addition, challenges associated with the implementation of the intervention such as recruitment, training and technical issues will be discussed. Overall, despite these challenges, the participants' reactions are highly positive and indicate that use of the system helped them remain connected and improved their access to resources in the community.

### PRISM: THE FOCUS GROUP AND QUESTIONNAIRE PREQUEL

*N. Charness<sup>1</sup>, K. Dijkstra<sup>2</sup>, R. Best<sup>1</sup>, D. Souders<sup>1</sup>, 1. Florida State University, Tallahassee, Florida, 2. Erasmus University, Rotterdam, Netherlands*

We report on a focus group study conducted in Atlanta, Tallahassee, and Miami (n=113; split by low and high education levels) and a questionnaire conducted in Atlanta and Tallahassee (n=321) concerning the technology that older adults used, liked, and disliked to determine the components and design features for the PRISM clinical trial. People in the focus groups reported a range of technologies from 3-32 items/group, with 19 for home, 13 for work and 7 for health. Technologies that were liked supported activities, were convenient to use, and had useful features. Technologies that were disliked proved inconvenient, had too many features, raised safety concerns, and proved unreliable. The communications section of the questionnaire showed that for older adult computer users rated e-mail and e-mailing photos more highly than messaging, chat, and videoconferencing. These findings guided the development and inclusion of features for PRISM, such as e-mail, search, calendaring, and classroom topics.

### USING HUMAN FACTORS TOOLS TO PREPARE FOR A FIELD TRIAL WITH OLDER ADULTS

*W.A. Rogers, T.L. Mitzner, School of Psychology, Georgia Institute of Technolog, Atlanta, Georgia*

The PRISM field trial was designed to assess the relative benefits of a computer system versus a paper-based system containing comparable information. To evaluate the differential effects, we had to ensure that both systems were usable by and useful for the target users (i.e., older adults at risk for social isolation). In addition, the instructions for use and the training had to be clear and effective. To that end, we employed a human factors approach. Human factors practitioners investigate capabilities and limitations of people and demands placed upon them when interacting with a system. Our approach was multifaceted: (1) heuristic evaluation by experts; (2) user testing of all experimental materials; and (3) development of detailed instruction and support system. We will present these data to illustrate how the assessment tools provided valuable insights for design of the field trial, a necessary first step to ensure reliable and valid behavioral assessments.

## THE PRISM FIELD TRIAL: DEVELOPMENT OF NEW MEASURES

W.R. Boot, N. Charness, K. Arredondo, J. Bartley, A. Saperstein,  
*Psychology, Florida State University, Tallahassee, Florida*

The PRISM trial's focus of a computer-based intervention to improve well-being and social connectedness, in addition to its target population of non-computer using older adults, required the development of new measures of computer proficiency and user acceptance. We present factors that influenced the development of these measures (including the popularization of new technologies and shifts in usage patterns over time) and an assessment of their psychometric properties derived from baseline data collected from PRISM participants and from computer proficient adults across the three sites of the PRISM trial. Pilot testing of a new questionnaire revealed that a brief Computer Proficiency Questionnaire (CPQ) targeting six computer-related skill domains could reliably capture computer proficiency (Cronbach's alpha = .94). Although developed for the PRISM trial, we discuss the utility of brief but well-characterized and validated measures of computer proficiency and acceptance in facilitating the training of technologies related to E-health and other applications.

## SESSION 1090 (SYMPOSIUM)

### DOES 'WHERE' HAVE AN IMPACT ON 'HOW' PEOPLE AGE? THE ROLE OF CONTEXT IN SUCCESSFUL AGING

Chair: *M. Wiest, German Centre of Gerontology, Berlin, Germany*  
Co-Chair: *N.J. Webster, Life Course Development Program, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*  
Discussant: *C. Phillipson, Keele University, Keele, United Kingdom*

It is understood that aging does not occur in a vacuum, but rather people grow older within multiple layered environmental contexts, from countries to neighborhoods. However, the extent to which structural characteristics of these environments influence how people age are rarely examined. This symposium addresses the role of context in shaping later life mastery, health and well-being within four countries and varying levels of the environment. Using data from the INK study from South Africa (N=1008), Deeg and colleagues found that the negative association between depression and mastery was greatest in the context of more affluent living conditions. Park and Kim, using data from the Korean Longitudinal Study of Ageing (N=3500) found that functional limitations were negatively associated with life satisfaction in urban areas, and this relationship was further buffered by social network type. Using data from the Social Relations, Aging and Health Study from the mid-western United States (N=293), Webster and Antonucci found that in more affluent neighborhoods positive support was related to less depression, while in poorer neighborhoods functional impairments had a weaker relationship with depression. With data from the German Ageing Survey (N=1735), Wiest and colleagues found that positive emotions and county-level density of general practitioners had a positive impact on health. Together, these studies demonstrate that contextual factors need to be considered on multiple levels and structural characteristics of the environment affect mastery, health and well-being differently across countries. To better understand successful aging we need to situate individuals within the places in which they live.

### THE INFLUENCE OF POVERTY ON THE ASSOCIATION BETWEEN HEALTH AND MASTERY

D.J. Deeg, D. Verver, S. Van der Pas, B. Cassim, *LASA, VU University Medical Centre, Amsterdam, Netherlands*

Poor health has been shown to be associated with a poor sense of mastery. The strength of this association may differ across living conditions. It was examined if the association of health (disability and depression) with mastery varies across three townships outside Durban, South Africa, as part of the Inanda-KwaMashu-Ntuzuma (INK) study. The townships differed in average income, KwaMashu having the low-

est. Using multiple stage clustering, a sample of 1008 individuals aged 60+ was recruited, with a 100% response rate. Pearlin's sense of mastery scale (5-item version) showed better scores in Inanda, followed by KwaMashu and Ntuzuma. The Center for Epidemiologic Studies Depression scale (10-item version) showed the reversed pattern. Disability was lowest in KwaMashu. Both disability and depression were inversely associated with mastery. An interaction effect township\*depression indicated that the depression-mastery association was weakest in KwaMashu, suggesting that depression affects mastery only in relatively favorable living conditions.

### HEALTH, SOCIAL NETWORK, AND LIFE SATISFACTION AMONG KOREAN OLDER ADULTS: DOES URBAN RESIDENCE MATTER?

S. Park, B. Kim, *University of Michigan, Ann Arbor, Michigan*

This study investigated the association between functional limitations and life satisfaction among older Koreans, and explored how social network type and urban residence moderate this association. Data came from the 2006 and 2008 waves of the Korean Longitudinal Study of Ageing on respondents aged 65 years or older (N=3,500). Five network types were derived by Ward hierarchical and k-means cluster analysis based on network structural characteristics, including 1) restricted, 2) coresidential family-focused 3) child-focused, 4) friends-focused, and 5) diverse. Separate analysis was conducted among urban and rural residents. Functional limitations were negatively associated with life satisfaction among those living urban areas, and coresidential family-focused and diverse types of social network buffered the effect of functional limitation on life satisfaction. Among older adults in rural areas, functional limitations exerted no significant effects on life satisfaction. These results extend previous findings on health, social networks, and well-being in later life.

### SOCIAL SUPPORT AND WELL-BEING IN LATER LIFE: THE ROLE OF NEIGHBORHOODS

N.J. Webster, T.C. Antonucci, *Life Course Development Program, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Many studies have documented the detrimental effects of poverty on health and well-being. Less is understood about how environment enhances or hinders the buffering effect of social relationships on the stress-health link. This study explores how neighborhood-level income moderates the effects of functional limitations and positive child relationship quality on depression. Data include respondents age 65 and older (N=293) from the Social Relations, Aging and Health Study (2005) a regionally representative sample from the mid-western United States. A significant interaction between neighborhood income and positive child relationship quality indicates that more positive support is related to less depression among those living in more affluent neighborhoods. Among respondents living in less affluent neighborhoods, functional impairments had a weaker relationship with depression. Findings highlight the importance of environmental context in shaping later life vulnerabilities and suggest that interventions need to be tailored to the structural characteristics of where people live.

### THE EFFECT OF POSITIVE EMOTIONS ON FUNCTIONAL HEALTH: DOES CONTEXT MAKE A DIFFERENCE?

M. Wiest, J.K. Wolff, O. Huxhold, *German Centre of Gerontology, Berlin, Germany*

Positive emotions (PE) and health care service predict health outcomes. We examine if they interact in the prediction of functional health (FH) in old age. Using cross-sectional data from the German Ageing Survey (age range: 65-91, N= 1.735), multilevel models were estimated to examine the direct and interaction effects of PE and health care service on FH in old age. Number of general practitioners per inhabitant (GPs) was considered as an indicator of health care service on the county

level (N=206). Preliminary results show that PE ( $B = .26$ ;  $p < .01$ ) and GPs ( $B = -.31$ ;  $p < .05$ ) were related to FH, however, there was no support for a cross-level interaction between PE and GPs ( $B = .01$ ;  $p = .24$ ). Findings suggest that personal and context resources independently affect health outcomes in old age. Feeling good and GPs in the area are important for maintaining FH in old age.

## SESSION 1095 (SYMPOSIUM)

### FROM RCT TO COMMUNITY-BASED TRANSLATION: SYSTEMATIC EXPANSION OF THE SEATTLE PROTOCOLS:

Chair: L. Teri, U. Washington — School of Nursing, Seattle, Washington

Recent years have seen a slow but steady rise in both (1) the number of randomized controlled trials indicating behavioral and psychosocial strategies are effective in teaching caregivers how to reduce affective and behavioral disturbances common in persons with Alzheimer's disease (AD) and (2) the funding of translational efforts to move these findings into 'real world' community settings. This symposium will present three such translational efforts which have been conducted systematically taking caregiver and care-recipient needs into account, addressing provider and agency priorities, allowing flexibility and fidelity to the original protocols, and evolving across five states. Each presenter will discuss a different protocol and translation project, focusing on the issues arising from implementation and translation as well as providing new data on the success (or failure) of these approaches in community settings.

### DISCUSSANT

L. Anderson, CDC, Atlanta, Georgia

Perspectives on translating research into practice

### REDUCING DISABILITY IN ALZHEIMER DISEASE: OHIO'S TRANSLATION INTO COMMUNITY PRACTICE

H.L. Menne<sup>1</sup>, J.D. Johnson<sup>1</sup>, D.M. Bass<sup>1</sup>, S. Bollin<sup>2</sup>, L. Teri<sup>3</sup>, 1. Margaret Blenkner Research Institute, Benjamin Rose Institute on Aging, Cleveland, Ohio, 2. Alzheimer's Association, Northwest Ohio Chapter, Toledo, Ohio, 3. School of Nursing, University of Washington, Seattle, Washington

Alzheimer's Association Chapters serving Ohio replicated the evidence-based program "Reducing Disability in Alzheimer Disease" (RDAD). RDAD participants are trained in three exercise areas (i.e., flexibility, strength, and balance), and caregivers learn techniques to manage dementia-related behaviors. Preliminary analyses focus on 3 month physical health outcomes for persons with dementia (PWDs) in relation to usage of RDAD program components (i.e., exercises and behavior management). For the 282 PWDs completing 12 RDAD sessions, the results are mixed. A beneficial relationship exists for PWDs who have a history of falls before enrollment, where usage of the RDAD exercise component is associated with significantly fewer falls. Conversely, for PWDs who have more disability before the program, usage of the RDAD exercise component is associated with a significant increase in disability. The use of RDAD components has no relationship with PWD walking speed and functional reach. Findings inform sample eligibility recommendations for future RDAD implementations.

### ADAPTING AND IMPLEMENTING STAR FOR VA MENTAL HEALTH PROVIDERS: FEASIBILITY AND FINDINGS FROM A NATIONAL PILOT PROJECT

B. Karlin<sup>1</sup>, S. Visnic<sup>2</sup>, L. Teri<sup>3</sup>, 1. Office of Mental Health Services, Department of Veterans Affairs Central Office, Washington, District of Columbia, 2. VA Serious Mental Illness Treatment Research and Evaluation Center, Ann Arbor, Michigan, 3. University of Washington, Seattle, Washington

The U.S. Department Veterans Affairs (VA) health care system has developed and piloted an adapted psychosocial intervention for managing challenging dementia-related behaviors of residents in VA nursing homes [now known as "Community Living Centers" (CLCs)], called STAR-VA. STAR-VA is a multi-component behavioral intervention for managing challenging dementia behaviors, adapted from Teri and colleagues' (2005) STAR intervention. Following development of the protocol, interventionist manual, and training of CLC mental health providers, STAR-VA was implemented in selected CLCs throughout the VA health care system as part of pilot initiative. STAR-VA is a collaborative, interdisciplinary intervention that is guided by the behavioral expertise of a doctoral level mental health provider. This presentation will describe the adapted intervention and feasibility of implementation in a complex, interdisciplinary environment with nursing home residents. Initial resident and staff outcomes from the pilot will be reviewed as they relate to the feasibility and impact of implementing the intervention.

### STAR EXPANSION: LEARNING WHAT PROVIDERS WANT AND CHANGING PLANS ACCORDINGLY

D.M. La Fazia<sup>1</sup>, G. McKenzie<sup>2</sup>, G. Marshall<sup>1</sup>, K.C. Pike<sup>1</sup>, C.A. Coulter<sup>1</sup>, L. Teri<sup>1</sup>, 1. University of Washington, Seattle, Washington, 2. Oregon Health Sciences, Ashland, Oregon

STAR, Staff Training in Assisted-living Residences, is an interactive, dynamic program held onsite (2 group workshops and 4 individual sessions) with direct care staff and leadership. It is effective in reducing depression, anxiety, and behavioral problems among residents with dementia and improving staff satisfaction and skill. We were interested in learning whether ALR supervisors would be interested in teaching STAR and if so, what program characteristics were most appealing, which needed modifications, and what their ideas were for sustainability. To answer these questions, leadership from 10 ALRs participated in a series of informal information gathering sessions and structured focus groups designed to begin shaping STAR-II. Participants were interested in becoming certified STAR trainers and provided helpful suggestions for STAR implementation and sustainability. Data from these discussions will be presented along with preliminary plans to move STAR into an in-house trainer based model.

### STAR-C MOVING FROM RCT TO TRANSLATION – INITIAL FINDINGS FROM OREGON AND BEYOND

S.M. McCurry<sup>1</sup>, L. Teri<sup>1</sup>, R.G. Logsdon<sup>1</sup>, D.M. La Fazia<sup>1</sup>, J. Mead<sup>2</sup>, L.A. Stevens<sup>3</sup>, L. Korte<sup>4</sup>, 1. University of Washington, Seattle, Washington, 2. State Unit on Aging, Salem, Oregon, 3. Multnomah County Aging & Disability Services, Portland, Oregon, 4. Aging and Disability Services Administration, Department of Social and Health Services, Olympia, Washington

This paper describes an ongoing 3-year Administration on Aging-funded grant partnership between the State of Oregon and University of Washington designed to translate and sustain the evidence-based STAR-C program in Oregon. Two Area Agencies on Aging (AAAs) offered STAR-C to caregivers in three rural and urban counties. To evaluate outcomes, the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) framework was applied. To date, 142 caregiver/care-recipient dyads have been enrolled (mean caregiver age=68.4 years; 78% female). Thirteen STAR-C consultants completed training (nine AAA case managers, two private geriatric case managers, and two



regional coordinators). Participant outcomes indicate significant ( $p < .05$ ) reductions in caregiver depression, burden, and care-recipient behavioral disturbances. Plans for sustainability of STAR-C in the Oregon portfolio of caregiver services will be described, along with recent experiences introducing STAR-C as a pilot training and service implementation program in Washington State.

## SESSION 1100 (SYMPOSIUM)

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### MEASURING ALZHEIMER'S/DEMENTIA KNOWLEDGE IN DIVERSE POPULATIONS

Chair: *M. Hurwicz, Anth, Soc & Lang, UMSL, St. Louis, Missouri*

Co-Chair: *B.D. Carpenter, Washington University, St. Louis, Missouri*

Discussant: *M. Gatz, University of Southern California, Los Angeles, California*

Given the increasing prevalence of Alzheimer's disease (AD), it is essential for the public to have accurate knowledge about AD and for scientists and organizations to have well-validated tools to measure public knowledge. This symposium brings together papers by 3 researchers who have used a variety of quantitative and qualitative methods to understand knowledge about Alzheimer's disease/dementia in diverse populations. In the first paper, Carpenter conducted a cross-national study to confirm the psychometric properties of the Alzheimer's Disease Knowledge Scale (ADKS) in a variety of languages and assessment settings. He identified national differences in knowledge regarding risk factors, assessment and diagnosis, symptoms, course, life impact, caregiving, and treatment and management. In the second, Rodriguez conducted focus groups with community-dwelling Latinos in Los Angeles. He identified common themes in their knowledge and perceptions of dementia by asking questions about the idioms, behavioral signs, etiology, risk and protective factors, help-seeking, and available treatments for dementia. In the final paper, Hurwicz developed lay-generated questions based on in-depth interviews about the explanatory models of African American and European American caregivers and non-caregivers in St. Louis. These questions were administered to a large random sample to identify shared cultural knowledge about symptoms, causes/risk factors, home and physician treatments and prevention of AD in several subpopulations using the Cultural Consensus Model. The results of these studies could provide the substantive basis for the development and targeting of health education materials for specific countries and groups defined by culture.

### AN INTERNATIONAL PERSPECTIVE ON KNOWLEDGE ABOUT ALZHEIMER'S DISEASE

*B.D. Carpenter, Washington University, St. Louis, Missouri*

Many countries around the globe are facing the public health crisis prompted by the growing prevalence of Alzheimer's disease (AD). The purpose of this presentation is to review data collected using the Alzheimer's Disease Knowledge Scale (ADKS) in several countries, including Australia, Brazil, Israel, Iceland, India, and the United Kingdom. Psychometric characteristics of the scale appear to be consistent across translations and assessment settings. Knowledge about AD is variable across content domains and across countries, with notable differences in knowledge regarding risk factors, assessment and diagnosis, symptoms, course, life impact, caregiving, and treatment and management. Patterns of misinformation suggest a potential focus for future educational efforts. Accurate knowledge about AD in the general public (and a way to measure it) will be essential to future public health initiatives.

### KNOWLEDGE AND PERCEPTIONS OF DEMENTIA AMONG LATINOS

*C. Rodriguez, Psychology, University of Southern California, Los Angeles, California*

The current study examined knowledge and perceptions of dementia among a convenience sample of 40 community-dwelling adult Latinos in Los Angeles using focus group interviews asking questions regarding the idioms, behavioral signs, etiology, risk and protective factors, help-seeking, and available treatments for dementia. Common themes included: the belief that dementia is a normal part of aging, a lack of knowledge of specific treatments despite a recognition that seeking a medical diagnosis leads to the best treatment, overestimation of reported risk and protective factors of dementia, and little knowledge of the earliest signs of dementia. Participants commonly described dementia as a loss of memories, and placed a high value on the family participating in dementia care. Results suggest priorities in dementia literacy to target in public health communications among subpopulations of Latinos.

### SHARED CULTURAL KNOWLEDGE OF ALZHEIMER'S DISEASE IN A LARGE RANDOM SAMPLE

*M. Hurwicz, Anth, Soc & Lang, UMSL, St. Louis, Missouri*

Agree/Disagree data for 44 Alzheimer's knowledge items covering symptoms, causes/risk factors, home and physician treatments and prevention of AD, developed using in-depth Explanatory Model (EM) interviews with African American and European American caregivers and non-caregivers in St. Louis, Missouri, were collected from a Random Digit Dialing (RDD) sample ( $N=692$ ) in the St. Louis SMSA. Consensus Analysis (CA) was performed for the total sample, and for subsamples defined by gender, race/ethnicity, education and caregiver status. Although the "culturally correct" answer to some items in some subgroups did not match the total sample consensus for those items, the "culturally correct" answers to most of the items were shared by all groups. The content of these items and suggestions for designing and targeting health education and outreach materials for specific cultural groups are discussed.

## SESSION 1105 (SYMPOSIUM)

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### NEW INVESTIGATIONS OF AGING WITH DISABILITY: RESULTS AND IMPLICATIONS FOR DATA, POLICY AND PRACTICE

Chair: *M. Campbell, U.S. Department of Education, National Institute on Disability and Rehabilitation Research, Washington, District of Columbia*

Discussant: *M. Campbell, U.S. Department of Education, National Institute on Disability and Rehabilitation Research, Washington, District of Columbia*

This symposium will feature four presentations on aging with and aging into disability by distinguished scholars from gerontology and rehabilitation. The purpose of this symposium is to advance knowledge about the health and well-being of individuals aging with long-term disabilities acquired at different stages of the life course, and identify implications for program development and public policy. The symposium will also examine how best practices in health interventions in the fields of gerontology and disability can be used to inform each other to better meet the needs of the expanding population of individuals aging with disabilities, regardless of age of onset. Gaps in data sources and evidence will also be discussed. Implications focus on how these findings inform federal, state, and local level policies and practices as well as international efforts to bridge the fields of aging and disability research. The first two presenters focus on documenting secondary/chronic health conditions experienced by individuals aging with long-term disabilities acquired earlier in life, and outlining the results

of reviews of best practices for health promotion interventions to synthesize “what works” for middle-aged and older adults aging with physical and developmental disabilities. The third presenter utilizes data from The National Health and Aging Trends Study (NHATS) to examine implications of disability onset before late life for supportive services. The fourth presenter places these trends within a larger context of initiatives on healthy aging and highlights how they inform national and international work on bridging aging and disability research, policy, and practice.

#### **IMPLICATIONS OF KNOWLEDGE TRANSFER BETWEEN AGING AND DISABILITY FOR PUBLIC POLICY AND ADVANCING BRIDGING ACTIVITY**

M. Putnam, *School of Social Work, Simmons College, Boston, Massachusetts*

This presentation places the results of the environmental data scans on aging with physical disabilities and aging with intellectual disabilities within the context of healthy aging initiatives including the World Health Organization’s Active Aging Framework and Healthy People 2020. It discusses how findings from the data scans inform current national strategies to bridge aging and disability service systems and reduce poor outcomes for older adults with chronic conditions in need of long-term supports and services through mechanisms such as Aging and Disability Resource Centers and initiatives that support community living. It concludes by discussing how the environmental data scans contribute to the empirical argument for creating a national agenda for bridging research between the fields of aging and disability and formalizing mechanisms of knowledge transfer that support larger national goals for health population aging.

#### **IMPLICATIONS OF DISABILITY ONSET BEFORE LATE LIFE FOR SUPPORTIVE SERVICES**

B. Spillman, *Urban Institute, Washington, DC, Maryland*

Relatively little is known about the number and characteristics of persons who enter retirement ages already experiencing disabilities, although there is widespread belief that improved medical treatments and survival may be contributing to a higher proportion of older persons who have longstanding disabilities that began in midlife or earlier. The National Health and Aging Trends Study (NHATS) provides an enhanced ability to identify this group through a combination of survey reports and administrative data and to examine whether and how they differ from persons with disability onset in later life. In this presentation, we exploit this opportunity to more carefully characterize the population with early onset disability and profile how their demographic and socioeconomic characteristics, and social and family support networks; assistive technology, environmental, and informal support accommodations; and use of other supportive services compare with those for older persons with later-onset disabilities.

#### **PREVALENCE AND IMPACT OF SECONDARY HEALTH CONDITIONS IN INDIVIDUALS AGING WITH, AND AGING INTO, DISABILITY**

I. Molton, M.P. Jensen, *Rehabilitation Medicine, University of Washington, Seattle, Washington*

Individuals aging with long-standing disabilities as well as those aging into disability are at increased risk of developing chronic health conditions. These conditions, often described as “secondary” to the original disability, make a significant impact on quality of life. This presentation will have two main goals: 1) to share key findings from a series of scoping literature reviews examining the frequency, course, and impact of chronic health conditions in older persons aging with and into physical disability; and (2) to outline the results of a review of best practices for health promotion in these individuals. Key findings from these reviews highlight gaps in the knowledge base for particular conditions, describe a need for more standardized terminology defining “secondary

health conditions,” and call for better translation of effective health and wellness interventions to the older, disabled population.

### **SESSION 1110 (SYMPOSIUM)**

#### **PAIN ASSESSMENT AND MANAGEMENT IN OLDER ADULTS. CURRENT DEVELOPMENTS IN THE US, CANADA AND EUROPE**

Chair: *S.M. Zwakhalen, CAPHRI School for Public Health and Primary Care, Maastricht University, Maastricht, Netherlands*

Discussant: *A. Horgas, College of Nursing at the University of Florida, Florida, Florida*

Assessment and management of pain in older adults has been a topic of discussion during the last decade. Research focused on the development of tools to assess pain in older adults at first and more recently attention has been given to innovative ways to treat pain. In this area of pain research there is particular emphasis on residents who have dementia. During this symposium cross country developments and initiatives undertaken on pain research in older adults will be highlighted and discussed. To start with, tools available to measure pain in older adults with and without dementia will be discussed in this symposium. In Europe there is an aim towards the development of a comprehensive and internationally useful toolkit for older adults targeting the various subtypes of dementia and various aspects of pain. In the US there is a priority on addressing pharmacologic treatment of pain in older adults. The challenges of pharmacological treatment and research directions will be highlighted. In Ontario Canada, the development and implementation of provincial governmental regulations specific to pain management has recently occurred, which has created an imminent need for LTC homes to develop or improve their programs. In partnership with Health Quality Ontario a Change Package for pain management has been developed which will be discussed in detail in this presentation.

#### **CHALLENGES IN PHARMACOLOGIC MANAGEMENT OF PAIN IN OLDER ADULTS: RESEARCH DIRECTIONS**

K. Herr, *Nursing Science, The University of Iowa, Iowa City, Iowa*

Considerable interest has been voiced recently regarding chronic pain management in older adults. With the growing proportion of those over 65 globally, an urgency to address challenges of providing safe and effective pain care to older persons has surfaced. In particular, concerns regarding safe use of pharmacological agents as a strategy for pain management in this population are impacting practice and stimulating the research agenda. The FDA, NIA, and NIH Pain Consortium, as well as other groups with commitment to quality pain care, have addressed this problem with panel meetings leading to recommendations and action. This session will highlight the challenges facing the care of older persons with pain, recommendations for research and current activities in USA to move the agenda forward.

#### **INNOVATIVE HEALTH SERVICES AND POLICY FOR PAIN MANAGEMENT IN LONG TERM CARE: CREATING MOMENTUM FOR CHANGE**

S. Kaasalainen, *McMaster University, Hamilton, Ontario, Canada*

In Ontario, Canada, new long term care (LTC) regulations have recently been developed with a particular focus on improving pain management. These regulations mean that LTC homes are faced with meeting new inspection processes without much support or time to do so. As a result, a partnership with Health Quality Ontario has spawned the development of a Pain Change Package that can assist LTC homes to meet these new inspection processes. A Pain Advisory board was assembled that included 24 pain/LTC experts with representation from pharmacy, medicine, nursing, personal support workers, LTC administration, and provincial organizations. Using a Delphi consensus method that included three sequential rounds of data gathering interspersed with controlled feedback, a list of priority areas for change that aligned with

the new regulations was developed. This presentation will discuss the activities involved with this partnership and the Change Package that resulted.

#### **THE ASSESSMENT OF PAIN IN LONG TERM CARE PATIENTS WITH DEMENTIA**

S. Zwakhalen, J. Hamers, *HSR, University Maastricht, Maastricht, Netherlands*

Pain research in Europe predominantly focused on the development and evaluation of observational tools in long term care dementia patients, with a recent shift towards the uptake of strategies to assess and manage pain in daily clinical practice. We investigated which pain assessment tools are currently available and in use to assess pain in this patient population and what the psychometric qualities of these tools are. In addition the clinical usefulness were evaluated and common barriers and facilitators to use these pain tools discussed. We reviewed publications based on an extensive search strategy and evaluated the tools using quality judgement criteria. Findings show that currently, a large number of tools (>20) are available with varying degree of psychometric properties. Closer examination of the tools reveal that content and format vary extensively. In recent years more tools have become available to assess specific pain conditions (like for example osteoarthritis). Initiatives undertaken in Europe during last decade focused on developing innovative ways to both assess pain with a particular emphasis on residents who have dementia. This resulted in a large number of tools. We should avoid the development of new scales. A consensus on what to use in Europe in assessing pain in long term care residents could contribute to this proliferation.

### **SESSION 1115 (SYMPOSIUM)**

#### **SUCCESSFUL AGING – FROM INDIVIDUAL DIFFERENCES TO PERSONALIZED INTERVENTIONS?**

Chair: *B. Godde, Jacobs Center on Lifelong Learning, Jacobs University, Bremen, Germany*

Co-Chair: *M.M. Lorist, University of Groningen - Department of Experimental Psychology, Groningen, Netherlands*

With aging populations in most industrialized societies the question of how older adults can maintain or even improve their cognitive functioning and independent living has gained increasing importance. Decades of training research have demonstrated cognitive plasticity but also that training gains are highly specific. This Symposium aims to shed light on the role of specific alterations in brain function and connectivity for aging outcomes. Moreover, we will provide latest evidence on different types of training and their effects on cognitive functioning in both healthy and cognitively impaired older adults and discuss the specificity and generality of such effects. For this purpose, we will get together researchers using different methods, e.g. neuropsychological testing, EEG, fMRI, genetics, and different study samples – healthy and demented older adults. Thus, the symposium will contribute to answering the question what successful and sustainable interventions should look like. Monique Lorist will address changes in functional brain networks and compensation strategies related to specific aging outcomes. The following two presentations will report data from a one-year intervention study with older adults trained in physical fitness or motor coordination. Claudia Voelcker-Rehage will discuss the role of genetic polymorphisms on the relationship between physical activity and cognition. Ben Godde will present how cognitive resources can be freed-up by physical interventions. Finally, Marieke van Heuvelen will address effects of combined strength and aerobic exercise interventions on cognition in older adults with dementia. The session will end with a discussion of the presented findings in respect to the topic of the symposium.

#### **COGNITIVE RESOURCES NECESSARY FOR MOTOR CONTROL IN OLDER ADULTS ARE FREED UP AFTER ONE YEAR OF PHYSICAL EXERCISE TRAINING**

B. Godde, C. Voelcker-Rehage, *Jacobs Center on Lifelong Learning, Jacobs University, Bremen, Germany*

With advanced age, motor tasks are increasingly in need of cognitive control. Moreover, in older adults low fitness corresponds with less automation and more cognitive supervision. To study the effect of physical exercise on cognitive control of complex motor tasks, 44 healthy older adults (62-79 years of age) participated in a one-year intervention study. They trained either walking or motor coordination or did relaxation and stretching as active control group. Brain activation during motor imagery of forward and backward walking was assessed with functional MRI. BOLD responses in selected brain regions modulated by fitness levels under control conditions were analysed. Both training interventions led to significantly reduced activation in the dorsolateral prefrontal cortex during motor imagery. There was no such effect for the control group. Therefore our results reveal that one year of physical exercise is sufficient to free up frontal brain resources otherwise spent to the cognitive control of motor tasks.

#### **COMT POLYMORPHISMS INFLUENCE THE ASSOCIATION BETWEEN PHYSICAL AND COGNITIVE FITNESS IN OLDER ADULTS**

C. Voelcker-Rehage<sup>1</sup>, A. Jeltsch<sup>1,2</sup>, B. Godde<sup>1</sup>, U.M. Staudinger<sup>1</sup>, *1. Jacobs Center on Lifelong Learning and Institutional Development, Jacobs University Bremen, Bremen, Germany, 2. University Stuttgart, Stuttgart, Germany*

Physical fitness is positively related to cognitive functioning in older adults. Further, it is well known that genetic predispositions might influence cognitive performance. One gene related to dopamine metabolism and executive functioning is the COMT gene with met/met carriers outperforming val/val carriers in cognitive tasks. The aim was to analyze the association of the COMT gene polymorphisms with the relationship between fitness and cognition. Sixty-eight healthy older adults (62-79 years of age) were analyzed. DNA was extracted from capillary blood samples. As indicator for executive control a modified version of the Flanker Task, as indicator for fitness a battery of motor tests was used. Hierarchical regression analyses revealed a positive influence of fitness and of the interaction between fitness and COMT polymorphisms on accuracy in the Flanker task. Val/val carriers revealed the strongest association between fitness and cognition. Thus, exercise might particularly help val/val carriers to improve their cognitive functioning.

#### **EFFECTS OF COMBINED STRENGTH AND AEROBIC TRAINING IN OLDER PEOPLE WITH DEMENTIA**

M.V. Heuvelen, *Center for Human Movement Sciences, University Medical Center Groningen / University of Groningen, Groningen, Netherlands*

There is ample evidence that physical exercise enhances cognition in healthy older people. In this population, a combination of strength and aerobic exercise appeared to be most effective. In older people with dementia, the effects of physical exercise on cognition are less clear and the combination of strength and aerobic exercise was not studied before. Therefore, the effects of combined strength and aerobic exercise on cognitive functioning, physical functioning and ADLs in older people with dementia were investigated. A randomized clinical trial was performed. Persons recruited in nursing homes/homes for the elderly with moderate to moderate/severe dementia were included (MMSE 10-20). The participants were randomized over three interventions: combined strength/aerobic training, aerobic training, and control (social visits). Sessions lasted 30 minutes, 4 times/week, during 8 weeks. The effects were measured with performance-based tests for executive functioning, memory, physical fitness and ADLs. Preliminary results of 75 participants will be presented.

## FUNCTIONAL CONNECTIVITY AND COGNITIVE PERFORMANCE IN THE AGING BRAIN

M.M. Lorist<sup>1,2</sup>, L. Geerligs<sup>1,2</sup>, 1. *Department of Experimental Psychology, University of Groningen, Groningen, Netherlands*, 2. *BCN-Neuroimaging Center, University of Groningen, Groningen, Netherlands*

In different projects we examined whether age-related changes in brain structure and neuronal activity affects functional connectivity and cognitive performance. First, a data-driven method was used to analyse fMRI data of older and younger participants who performed a visual oddball task. Results showed a widespread decrease in the specificity of functional networks in older compared to younger participants, reflected in decreased connectivity between areas belonging to the same functional network and increased connectivity between areas belonging to different networks. In an EEG study we tested whether changes in connectivity were related to performance changes. Phase locking analyses in the alpha band revealed that increased phase locking between frontal and occipito-parietal regions in the pre-stimulus interval led to better performance in both age groups. Phase locking in the beta band was related to better suppression of irrelevant information in the elderly group only, which may reflect compensation mechanisms employed by high performing elderly.

## SESSION 1120 (SYMPOSIUM)

### SYMPOSIUM ON REDUCING DISTRESS IN DEMENTIA CAREGIVERS: THE NUMBER NEEDED TO TREAT (NNT)

Chair: R.C. Moore, *Psychiatry, University of California, San Diego, La Jolla, California*

Co-Chair: B. Mausbach, *Psychiatry, University of California, San Diego, La Jolla, California*

Discussant: R.C. Moore, *Psychiatry, University of California, San Diego, La Jolla, California*

This symposium's primary objectives are to showcase a new method for evaluating clinical effectiveness of EBTs: the Number Needed to Treat (NNT), and to introduce two novel interventions for dementia caregivers. The symposium will be of interest to mental health providers. Caregivers are at risk for significant health problems, including increased stress, major depression, generalized anxiety, and sleep problems, and interventions to improve caregiver health and emotional wellbeing have greatly evolved over the past decade. We will begin with an overview of NNT, which is a way for clinicians to discuss the strength of an intervention in terms of how many clients need to receive the treatment before one client will show clinical improvement. Knowing the NNT can help clients and clinicians weigh the costs and benefits of specific treatment modalities. Following the NNT overview, the NNTs of the largest existing dementia caregiver intervention and two novel interventions will be presented. The first presentation will discuss the NNTs on several aspects of caregiver wellbeing (e.g., depression, burden, self-care) from the multicomponent Resources for Enhancing Alzheimer's Caregiver Health 2 (REACH2) program. Next, we will introduce a new EBT for reducing depression and distress in dementia caregivers: the Pleasant Events Program (PEP). In the PEP randomized, controlled trial, several biomarkers associated with cardiovascular disease risk were measured, and the impact of PEP on these biomarkers will be discussed. The final presentation will be a comparison between the efficacy of Acceptance and Commitment Therapy and Cognitive Behavioral Therapy for reducing caregiver distress.

### ACCEPTANCE AND COMMITMENT THERAPY VS. COGNITIVE BEHAVIOURAL THERAPY FOR DEMENTIA FAMILY CAREGIVERS: OUTCOMES OF A RANDOMIZED INDIVIDUAL TREATMENT STUDY

A. Losada<sup>1</sup>, M. Marquez-Gonzalez<sup>2</sup>, R. Romero-Moreno<sup>1</sup>, J. Lopez<sup>3</sup>, V. Fernandez-Fernandez<sup>1</sup>, C. Nogales-Gonzalez<sup>1</sup>, 1. *Universidad Rey Juan Carlos, Psychology Department, Madrid, Spain*, 2. *Universidad Autonoma de Madrid, Biological and Health Psychology Department, Madrid, Spain*, 3. *Universidad San Pablo Ceu, Department of Psychology, Madrid, Spain*

Preliminary data analyzing the differential efficacy of Acceptance and Commitment Therapy (ACT), Cognitive Behavioural Therapy (CBT) and a minimal support control group (MSG) for reducing depression in dementia caregivers is described (N=44). While 78.6% of caregivers in the ACT program showed CES-D scores lower than 16 at post-intervention (d= 1.39; NNT for obtaining a 50% improvement = 2.04), a 58.8% and 23.1% change was found for CBT (d = 1.35; NNT for a 50% improvement = 2.66) and MSG (d = -0.12) groups. Regarding anxiety, an effect size of 1.29 was found for ACT, and 0.79 and 0.04 for CBT and MSG, respectively. The NNT for a 50% improvement in anxiety in ACT and CBT is 4.6. The NNT for obtaining a greater improvement in experiential avoidance is lower for ACT than for CBT, while a lower NNT is found in CBT for change in dysfunctional thoughts compared with ACT.

### NUMBER NEEDED TO TREAT VS. TRADITIONAL EFFECT SIZES: EXPLORATION OF THE REACH II RANDOMIZED, CONTROLLED TRIAL

R.C. Moore<sup>1</sup>, J. Ceglowski<sup>1</sup>, E. Chattillion<sup>1,2</sup>, B. Mausbach<sup>1</sup>, 1. *Psychiatry, University of California, San Diego, La Jolla, California*, 2. *San Diego State University/University of California, San Diego, Joint Doctoral Program in Clinical Psychology, San Diego, California*

Number Needed to Treat (NNT) was calculated based on the published results of the structured multicomponent REACH II intervention for reducing depression in caregivers (Belle et al., 2006). In a sample of 642 Hispanic (N=212), Caucasian (N=219), and African-American (N=211) caregivers, NNT for improvements in burden, depression, problem behaviors, self-care and social support were calculated. This intervention yielded positive results for decreasing depression in Hispanics (NNT = 4), yet was not as successful in the Caucasian (NNT=20) or African-American (NNT=12.66) groups. NNT for overall improvement across all domains was 2.59 for Hispanic, 5.92 for Caucasian, and 8.4 for African-American. Additionally, NNTs for changes in clinical depression and institutional placement of care recipients at 6-months post-intervention were calculated in each group and the whole sample. Overall, the NNTs were much more robust than the effect sizes, and are encouraging for clinicians and agencies who are interested in implementing this intervention.

### HOW EFFECTIVE IS YOUR TREATMENT? EVALUATING TREATMENT EFFECTS USING THE NUMBER NEEDED TO TREAT (NNT) EFFECT SIZE

D.E. Jimenez<sup>1</sup>, R.C. Moore<sup>2</sup>, V. Cardenas<sup>2</sup>, B. Mausbach<sup>2</sup>, 1. *Dartmouth University, Hanover, New Hampshire*, 2. *Psychiatry, University of California San Diego, La Jolla, California*

The American Psychological Association (APA) Task Force on Statistical Inference has stated that scientists should "always provide some effect size estimate when reporting a p value." In intervention research, effect sizes provide a meaningful way to evaluate the strength of a treatment's effect on a given outcome. The most commonly reported effect size for treatment research is Cohen's d, although the clinical meaning of this metric is not always intuitive. For example, patients may not grasp the meaning of improving 0.8 standard deviations in depressive symptoms over the course of treatment. When comparing treatments, the Number Needed to Treat (NNT) effect size represents the number

of individuals who must receive treatment A to generate one more success than would have resulted had all persons been given treatment B. We will present information on the clinical meaning of NNT, methods for its calculation, and provide examples from the empirical literature.

### **BEHAVIORAL ACTIVATION THERAPY FOR DEPRESSIVE SYMPTOMS AND CVD RISK IN CAREGIVERS: A CONTROLLED TRIAL**

B. Mausbach<sup>1</sup>, E. Chattillion<sup>1</sup>, R.C. Moore<sup>1</sup>, T.L. Patterson<sup>1</sup>, R. von Känel<sup>2</sup>, I. Grant<sup>1</sup>, 1. *Psychiatry, University of California San Diego, La Jolla, California*, 2. *Bern University Hospital, Bern, Switzerland*

We describe results of a randomized trial comparing a brief (6-week) Behavioral Activation (BA) intervention to an information support (IS) intervention for reducing depression, Interleukin (IL-) 6, and D-dimer in 80 dementia caregivers (CG). We compared BA and IS on change from pre- to post-treatment and calculated the number-needed-to-treat (NNT) for 50% reduction in each outcome. The BA condition showed greater improvement in depressive symptoms ( $p = .049$ ). 39% of CG in the BA condition showed 50% improvement compared to 12.8% in the IS condition (NNT = 3.82). BA participants also showed greater reduction in IL-6 ( $p = .048$ ), with 41.4% of CG showing 50% reduction compared to 20% of IS participants (NNT = 4.67). Group differences were not observed in D-dimer change ( $p = .699$ ). However, a main effect for time was evident ( $p = .039$ ), with the sample-wide mean  $\pm$  SE decrease of  $103.0 \pm 49.3$  pg/ml.

## **SESSION 1125 (SYMPOSIUM)**

### **WHAT'S TIME GOT TO DO WITH IT?: EXPLORING CHANGING CONCEPTS, PRACTICES AND EXPERIENCES RELATED TO AGING**

Chair: *R.L. Beard, Department of Sociology & Anthropology, College of the Holy Cross, Worcester, Massachusetts*

Discussant: *T. Calasanti, Virginia Tech, Blacksburg, Virginia*

This panel will examine the salience and changing role of time in aging theory, research, practice and experiences. By exploring the different concepts, images and metaphors of time related to aging, and how these have changed historically, we aim to open up the dialogue to a richer, multi-layered temporal perspective on aging. Conceptually, a more complete understanding of human aging requires an appreciation of numerous images and metaphors of time and temporality beyond chronological age, physical appearance and functional performance. Practically, outcome-based interventions, especially for individuals with dementia, fall short of adequately measuring “in-the-moment” benefits of various arts therapies. Experientially, frank discussion about how the very meaning of time and aging changes across the life course offers a broader definition of subjective experiences of self aging. Given the ever-evolving nature of the theory, concepts, practices and experiences of time, temporality has everything to do with aging.

### **OUT OF TIME OR IN-THE-MOMENT? BEYOND OUTCOME-BASED ARTS THERAPY INTERVENTIONS FOR DEMENTIA**

*R.L. Beard, Department of Sociology & Anthropology, College of the Holy Cross, Worcester, Massachusetts*

Research on arts based therapies (AT) has long been accused of trying to impose a basic science model of evaluation on what is an inherently idiosyncratic process and subjective experience. Especially with persons who have dementia, the value of understanding the meaning of AT “in-the-moment” for those participating in such programs cannot be overstated. Efforts to evaluate these programs based on such narrow scientific measures as quantifiable outcomes risks overlooking the meaning for participants while they are participating. In contrast, various programs focused on subjective well-being and/or enrichment will be discussed. Based on an extensive literature review of AT over the past

two decades, reflections on the state-of-the-science and art will be made. In contrast to biomedical models privileging the management of so-called behavioral problems, the pros and cons of refocusing evaluation on subjective well-being and enrichment will be discussed, as will implications for AT practice.

### **THE CHANGING MEANINGS OF “TIME” TO AN AGING GERONTOLOGIST**

*W. Achenbaum, University of Houston, Houston, Texas*

As a gerontologist for over four decades, I will recollect my thoughts about my aging self at 25, 40, 55, and 65. As a historian of aging, in this presentation I will locate my changing perspective within the salient cultural trends and popular gerontological frameworks of the epochs relevant to my aging self concept and experience. Engaging policy making related to, images of, and issues regarding spirituality in aging, I will both reflect on my past self as well as speculate about my future aging self and the projects I hope to complete before exiting the stage.

### **THE RICHNESS OF TIMES IN AGING**

*J. Baars, University of Humanistic Studies, Haarlem, Netherlands*

Human aging is basically living in a time perspective. In a more specific meaning it refers to human life after somebody has crossed the threshold of being called ‘aged’ or ‘old’. Usually such thresholds are connected with a certain chronological age, although this age may vary across cultures and societies. Other dimensions of ascribing the status of being or becoming ‘aged’ are physical appearance or functional performance, which however do not change according to calendar age and introduce other temporal perspectives. A further inspection reveals several different concepts and metaphors of time and temporality which are important to distinguish and acknowledge if we want to attain a fuller understanding of human aging.

## **SESSION 1130 (PAPER)**

### **DISCOVERY EXCHANGE: EARLY ORIGINS OF ADULT WELL-BEING**

#### **EARLY LIFE NUTRITIONAL ENVIRONMENTS, INFECTIOUS DISEASE AND OLDER ADULT HEALTH: CONTRASTING CROSS NATIONAL MORBIDITY PATTERNS**

*M. McEniry, University of Michigan, Ann Arbor, Michigan*

The dramatic improvement in life expectancy during the 20th century (1930s-1960s) was primarily due to reductions in infant and child mortality as a result of massive public health interventions and medical technology but in some instances occurred largely in the absence of improvements in standard of living. Using comprehensive historical and survey data on nearly 144,000 older adults (50 years and older) in 20 low, middle and high income countries, the paper demonstrates that these circumstances produced a larger pool of survivors of poor early life conditions (i.e., poor nutrition, infectious diseases, and poor socioeconomic conditions) in the “tip of the iceberg” unique cohorts of the 1930s-1960s that is more susceptible to their effects later in life, specifically in the case of adult diabetes. The results suggest the importance of early life nutritional environment and infectious disease and a critical period in utero, early infancy or childhood with consequences for adult functionality and mortality. In contrast and surprisingly the paper provides evidence that in the case of adult heart disease the composition of early life diet is important with poor early life nutritional environment and infectious disease playing a competing role in the “tip of the iceberg” cohorts. Evidence for increased susceptibility to the effects of poor early life conditions for the “tip of the iceberg” unique cohorts is thus mixed but may become more apparent when individuals from later cohorts born in low and middle income countries reach older ages.

## CHILD MALTREATMENT AND ADULT HEALTH: DO FAVORABLE RECOLLECTIONS OF THE OFFENDING PARENT SOFTEN THE BLOW?

M.H. Schafer<sup>1</sup>, P. Morton<sup>2</sup>, K.F. Ferraro<sup>2</sup>, 1. *Sociology, University of Toronto, Toronto, Ontario, Canada*, 2. *Purdue University, West Lafayette, Indiana*

**Objectives:** This study considers the long-term health consequences of childhood maltreatment on health. Distinct from previous research, we examine the maltreatment in the context of more general parental evaluations. Our main hypothesis is that adults who experienced maltreatment but view the overall relationship with the offending parent in a positive light will report better health than adults with more negative recollections of their offending parent. **Methods:** Analyses used retrospective and current data from the Midlife Development in the United States (MIDUS) study. We employed negative binomial regression to predict the count of chronic conditions experienced in middle- and older-aged men and women; ordinary least squares regression was used to understand the association between maltreatment, parental evaluations, and physical symptom complaints. **Results:** A considerable proportion of middle- and older-age adults who experienced frequent maltreatment nevertheless evaluated the relationship with their offending parent as “excellent”, “very good”, or “good” (e.g., 64% for physical abuse by mothers). Adults who experienced child maltreatment reported a greater number of chronic medical conditions and physical symptoms, but the effect was much smaller when they evaluated the relationship with the offending parent as a generally positive one. **Discussion:** Findings highlight a common and seemingly paradoxical pattern among MIDUS participants: the co-presence of harsh parental behavior and positive recollections of parental relationships during childhood. Moreover, these surprising patterns of retrospective interpretation predict very different experiences of adult health, suggesting that favorable recollections of parents in spite of maltreatment may be a compensatory mechanism of resilience.

## CHILDHOOD POVERTY AND DEPRESSIVE SYMPTOMS FOR OLDER ADULTS IN MEXICO: A LIFE-COURSE ANALYSIS

J. Torres, *Community Health Sciences, UCLA, Los Angeles, California*

Recent health research has turned its focus to childhood circumstances in order to explain later-life outcomes. However, less work has been done in the developing country context, and particularly on mental health outcomes. This study applies life-course theories of latent (direct), pathway (indirect) and conditional effects in an analysis of childhood poverty on later-life depressive symptoms among older adults in Mexico. Data are from the 2001 Mexican Health and Aging Study (MHAS), a nationally representative sample of older adults born before 1951 ( $n=8697$ ). Respondents had a mean of 3.6 past-week depressive symptoms (9-item CES-D scale) and 71% had no household sanitation facilities before age 10, indicating poverty. Childhood poverty is significantly related to scores on the 9-item CES-D scale in the full model ( $b=0.20$ ,  $p<0.01$ ). This effect is partially mediated by four adult socioeconomic status measures, although decomposition analysis reveals the mediation effect to be primarily driven by education, and minimally by occupation, wealth or income. Results for conditional effects of childhood poverty and education on CES-D scores are negative. The negative results instead suggest that material deprivation during childhood has a consistently adverse impact on depressive symptoms later on regardless of years of education, although education has important implications for health outcomes generally. These findings have important implications for Mexico's rapidly aging population as well as efforts for childhood poverty reduction.

## THE EFFECTS OF CHILDHOOD SOCIAL CONDITIONS ON MENTAL AND PHYSICAL HEALTH OF SOUTH KOREAN OLDER ADULTS

H. Jun<sup>1</sup>, J.I. Wassel<sup>2</sup>, K. Cho<sup>1</sup>, H. Chai<sup>1</sup>, 1. *Yonsei University, Seoul, Republic of Korea*, 2. *The University of North Carolina Greensboro, Greensboro, North Carolina*

Historically, researchers have tended to focus on the low social conditions in the adulthood when examining social inequalities related to health issues. Only recently has the link between childhood factors and the health status in older adulthood is only recently gained attention. Current South Korea older adults faced great adversity as children during and after the Korean War however no formal study has examined the effect of this hardship on later life. Using the South Korea Welfare Panel data, we examined the association between the physical/mental health of the older South Korean adults (aged 60+ in 2006,  $N=4,579$ ) and childhood social conditions, including economic adversity and parental loss. Four health indicators (depression level, self-esteem, health satisfaction, and self-perceived health status) were measured yearly from 2006 to 2009. Using Latent Growth Curve Models, the result suggest that childhood parental loss was significantly associated with the initial levels of all four health measures in 2006. Older Koreans who experienced childhood parental loss marked significantly high on the initial 2006 level of depression measured and significantly low on self-esteem, health satisfaction, and self-perceived health status and were sustained for all times measured. Experiencing economic adversity during childhood was significantly associated with the four health variables. However its effect was positive for health status, suggesting that the economic adversity during childhood tended to decrease over time. These results suggest that experiencing parental loss during childhood is more likely to trigger negative long-term effects in the older ages compared to experiencing economic adversity during childhood.

## EDUCATIONAL TRAJECTORIES AND WELLBEING: A LIFECOURSE PERSPECTIVE

A. Jenkins, R.D. Wiggins, *Quantitative Social Science, Institute of Education, University of London, London, United Kingdom*

This project presents new quantitative evidence for contemporary ‘third age’ individuals on the relationship between their individual histories of learning and subsequent well-being. In the European Union there is a mounting policy interest, in the influence of learning on a range of outcomes, notably health and wellbeing. However, much of the research to date has tended to focus on younger adults and the immediate benefits of participating in courses. The longer term outcomes, such as the potential of accumulated learning experience for enriching later life, have been neglected. Our research therefore adopts a lifecourse approach to participation in learning and the potential benefits of learning. We will present typologies of participation in learning through the lifecourse into early old age, and then to relate these differing learning ‘trajectories’ to wellbeing at age 50. We use data from the UK's National Child Development Study (NCDS). This is a large-scale survey which contains information on all those born in Britain in one week in 1958. Follow-up data collection has taken place at various points in childhood and adulthood, most recently at age 50. Wellbeing at 50 is analysed as an outcome in path analyses and structural equation models. Our results will show, firstly, the extent to which engagement in learning has an impact on wellbeing at 50 after allowing for other factors and, secondly, whether the various learning trajectories have differential effects on wellbeing.

## ADOLESCENT HEALTH AND EDUCATIONAL ATTAINMENT: AN EXAMINATION OF REVERSE CAUSALITY

A. Zajacova<sup>1</sup>, K.M. Walsemann<sup>2</sup>, 1. *University of Wyoming, Laramie, Wyoming*, 2. *University of South Carolina, Columbia, South Carolina*

Educational attainment is a key predictor of health in adulthood and old age. A critical question, however, is whether early health problems can depress educational attainment, creating a spurious

association in studies of the education- health relationship. We analyzed the impact of adolescent health limitations on educational attainment. Our study is unique in that it accounts for major correlates of educational attainment identified in the educational and psychological literatures, including factors like parental background and educational aspirations. We used data from the National Longitudinal Survey of Youth (NLSY79), a nationally representative sample of 12,686 respondents ages 14-21 at baseline who were followed through 2008 when they were ages 42-50. Regression and fixed-effects models estimated the relationships between adolescent health and education, net of family background, academic performance, school-level information, and personality characteristics. Adolescent health limitations had no significant effect on educational attainment net of family background and other covariates. In bivariate sibling fixed-effects models, there was also no association between limitations and attainment. At the same time, the limitations strongly predicted adult health outcomes, indicating that the measure had good criterion and predictive validity. We found little evidence that adolescent health limitations influenced educational attainment. The results have implications for research on educational inequalities in adult health, providing additional support that schooling's effects are likely causal.

## **SESSION 1135 (SYMPOSIUM)**

### **DEVELOPING GERIATRIC NURSE LEADERS TO ADVANCE INTERPROFESSIONAL PRACTICE**

Chair: *D. Cleeter, Sawgrass Leadership Institute, Ponte Vedra Beach, Florida*

Discussant: *B. Resnick, University of Maryland School of Nursing, Baltimore, Maryland*

Many reports have recently called for the development of skilled and committed leaders as we intentionally transform healthcare in the United States. A clearly identified need for the immediate future is to lead practice advancements in the care of older adults across settings. Twenty eight Fellows of the national Geriatric Nursing Leadership Academy (GNLA) have completed the 18 month experience in which leadership of an inter-professional team project serves as the medium for individual leadership development. Of these interprofessional team projects 11 were conducted within acute care settings, 5 within community health agencies, and 12 occurred within long term care organizations including nursing homes and assisted living facilities. From Alaska to Maine, in rural and urban locations, and among a variety of patient populations, these projects have resulted in significant outcomes regarding practice improvements at the individual and family level, system and organizational changes including impact on market share, cost reduction, workforce development through education of geriatric resource nurses (GRN) and other health professionals caring for older adults, leadership of national professional organizations, and involvement within regional and national policy arenas. Using evidence from the GNLA Fellows evaluations and reports, the presentations will address practice advancements, individual leadership development, expanded scope of involvement within professional organizations, career progression, policy activities, and national impact. In addition, in-depth reports from two Fellows regarding the outcomes of their inter-professional projects will be included in the symposium.

### **GERIATRIC NURSE LEADERSHIP OF INTERPROFESSIONAL TEAMS: HEALTHCARE IMPROVEMENTS AND OUTCOMES**

*J.F. Wyman<sup>1</sup>, D. Cleeter<sup>2</sup>, C.J. Beverly<sup>3</sup>, 1. School of Nursing, University of Minnesota, Minneapolis, Minnesota, 2. Sawgrass Leadership Institute, Ponte Vedra Beach, Florida, 3. Arkansas Medical Sciences University, Little Rock, Arkansas*

Developing nurses who can effectively lead interprofessional teams that improve care quality to older adults is a major goal of

the Geriatric Nursing Leadership Academy (GNLA). This presentation will summarize the 28 interprofessional projects conducted by the GNLA Fellows and describe their impact on patient, family, and organizational outcomes. Outcomes associated with the Fellows' professional development will also be described. Practice changes included implementation of new guidelines, culture change programs, the NICHE program across settings, workforce development programs, and development of a telehealth program. Project outcomes included reduced use of psychotropic medications, falls, and readmission rates; improved function; decreased length of stay; improved patient/family satisfaction; increased Press-Ganey scores; increased geriatric knowledge among nursing staff; and reduced staff turnover and increased retention. As a result of their GNLA experience, Fellows have enrolled in advanced degree programs, with a majority assuming new leadership positions and receiving state and national awards.

### **IT'S MY HEALTH: A NURSING MODEL COMBINING PATIENT-CENTERED CARE AND TRANSITIONAL CARE**

*K. Wright<sup>1,2,3</sup>, C. Holder<sup>1</sup>, K. Hausch<sup>1</sup>, B. Lyn<sup>1</sup>, S. Hazelett<sup>1</sup>, M.H. Ward<sup>1</sup>, K. Blake<sup>1</sup>, C. Natale<sup>1</sup>, 1. Summa Health System, Akron, Ohio, 2. The University of Utah College of Nursing John A. Hartford Center of Geriatric Nursing Excellence, Salt Lake City, Utah, 3. John A. Hartford Building Academic Geriatric Nursing Capacity Scholar and Substance Abuse and Mental Health Services Administration MFP Fellow at ANA, New York, New York*

Fifty percent of Medicare patients returning to the hospital did not follow-up with a doctor after discharge. "It's My Health (IMH) is a nurse driven model of care designed to activate patients/families and improve the discharge care experience. In a pilot study, nurses provided the IMH folder and collaborative goal-setting. Patients were encouraged to keep discharge instructions in the folder and take the IMH folder to each medical appointment. N=504 patients were discharged; nurses completed a 2-3 day post-discharge phone call with a 62% completion rate. Seventy-six percent of patients made follow-up appointments and 78% filled prescriptions. Press Ganey Satisfaction with discharge planning scores increased to the 80-95%tile range. IMH was awarded "Best New Innovation" at 2011 Magnet Conference and Summa Health System created a centralized Post-Discharge Phone Call program as part of the Service Excellence Department to assure a standardized process that coach's patients around their IMH goals.

### **INTEGRATING NICHE ACROSS SETTINGS: A GERIATRIC NURSE LEADERSHIP CAPSTONE PROJECT**

*C. Roscoe-Herbert, P. DeGolia, Geriatrics, UH Hospitals, Cleveland, Ohio*

Frail older adults across healthcare settings often receive care from healthcare providers, including nurses, having repeatedly failed to recognize acute health status changes precipitated by certain medications, infection, and dehydration related issues such as constipation. The specific aim for the Geriatric Nursing Leadership Academy (GNLA) Fellowship Project was to institute a comprehensive Leadership Plan to improve senior care across healthcare settings and concurrently integrate a large health system with model senior care programming. The Fellow led integration efforts yielded an 83% NICHE designation for acute facilities. Other project outcomes and innovations include, development and implementation of the Teach Me Tuesday NICHE GRN Training Program<sup>®</sup>, and extending NICHE into the community to nursing homes (n=22) and one home care agency. More than two hundred (n=219) nurse recruits registered for Cohorts I – IV with near 82% (n=180) GRN(s) completing the training as skilled champions to improve senior care across the healthcare continuum.

## PREPARING GERIATRIC NURSES TO TRANSFORM HEALTH CARE ACROSS CARE SETTINGS

C.J. Beverly, *College of Nursing, University of Arkansas for Medical Sciences, Little Rock, Arkansas*

The Geriatric Nurse Leadership Academy (GNLA) serves as a mechanism for Fellows to increase knowledge about the health care delivery system and leadership in the policy arena at local, state and national levels. The Academy provides policy related learning opportunities by providing opportunities to increase knowledge and role of key agencies in the health care delivery system. Inter-professional opportunities engage other disciplines in the policy dialogue are examined through multiple strategies that include online discussions and inviting key policy stakeholders to site visits. Activities will be presented describing the experiences of all Fellows aimed at transforming health care within the context of the Patient Protection and Affordable Care Act and the work of the Fellows in Cohort II related to one or more of the recommendations from the Institute of Medicine's Future of Nursing report.

## SESSION 1140 (SYMPOSIUM)

### FIRST FRUITS FROM THE LIFESTYLE INTERVENTIONS AND INDEPENDENCE FOR ELDERLY (LIFE) STUDY

Chair: *S.B. Kritchevsky, Sticht Center on Aging, Wake Forest School of Medicine, Winston-Salem, North Carolina*

Co-Chair: *M. Pahor, University of Florida, Gainesville, Florida*

Discussant: *J.M. Guralnik, University of Maryland, Baltimore, Maryland*

The growing older population makes the identification of strategies to maintain functional independence a major public health priority. Physical inactivity is one of the strongest predictors of physical disability in elders, and substantial evidence from observational studies and small scale randomized trials targeting intermediate endpoints suggests that moderate-intensity physical activity can prevent mobility disability. However, there have yet to be trials confirming the efficacy of exercise for the prevention of clinical disability endpoints. To remediate this gap, several academic institutions with support from the National Institute on Aging and National Heart, Lung, and Blood Institute have fielded the LIFE Study, a Phase 3 multicenter randomized controlled trial comparing the effect of a supervised moderate-intensity physical activity program to a health education program in 1,635 sedentary older adults. Participants (age range 70-89; mean 78.9 yr; 33% male; and 25.8% non-white) were recruited by 8 field centers over a 21 month period. At baseline they were sedentary, at high risk for mobility disability (Short Physical Performance Battery score < 10) but able walk 400 m within 15 minutes without sitting, leaning, using a walker or the help of another person. This symposium will be the first presentation of LIFE data and will include its unique context (Pahor); recruitment strategies (Marsh); and baseline relationships between physical function and cognition (Espeland); peripheral vascular disease (McDermott) and sleep (Fragoso). LIFE is supported by a NIA grant U01 AG22376 and a supplement from the NHLBI. Additional support comes from the Pepper Centers grants.

### DESIGN AND RATIONALE FOR A LONG-TERM STUDY OF PHYSICAL ACTIVITY IN OLDER ADULTS

M. Pahor<sup>1</sup>, R. Fielding<sup>2</sup>, T. Church<sup>3</sup>, J. Williamson<sup>4</sup>, T. Manini<sup>5</sup>, S. Blair<sup>6</sup>, *1. University of Florida, Gainesville, Florida, 2. Tufts University, Boston, Massachusetts, 3. Pennington Biomedical Research Center, Baton Rouge, Louisiana, 4. University of Florida, Gainesville, Florida, 5. Wake Forest University, Winston Salem, North Carolina, 6. University of South Carolina, Columbia, South Carolina*

LIFE is a Phase 3, multicenter randomized controlled trial which compares a physical activity (PA) with a successful aging (SA) program in 1635 sedentary older persons over approximately 3 years. The primary outcome is major mobility disability (inability to walk 400m).

Secondary outcomes include cognitive function (Digit Symbol Substitution Test, Hopkins Verbal Learning Test); serious fall injuries; persistent mobility disability; major mobility disability or death; disability in activities of daily living; and cost-effectiveness. Tertiary outcomes include mild cognitive impairment or dementia, cognitive assessments, sleep disturbances, pulmonary function and events, and cardiovascular events. PA consists of walking at moderate intensity, resistance exercises, balance, stretching and behavioral counseling. SA consists of health education seminars regarding health-related matters and upper extremity stretching exercises. LIFE will provide definitive evidence regarding the efficacy of PA for preventing major mobility disability, and will yield valuable information concerning the efficacy of PA across several health outcomes.

### PERFORMANCE OF A COMPUTER-BASED ASSESSMENT OF COGNITIVE FUNCTION IN TWO COHORTS OF SENIORS

M.A. Espeland<sup>1</sup>, C.M. Castro<sup>2</sup>, J.M. Jennings<sup>3</sup>, J.A. Katula<sup>3</sup>, D.R. Kerwin<sup>4</sup>, A. Kramer<sup>5</sup>, J. Rushing<sup>1</sup>, *1. Wake Forest School of Medicine, Winston-Salem, North Carolina, 2. Stanford Prevention Research Center, Palo Alto, California, 3. Wake Forest University, Winston-Salem, North Carolina, 4. Northwestern University Feinberg School of Medicine, Chicago, Illinois, 5. University of Illinois at Urbana-Champaign, Urbana, Illinois*

Computer-based cognitive assessment tools are increasingly being incorporated in clinical trials and multicenter cohort studies because they may provide better standardization of test administration; richer data on performance measures such as response times, latency, and variability; and opportunities for greater efficiency and improved quality control for data management. We describe a battery developed in the Senior's Health and Activity Research Program pilot study (N=73) and implemented in LIFE (N=1635), a major multicenter clinical trial examining whether physical activity may reduce the risk of mobility disability and cognitive decline. Tasks to assess working memory, response inhibition, and attentional flexibility were administered; data were uploaded to a web-based data management system. Across both cohorts, computer-administered cognitive function scores were consistently related to risk factors for cognitive dysfunction, objective measures of physical function, and interviewer-administered assessments of cognitive function. They had stronger associations with 400 m walk gait than interviewer-administered test scores.

### THE ANKLE-BRACHIAL INDEX (ABI), LEG SYMPTOMS, AND PHYSICAL PERFORMANCE IN THE LIFE STUDY

M.M. McDermott<sup>1</sup>, L. Lovato<sup>4</sup>, J. Guralnik<sup>3</sup>, A.B. Newman<sup>2</sup>, *1. Northwestern University Feinberg School of Medicine, Chicago, Illinois, 2. University of Pittsburgh Aging Institute, Pittsburgh, Pennsylvania, 3. National Institute on Aging, Bethesda, Maryland, 4. Wake Forest School of Medicine, Salem, North Carolina*

Among 1527 LIFE participants with an ABI < 1.30, 219 (14%) had an ABI < 0.90, consistent with peripheral arterial disease (PAD). Exertional leg symptoms were reported by 35% with PAD vs. 25% without (P=0.001). Prevalences of intermittent claudication symptoms were 5.5% and 1.2% among those with vs. without PAD, respectively (P<0.0001). Lower ABI values were associated with older age, male gender, being African-American (all p-values < 0.001) and a history of current or former smoking, but not diabetes mellitus. Adjusting for age, sex, race, body mass index, smoking, and comorbidities, lower ABI values were associated with lower SPPB scores (p=0.02) and a trend toward slower 400-meter walk time (P trend=0.06). In LIFE, PAD is common and frequently asymptomatic. Lower ABI values were not significantly associated with walking endurance, perhaps because of the higher prevalence of frailty among LIFE participants as compared to community dwelling older men and women.



## SLEEP-WAKE COMPLAINTS AND SLEEP-APNEA RISK AMONG OLDER PERSONS WITH FUNCTIONAL LIMITATIONS (LIFE STUDY)

C. Frago<sup>1</sup>, M.E. Miller<sup>2</sup>, Y. Endeshaw<sup>3</sup>, T.B. Rice<sup>4</sup>, A. King<sup>5</sup>, S.B. Kritchevsky<sup>2</sup>, T.M. Gill<sup>1</sup>, *1. Yale University, New Haven, Connecticut, 2. Wake Forest University, Winston-Salem, North Carolina, 3. University of Florida, Gainesville, Florida, 4. University of Pittsburgh, Pittsburgh, Pennsylvania, 5. Stanford University, Palo Alto, California*

Among LIFE participants (N=1635), we evaluated the prevalence of sleep-wake complaints (Pittsburgh Sleep Quality Index [PSQI], Insomnia Severity Index [ISI], and Epworth Sleepiness Scale [ESS]), as well as the prevalence of high sleep-apnea risk (Berlin Questionnaire [BQ]). We also evaluated the association of objectively measured mobility (400-meter gait-speed and short physical performance battery score), with sleep-wake complaints and sleep-apnea risk—which has been studied rarely. The prevalence of poor sleep quality (PSQI>5), insomnia-diagnosis (ISI>=8), and daytime-drowsiness (ESS>=10) was 51.6%, 33.6%, and 17.6%, respectively; 32.9% had a high sleep-apnea risk (BQ>=2 positive categories). Using continuous measures, a significant association was found only between slower gait-speed and higher sleep-apnea risk—adjusted R-squared value of 0.41% (p=0.009). These results suggest that, among older persons with functional limitations, sleep-wake complaints and high sleep-apnea risk are highly prevalent. However, reduced mobility was not associated with sleep-wake complaints, and only minimally associated with sleep-apnea risk.

## RECRUITMENT STRATEGIES AND BASELINE CHARACTERISTICS OF OLDER ADULTS RECRUITED INTO THE LIFE STUDY

A. Marsh<sup>1</sup>, K. Kennedy<sup>2</sup>, L. Lovato<sup>2</sup>, E.J. Groessl<sup>3</sup>, M. Pahor<sup>4</sup>, J.M. Guralnik<sup>5</sup>, *1. Health and Exercise Science, Wake Forest University, Winston Salem, North Carolina, 2. Wake Forest Health Sciences, Winston Salem, North Carolina, 3. University of California San Diego, San Diego, California, 4. University of Florida, Gainesville, Florida, 5. University of Maryland, Baltimore, Maryland*

Recruitment of functionally limited older persons into behavioral/lifestyle long-term randomized controlled trials is a significant challenge. In the LIFE Study we used a diverse array of recruitment strategies at eight study sites including print, TV, radio, and events. Over 21-months we completed 14,811 telephone screens and randomized 1,635 (11.0%) participants (67.2% women, 21.0% minorities, 44.7% with SPPB ≤ 7) at an average cost/participant of \$838. Of the 6,318 persons who received physical performance assessments, 42% were excluded because they scored above the SPPB cutoff of 9. Of the 3,669 remaining eligible, 4.9% (174/3547) were too active, 10.0% (198/1980) could not complete the 400-m walk, and 5.6% (109/1945) had medical exclusions. The LIFE Study achieved all recruitment goals. Direct mailing was the most productive recruitment strategy (58.0% of all randomized participants) and an efficient method for recruiting high-risk community-dwelling older persons, including minorities, in diverse geographic areas.

## SESSION 1145 (SYMPOSIUM)

### IDENTIFICATION AND TREATMENT OF COMMUNITY-DWELLING FRAIL OLDER PEOPLE: AN INTERNATIONAL PERSPECTIVE

Chair: *E. van Rossum, Zuyd University of Applied Sciences, Heerlen, Netherlands, CAPHRI School for Public Health and Primary Care, Maastricht University, Maastricht, Netherlands*

Co-Chair: *G.I. Kempen, CAPHRI School for Public Health and Primary Care, Maastricht University, Maastricht, Netherlands*

Discussant: *L. Rubenstein, University of Oklahoma, Oklahoma, Oklahoma*

Frail older people often suffer from multimorbidity and functional impairments, which may lead to disability and long-term care. Regarding the increasing number of older people, it is a public health priority for Western countries to support frail older people in staying at home as long as possible. They have to be identified in time and their problems have to be addressed adequately. Various initiatives have been set up to improve community-based care for frail older people. This symposium aims to provide an international perspective on community-based strategies in five different countries (Denmark, The Netherlands, Switzerland, Japan and USA). Five presenters discuss their experiences with and results of various strategies. The first presenter reports about the effects of different home visiting models in Denmark, which support frail older people after discharge from hospital. The second presentation is about an interdisciplinary primary care approach in the Netherlands. The experiences of frail older people and healthcare professionals were investigated in a comprehensive process evaluation. The third presenter reports on the effects of a preventive home visits in Japan, and the implications of their findings for local public health strategies. The fourth presentation is about a study on a Swiss telephone-based reinforcement approach combined with computer-based feedback reports on health risks and recommendations by primary care practitioners. The fifth presenter reports on a bio-behavioural-environmental program in the USA and its effects on healthcare outcomes and costs. The findings of these five studies will be discussed by Dr Laurence Rubenstein from the University of Oklahoma.

### GERIATRIC FOLLOW-UP OF FRAIL ELDERLY AFTER DISCHARGE FROM HOSPITAL: EVIDENCE FROM FOUR INTERVENTION SCHEMES

F. Rønholt, *Medical dept. O, University Hospital of Copenhagen - Herlev, Herlev, Denmark*

Over the last years, different models were tested in four RCTs in Denmark to support frail elderly after discharge from hospital 1) One home visit by a home nurse the day after discharge and one home visit by a GP 2 weeks after discharge. 2) Four home visits over 4 months (week 1, 3, 8 and 16) by a geriatric team after discharge from a geriatric ward. 3) One home visit by a GP and a home nurse 1 week after discharge plus 2 contacts further at week 3 and 8. 4) "Follow home" on the day of discharge by a member of a geriatric team. Conclusion: Geriatric follow-up reduces the risk of readmissions, has financial benefits, initiate medical adjustment but seems not to influence functional capacity or allocated social care. But we still need to know how to target the right patients for the right type of follow-up.

### DISABILITY PREVENTION IN FRAIL OLDER PEOPLE: AN INTERDISCIPLINARY PRIMARY CARE APPROACH

S. Metzelthin<sup>1</sup>, E. van Rossum<sup>2,1</sup>, R. Daniels<sup>2</sup>, K. Cox<sup>1</sup>, H. Habets<sup>2,1</sup>, L. de Witte<sup>2,1</sup>, G.I. Kempen<sup>1</sup>, *1. CAPHRI School for Public Health and Primary Care, Maastricht University, Maastricht, Netherlands, 2. Zuyd University of Applied Sciences, Heerlen, Netherlands*

A powerful multidisciplinary primary care approach is needed to identify frail older people, to address their needs and to prevent a loss of function and early long-term care. Such an approach is evaluated in

six general practitioner (GP) practices in the south of the Netherlands in the framework of the National Care for the Elderly Program (2008-2012), an initiative of the Dutch Ministry of Health, Welfare and Sport. The approach starts with a postal screening of community-dwelling older people ( $\geq 70$  years,  $n=1,825$ ) using a 15-item screening questionnaire (Groningen Frailty Indicator). Consequently, frail older people receive a multidimensional assessment and a tailor-made treatment executed by a primary care team. Frail older people ( $n=194$ ) and health-care professionals ( $n=45$ ) are very satisfied with the approach. The approach is considered to be feasible by both healthcare professionals and frail older people. However given its complexity the implementation is challenging and requires special attention.

#### **PREVENTIVE HOME VISIT APPROACH IN FRAIL ELDERLY UNDER THE JAPANESE PUBLIC LONG-TERM CARE SYSTEM**

A. Kono<sup>1</sup>, Y. Kanaya<sup>1</sup>, C. Tsumura<sup>2</sup>, L. Rubenstein<sup>3</sup>, 1. School of Nursing, Osaka City University, Osaka, Japan, 2. Konan Women's University, Kobe, Japan, 3. the University of Oklahoma, Oklahoma, Oklahoma

Japan faces a "super-aging" society, where elders comprise over 23%, and preventing their functional decline has become a high priority. Japan has a unique mandatory public long-term care insurance (LTCI) system that divides elders into several categories according to their care needs. We performed a randomized trial on the effects of preventive home visits (PHVs) for those elders not using long-term care service even though they qualify for it ( $N=323$ ). The PHVs were provided by nurses or care managers on municipal community-based comprehensive care centers. Results from subgroup analysis suggest PHVs prevent functional decline including ADLs or IADLs for those with ADL dependency. Moreover, PHVs could facilitate earlier use of long-term care service, avoiding monthly hospital costs with more than 500,000 JPY ( $\approx 5,000$ USD) per person on average. We feel that our preventive care system needs to be connected to primary care and further multidisciplinary public health programs.

#### **FEASIBILITY OF HEALTH RISK APPRAISAL FOR OLDER PERSONS WITH TELEPHONE REINFORCEMENT IN FOUR SWISS COMMUNITIES**

A.E. Stuck<sup>1</sup>, J. Wagner<sup>1</sup>, A. Moser<sup>2</sup>, S. Born<sup>1</sup>, P. Frey<sup>3</sup>, 1. Geriatrics University of Bern, Bern, Switzerland, 2. Institute of Social and Preventive Medicine, Bern, Switzerland, 3. Institute of Primary Care, Bern, Switzerland

A promising approach for prevention of disability is based on Health Risk Appraisal for Older Persons (HRA-O). A randomised controlled study in Switzerland demonstrated favourable effects on health behaviour and preventive care uptake of older persons if a self-administered HRA-O questionnaire was combined with preventive home visits. However, only 514 (59%) of 874 persons allocated to the intervention group accepted to receive preventive home visits. We therefore developed a telephone-based reinforcement approach combined with mailing of individualized computer-generated HRA-O feedback reports and selection of appropriate recommendations by primary care practitioners on a computer-generated prescription form. This telephone-based system was successfully implemented in a group of 129 older persons. Participation rate was 95%, and overall cost was USD 27 per person. In a next step this promising low-cost approach is implemented and compared to the more costly home visitation approach in a larger population.

#### **FISCAL AND POLICY IMPLICATIONS FOR IMPROVING FUNCTIONAL ABILITY IN THE U.S.: THE CAPABLE PROGRAM**

S.L. Szanton<sup>1</sup>, R. Thorpe<sup>1</sup>, B. Left<sup>1</sup>, E. Tanner<sup>1</sup>, J.M. Guralnik<sup>2</sup>, L. Gitlin<sup>1</sup>, 1. Johns Hopkins University, Baltimore, Maryland, 2. University of Maryland, Baltimore, Maryland

In the United States, there is substantial race and income disparity in functional status in middle to late life. Although Medicare is univer-

sal for those over 65, many cannot afford to make changes to their living environment that can keep them safe and mobile at home. This leads to costly, preventable, nursing home placement much of which is paid for by tax-payers. We performed a randomized pilot trial on the effects of a bio-behavioral-environmental program called Community Aging in Place, Advancing Better Living for Elders ( $N=41$ ) which demonstrated decreased limitation in functional ability and increased quality of life for the intervention group relative to the control group. Nursing home care in the United States costs \$75,000 per person per year. If each participant is delayed from nursing home admission only by 2 weeks, the CAPABLE program will save substantial health care costs.

#### **SESSION 1150 (SYMPOSIUM)**

#### **OCCUPATIONAL GERONTOLOGY: EFFECTS OF WORK AND RETIREMENT ON HEALTH AND FUNCTIONING IN OLD AGE**

Chair: S. Stenholm, National Institute for Health and Welfare, Turku, Finland

Co-Chair: T. Rantanen, University of Jyväskylä, Jyväskylä, Finland

Discussant: W. Satariano, University of California at Berkeley, Berkeley, California

Several work-related factors have been identified as determinants of adverse health events. However, few studies have the long-term data needed to examine the consequences of work and retirement on health and functioning in old age. The presentations in this symposium are based on two unique cohorts from Finland: The Finnish Longitudinal Study of Municipal Employees (FLAME) is a 28-year follow-up study of public sector employees aged 44 to 58 years at baseline ( $n=6257$ ) in 1981 and 3092 returned the follow-up questionnaire in 2009. The Mini-Finland Health Examination Survey enrolled a nationally representative sample of 8000 Finnish persons aged 30 or over in 1978-1980 and 1278 of them living in the 9 municipalities were re-examined 22 years later. This symposium will describe the associations of work-related physical stress on handgrip strength in midlife and handgrip strength decline through 22 years of follow-up (Dr. S Stenholm). Findings from the FLAME will include the role of work-related mental stress symptoms in midlife as risk factors for old age disability (Dr. J Kulmala) and the effects of midlife physical activity during leisure and at work on later life mobility limitations (Prof. T Rantanen). Moreover, based on linkage from several medical records in the FLAME study data, the long-term effect of physical and mental job strain on hospital admissions (Dr. MB von Bonsdorff) and the relationship between type of pension and mortality (Dr. ME von Bonsdorff) will be highlighted. Taken together, these studies demonstrate the importance of working life on health and functioning in old age.

#### **PHYSICAL ACTIVITY DURING LEISURE VS. WORK: DIFFERENT EFFECTS ON PROGRESSION OF MOBILITY LIMITATION**

T. Rantanen<sup>1</sup>, M. von Bonsdorff<sup>1</sup>, T.M. Tormakangas<sup>1</sup>, C. Nygård<sup>2</sup>, J. Seitsamo<sup>3</sup>, J. Ilmarinen<sup>3</sup>, 1. Gerontology Research Center, University of Jyväskylä, University of Jyväskylä, Finland, 2. University of Tampere, Tampere, Finland, 3. Finnish Institute of Occupational Health, Helsinki, Finland

We studied the effects of midlife physical activity during leisure and at work on mobility limitations assessed 28 years later. The participants were 2899 municipal employees aged 44 to 58 years (63% women) at baseline in 1981. In follow-up in 2009, 30% reported difficulty walking 500 meters. Higher leisure time physical activity protected from mobility limitation while higher work physical activity increased the risk of mobility limitation 28 years later. After adjusting for age, body dimensions and occupational status, the risk of mobility limitation was highest among those with low leisure and high work physical activity, and lowest among those with high leisure and low work physical activ-

ity. High work physical activity accelerates progression of mobility decline probably through degenerative diseases. In contrast, leisure physical activity protects from mobility limitation through improved fitness.

### PHYSICAL AND MENTAL JOB STRAIN IN MIDLIFE AND USE OF HOSPITAL RESOURCES: A 27-YEAR PROSPECTIVE FOLLOW-UP

M. von Bonsdorff<sup>1</sup>, M.E. von Bonsdorff<sup>1</sup>, J. Kulmala<sup>1</sup>, T. Törmäkangas<sup>1</sup>, J. Seitsamo<sup>2</sup>, C. Nygård<sup>3</sup>, J. Ilmarinen<sup>2</sup>, T. Rantanen<sup>1</sup>, 1. *Gerontology Research Center and Health Sciences, University of Jyväskylä, University of Jyväskylä, Finland*, 2. *Finnish Institute of Occupational Health, Helsinki, Finland*, 3. *University of Tampere, Tampere, Finland*

We investigated the long-term effect of physical and mental job strain on hospital admissions during a 27-year follow-up. 5485 middle-aged public sector employees had data on physical and mental job strain in 1981. Hospital admissions between January 1981 and December 2008 were extracted from the National Hospital Discharge Register. Analyses were performed with recurrent event models and adjusted for age, gender, occupational group, smoking and main chronic diseases. Mortality was considered as a competing risk. Those with higher physical and mental job strain in midlife had a higher rate of hospital admissions during the follow-up (Likelihood ratio test  $p < 0.001$ ). The competing risks –recurrent events model indicated that higher mental and physical job strain was associated with a higher risk for recurrent hospital admissions during the long follow-up. Higher mental and physical job strain in midlife predicted more frequent hospital admissions spanning from midlife to old age.

### WORK-RELATED PHYSICAL STRESS AS PREDICTOR OF MUSCLE STRENGTH DECLINE OVER TWO DECADES

S. Stenholm<sup>1</sup>, T. Rantanen<sup>2</sup>, P. Sainio<sup>1</sup>, M. Heliövaara<sup>1</sup>, S. Koskinen<sup>1</sup>, 1. *National Institute for Health and Welfare, Turku, Finland*, 2. *University of Jyväskylä, Jyväskylä, Finland*

This study examines the associations of work-related physical stress on handgrip strength in midlife and handgrip strength decline through 22 years of follow-up. Data are from 892 men and women aged 30 to 73 years at baseline participating in the population-based Mini-Finland Health Examination Survey (1978–80) and living in 9 municipalities in which the handgrip strength measurement was repeated in 2000–01. At baseline, no difference in handgrip strength was observed in men with different work-related physical stress but women who engaged with heavy physical work had significantly higher handgrip strength compared to those with light work ( $p = 0.04$ ). Both men ( $p = 0.05$ ) and women ( $p = 0.04$ ) with heavy physical work experienced greater handgrip strength decline over 22 years than those with light work. Especially vibration from hand-held tools and repetitive work predicted higher handgrip strength decline. In conclusion, physically demanding work exposes to accelerated muscle strength decline, possible via upper extremity musculoskeletal disorders.

### PSYCHOSOCIAL STRESS IN WORK AND DISABILITY 30 YEARS LATER

J. Kulmala<sup>1</sup>, M. von Bonsdorff<sup>1</sup>, S. Stenholm<sup>2</sup>, M.E. von Bonsdorff<sup>1,3</sup>, C. Nygård<sup>4</sup>, J. Seitsamo<sup>5</sup>, J. Ilmarinen<sup>5</sup>, T. Rantanen<sup>1</sup>, 1. *Department of Health Sciences, Gerontology Research Center, University of Jyväskylä, FI-40014 University of Jyväskylä, Finland*, 2. *National Institute for Health and Welfare (THL), Department of Health, Functional Capacity and Welfare, Turku, Finland*, 3. *Aalto University, School of Economics, Department of Management and International Business, Helsinki, Finland*, 4. *Gerontology Research Centre, School of Health Sciences, University of Tampere, Tampere, Finland*, 5. *Finnish Institute of Occupational Health, Helsinki, Finland*

The aim of this study was to examine work-related psychosocial stress symptoms in midlife as risk factors for old age disability. Study

includes 2994 persons aged 44–58 years at baseline, whose self-reported stress symptoms were assessed in 1981 and 1985 and who responded to disability questionnaire in 2009. Four midlife stress profiles were identified: avoidance of work and lack of energy; perceived decrease in cognition; sleep disturbances; and somatic stress symptoms. The results showed that the proportion reporting high level of work-related stress in midlife varied between 14–23%. The adjusted logistic regression models showed that those with disability in old age had reported constant work-related stress symptoms two to three times more often in midlife than those without disability in old age. Work-related stress symptoms may be the first signs of decompensation of individual functioning relative to environmental demands, which may later manifest in disabilities.

### TYPE OF PENSION AS A PREDICTOR OF MORTALITY - A 28-YEAR FOLLOW-UP STUDY

M.E. von Bonsdorff<sup>1,2</sup>, M. von Bonsdorff<sup>1</sup>, M. Wang<sup>3</sup>, J. Kulmala<sup>1</sup>, J. Seitsamo<sup>4</sup>, J. Ilmarinen<sup>4</sup>, T. Rantanen<sup>1</sup>, 1. *Health Sciences, University of Jyväskylä, Jyväskylä, Finland*, 2. *Aalto University, Helsinki, Finland*, 3. *University of Florida, Gainesville, Florida*, 4. *Finnish Institute of Occupational Health, Helsinki, Finland*

We investigated the relationship between type of pension and mortality. Data come from 5764 public sector employees from the Finnish Longitudinal Study on Municipal Employees (FLAME), aged 44 to 58 at baseline. Mortality data was retrieved from national registers. Register-based data on type of pension was classified into old age, disability, and early individual pension. Cox Regression analyses were adjusted for age, gender, occupational group, main chronic diseases, and lifestyle factors. 1753 participants died during the follow-up from 1981 to 2009. Compared to those who retired due to old age, those who retired due to disability had an increased risk of mortality among men and women. Adjusting for main chronic illnesses and lifestyle factors did not attenuate the associations. The risk of mortality differed according to type of pension. Disability pension was an independent predictor of mortality. Lifestyle and health factors changed little the association.

## SESSION 1155 (SYMPOSIUM)

### VOLUNTEERING AMONG THE OLD-OLD: NEW WAYS TO THINK ABOUT AGING

Chair: *B. Resnick, University of Maryland, Baltimore, Maryland*  
Discussant: *A. Cohen-Callow, University of Maryland, Baltimore, Maryland*

There is increasing evidence that volunteering among older adults benefits the individual and society at large. Numerous studies have documented that individuals who volunteer have lower morbidity and longer survival than those who do not volunteer. More importantly, a meta-analysis of 37 studies demonstrated that older volunteers report a higher overall quality of life than those who do not volunteer. Moreover, a growing number of longitudinal studies provide some support for causation and suggest that volunteering is beneficial to older individuals overtime. Specifically, longitudinal studies have shown a causal relationship between volunteering and lower rates of mortality, better quality of life, more time spent in physical activity and better mental health as demonstrated by fewer depressive symptoms and less anxiety. Given the many benefits of volunteering consideration should be given to ways to increase the number of older individuals who volunteer. An important first step in this process is to explore volunteer activities among older individuals, their preferences for volunteering and barriers to engaging in volunteer activities. This symposium provides outcomes from a sample of 127 older adults living in a continuing care retirement community, the majority of whom were greater than 85 years of age. In addition, we explored personality factors and tested the hypothesis that mutations in selected candidate genes can explain individual differences in resilience in older adults and this directly and indirectly

influences volunteer activity. Findings from this research can be used to guide future work focused on increasing volunteerism among older adults.

### **VOLUNTEER ACTIVITIES, PREFERENCES AND BARRIERS**

B. Resnick, J. Klinedinst, *University of Maryland, Baltimore, Maryland*

The purpose of this study was to explore the preferences for volunteer activities among residents of a continuing care retirement community (CCRC). The majority of the participants were female (78%) and white (98%) with an average age of 88.0 (SD=6.5) years. Just under half of the residents were doing some volunteer work (47%). Engagement in volunteer activities ranged from 0 to 7 activities with a mean of 1.31 (SD=1.62). The majority of the 60 individuals who volunteered did so within the facility [n=52 (87%)]. Reasons for volunteering included: engaging in an interesting activity, mental stimulation, health and social benefit, to learn new skills, and engagement in a meaningful activity. Of those who did not volunteer, 13% reported that they were interested and willing to volunteer either within or outside the facility. We propose using a community/kibbutz approach to increase volunteer opportunities and behaviors among these older individuals.

### **INFLUENCE OF VOLUNTEERING AND DEPRESSIVE SYMPTOMS AMONG RESIDENTS OF A CCRC**

N. Klinedinst, B. Resnick, *University of Maryland, Baltimore, Maryland*

The purpose of this study was to explore the impact of volunteerism on depressive symptoms among residents in a CCRC. All participants completed a one-time survey. Depressive symptoms were measured by the PHQ-2. Controlling for age and number of comorbidities a stepwise regression model was used. Participants were 88.0±6.5 years old, and the majority were female and Caucasian and on average were not depressed ( $X=.63\pm 1.1$ ). Pain ( $\beta=.0$ ,  $p<.001$ ), fear of falling ( $\beta=.29$ ,  $p<.001$ ) and exercise ( $\beta=-.16$ ,  $p=.04$ ) explained 27% of the variability in depressive symptoms. Volunteerism did not enter the model. Among older individuals living in a CCRC setting, there was no indication that volunteering is associated with depressive symptoms. Interventions aimed at reducing pain and fear of falling and increasing exercise among CCRC residents may be useful in reducing depressive symptoms.

### **THE DIRECT AND INDIRECT RELATIONSHIP OF GENETIC FACTORS ON RESILIENCE AND VOLUNTEERISM IN OLDER ADULTS**

S.G. Dorsey, B. Resnick, *University of Maryland, Baltimore, Maryland*

The most commonly studied gene related to resilience is variation in the human serotonin transporter gene (5-HTTLPR). The short allele of 5-HTTLPR is associated with decreased serotonin transporter availability and lower reuptake of serotonin from synaptic clefts. Another polymorphism that is relevant to resilience is found in the gene catechol-O-methyltransferase (COMTVal258Met). Individuals with low functioning have the VAL258Met allele, resulting in higher circulating levels of dopamine and noradrenaline and are more anxious and less resilient. With regard to BDNF, in animal models resilience to chronic stress can be mediated via BDNF expression. We proposed that the same process occurs in humans. In this study of 127 older individuals living in a continuing care retirement, we explored the relationship between resilience and volunteerism and considered whether or not the individual's genes interacted with environmental factors to shape neural circuitry and neurochemical function to influence resilience and directly and indirectly influence volunteerism.

## **SESSION 1160 (SYMPOSIUM)**

### **GETTING SQUEEZED: THE AARP MIDDLE CLASS SECURITY PROJECT**

Chair: *S.C. Reinhard, Public Policy Institute, AARP, Washington, District of Columbia*

Co-Chair: *D.L. Redfoot, Public Policy Institute, AARP, Washington, District of Columbia*

Discussant: *R. Deutsch, Public Policy Institute, AARP, Washington, District of Columbia*

This symposium will report findings from the "Middle Class Security Project," a ground-breaking look at factors that have squeezed middle class households over the past several decades and how those factors will impact the retirement security of current and future retirees. Specifically, the symposium will feature: 1) recent trends measured by a middle class security index, 2) findings from commissioned research in specific areas of security, and 3) videos and focus group results illustrating how these trends are experienced by individuals in their daily lives. Many families have faced growing financial insecurity for a generation. Wages have not kept pace with rising costs for middle class basics: housing, health care, and education. Income growth has not offset increasing family burdens associated with caring for children or aging parents. Unemployment, threats of layoffs, and the loss of housing values and wealth have contributed to the sense of insecurity during the recent recession. A recent AARP survey of Americans over 50 found that one in six is unemployed. One in three said their homes had lost value during the recession; one in four said they had exhausted all their savings. In these challenging times, Medicare, Medicaid and Social Security have become increasingly important for middle class security in retirement. If these benefits are cut—as many political leaders propose—the impact may force millions of older Americans out of the middle class. The symposium will discuss these trends and potential policy options for addressing middle class insecurity across the life span.

### **TRENDS IN MIDDLE CLASS SECURITY: THE MIDDLE CLASS SECURITY INDEX**

*S.C. Reinhard, Public Policy Institute, AARP, Washington, District of Columbia*

Susan Reinhard will describe the AARP Middle Class Security Project – the motivation for a major research focus in this area, the types of issues facing middle class Americans, and the importance of these issues for AARP's public policies. This presentation will describe how security is built over the working years in ways that affect security in retirement. This presentation will also examine the degree to which the recent recession disrupted the security of many middle class families and retirees. Finally, this presentation will describe the findings of a Middle Class Security Index developed in partnership with Brandeis University that measures trends in a number of dimensions – including asset security, housing security, budget security, and health security – among working age middle class households between 2004 and 2010. Trends in security on these dimensions as well as overall security are compared by age, race/ethnicity, and family status.

### **DOCUMENTING THE DECLINE: RESEARCH FROM THE AARP MIDDLE CLASS SECURITY PROJECT**

*D.L. Redfoot, Public Policy Institute, AARP, Washington, District of Columbia*

Don Redfoot will report the findings of various research initiatives that were commissioned as part of the Middle Class Security Project, including: Trends in family income The affordability of healthcare in retirement The performance of various classes of assets and investments and the increased risks associated with those assets for many in the middle class Strategies for decumulation of assets and the risks faced by middle class retirees in light of the lack of consensus about optimal strategies among financial experts Projections of the retirement secu-

city of future cohorts of middle class retirees This presentation will look at the growing risks in various areas that affect middle class security – income, asset accumulation, healthcare, housing, and family structure. The theme of the presentation is to describe the cumulative effects of these risks and the impact that they have on individuals through the life course.

### **INDIVIDUAL LIVES IN PERIL: THE AARP MIDDLE CLASS SECURITY PROJECT IN PERSPECTIVE**

R. Deutsch, *Public Policy Institute, AARP, Washington, District of Columbia*

Rick Deutsch's presentation will show how the cumulative risks and stresses from the social and economic trends described in the previous sections impact the lives of individuals. Individuals do not compartmentalize the stresses that are the basis of the analytical work that researchers, including those in this project, tend to do. Financial, healthcare, and family crises are often interrelated in complex ways at various stages in the life course of those in the middle class. This presentation will explore these individual experiences in two ways: Presenting mini-ethnographies of the lives of select participants in focus groups conducted in Tampa, Philadelphia, and Milwaukee Showing video ethnographies of middle class individuals in these three cities who are struggling with the loss of income, declining home values, and healthcare issues that affect their security and the security of their families

## **SESSION 1165 (SYMPOSIUM)**

### **INNOVATIONS IN GERIATRIC EDUCATION: CONSIDERING CROSS-DISCIPLINARY APPLICATIONS OF THE HPPAE MODEL**

Chair: *E.C. Barker, Social Work Leadership Institute, New York Academy of Medicine, New York, New York*

Co-Chair: *P.J. Volland, Social Work Leadership Institute, New York Academy of Medicine, New York, New York*

Discussant: *J. Damron-Rodriguez, University of California, Los Angeles, Los Angeles, California*

The Hartford Partnership in Aging Education (HPPAE) has been implemented in 69 US graduate schools of social work over a 12 year period. The rigorous evaluation of institutional and student outcomes and a 3 stage national dissemination strategy provide evidence of success and considerations for other health professional education programs. Six essential elements were identified by 11 demonstration sites and then adopted and adapted at 58 other schools. Dissemination continues through a normalization phase of implementation in additional schools. The elements include: 1) university-community partnership, 2) competency-driven education, 3) integrated field education across multiple programs, populations, interventions, and disciplines through rotations, 4) expanded field instructor role, 5) focused recruitment of students and 6) leadership. The IOM Report, *Re-tooling for an Aging America*, recommends competency-based education in aging for all providers in order to enact new EB models of care in the community. This paper will present findings of the evaluation of the HPPAE model and implications for other health professionals that are considering implementing a geriatric curriculum. Implications derived from the HPPAE evaluation support the following educational approaches. 1) Articulation of a rotational model that provides diverse learning experiences with particular attention to transitions and continuity of care. 2) Geriatric competencies are shown to provide a curricula for agency based field education. 3) The teaching of contemporary geriatric practice requires the need for collaborative models of education with strong university agency partnerships exemplified in the HPPAE model. Moreover cross -disciplinary and interdisciplinary new applications of the model will be explored.

### **HARTFORD PARTNERSHIP PROGRAM FOR AGING EDUCATION (HPPAE) OVERVIEW**

E.C. Barker, P.J. Volland, *Social Work Leadership Institute, New York Academy of Medicine, New York, New York*

The Partnership Program for Aging Education (HPPAE) is a national initiative funded with support from the John A. Hartford Foundation and the MetLife Foundation; developed and administered by the Social Work Leadership Institute at The New York Academy of Medicine. The program responds to several interconnected concerns, including the increasing numbers of older adults, difficulties attracting social work students to aging specializations, and lack of aging focused programs in schools of social work. It offers an innovative field approach that exposes students to a broad spectrum of settings and diverse older populations. It integrates classroom learning and internships, so that graduates are prepared for practice in the current dynamic delivery system. HPPAE differs from traditional MSW education models. Based on collaborative partnerships between universities and community-based agencies, the HPPAE provides select groups of students with wide-ranging, hands-on experience in older adult practice.

### **COLLABORATIVE MODEL OF SOCIAL WORK EDUCATION WITH STRONG UNIVERSITY-AGENCY PARTNERSHIPS**

E.C. Barker<sup>1</sup>, M. Patchner<sup>2</sup>, *1. Social Work Leadership Institute, New York Academy of Medicine, New York, New York, 2. Indiana University, Indianapolis, Indiana*

A key element of the HPPAE Model is the focus on agency-university partnerships to further social work education for geriatric practice. Though social work education has traditionally required linkages with community agencies, the HPPAE program established collaborative relationships of mutual benefit for the partners, students, and clients. Having collaborative relationships with agencies resulted in agency personnel informing curriculum development, which required rotations among community programs and developing competencies for student learning. The majority of HPPAE programs reported having formal university–community partnerships with between 5 and 25 agencies. Most of these schools had regular advisory board meetings with participating agencies, field instructors, and faculty members. HPPAE schools markedly increased the number of aging agencies designated as field sites and the number of students in aging placements. The HPPAE model has implications for the development of agency relationships for other disciplines.

### **THE ROTATIONAL MODEL PROVIDES DIVERSE LEARNING EXPERIENCES WITH ATTENTION TO TRANSITIONS, CONTINUITY OF CARE AND PROVIDING SERVICES FOR HARD TO REACH POPULATIONS**

E.C. Barker<sup>1</sup>, K. Bullock<sup>2</sup>, *1. Social Work Leadership Institute, New York Academy of Medicine, New York, New York, 2. North Carolina State University, Raleigh, North Carolina*

An essential component of the HPPAE model is rotational field education. This innovative approach to training and educating social workers to provide care for older adults, gives particular attention to transitions and continuity of care. Furthermore, it is an effective strategy for creating diverse learning opportunities in diverse practice settings. As demonstrated by comprehensive data collected from HPPAE programs, the field rotation model is a successful mechanism, which builds upon the university-community partnership and augments the capacity for aging agencies to serve “hard-to-reach” populations. This success is achieved through the recruitment and training of faculty and field instructors, recruitment and orientation of students; implementation and monitoring of the rotation process, customizing rotations to meet the students' learning objectives and participation in an evaluation of the model, which is used to make programmatic and curriculum changes and updates as needed.

## GERIATRIC COMPETENCIES PROVIDE A CURRICULUM FOR AND EVALUATION OF FIELD EDUCATION

E.C. Barker<sup>1</sup>, J. Damron-Rodriguez<sup>2</sup>, 1. *Social Work Leadership Institute, New York Academy of Medicine, New York, New York*, 2. *University of California, Los Angeles, Los Angeles, California*

According to accrediting bodies, Competency-based Education and Evaluation (CBE) is increasingly the foundation for professional education. The Geriatric Social Work (GSW) Competencies have been aligned with the Council on Social Work Education Educational Policy for Accreditation Standards. Within the HPPAE model, training of over 2,600 graduate students, the competencies actively structure the field education process in the following ways: training of field instructors, early assessment of student skills, to setting yearlong learning goals and on to continued student self-assessment as well as assessment by the field instructor. The types of field practice experiences are guided by the competency goals. Using the GSW Competency Scale II significant ( $p=.001$ ) improvement were found for 50 skills in 5 domains of practice. This evaluation of outcome allows for programs to continuously improve their training based on student outcomes. The implications of using other disciplinary competencies to guide internships and residencies will be discussed.

## SESSION 1170 (SYMPOSIUM)

### RELOCATION OF OLDER ADULTS AND TRANSITIONS

Chair: *N. Castle, University of Pittsburgh, Pittsburgh, Pennsylvania*

Discussant: *K. Thomas, Brown University, Providence, Rhode Island*

Relocation of older adults and transitions between places of care has been a consistent concern of practitioners and policy-makers for several years. Transitions have potential negative outcomes which include mortality and physiological and psychological decline, but may have positive outcomes as older adults move to less restrictive settings. The focus of this symposia is on the transitions of care between and among settings within the long-term care continuum, between the long-term care continuum and acute-care settings, and between the long-term care continuum and the community. The main objective is to gain an understanding of the mechanisms driving transitions, issues surrounding transition, and strategies to ensure successful transition in an effort to improve the quality of care delivered to patients in long-term care settings. Speakers will discuss transitional care, discharge planning, care coordination, case management, continuity of care, referrals, post-discharge follow-up, patient assessment, patient needs, interventions, and evaluation.

### APPLYING CRUCIAL CONVERSATIONAL SKILLS TO CARE TRANSITIONS

J.S. Hahn, *Center for Gerontology, Western Michigan University, Kalamazoo, Michigan*

This session addresses the importance of effective dialogue in care transitions. Conversations about care transitions are key to decision-making and often occur in rushed, high-stress situations. These conditions lead to poor communication and negative results for patients. Increasingly, regulations reward effective care transitions that reduce re-hospitalization and health care waste. However, none of the developing care transition models work well if patients, families and providers do not use effective communication skills. Based on work of Patterson, Grenny, McMillan and Switzler, "crucial conversation" skills will be mapped as applied to care transitions and guidance will be given on additional resources to support effective care communication through these skills. Participants will apply effective dialogue techniques to numerous cases and discuss ways to measure the effectiveness of dialogue. The presenter led survey process design at the Joint Commission, studied nursing home decision-making and culture

change, and led a care transition improvement team at a large health system.

### USE OF HEALTH INFORMATION TECHNOLOGY DURING CARE TRANSITIONS

W.W. Hung<sup>1,2</sup>, B. Morano<sup>1,2</sup>, K. Boockvar<sup>1,2</sup>, 1. *James J Peters VA Medical Center, Bronx, New York*, 2. *Geriatrics, Mount Sinai School of Medicine, New York, New York*

Older patients who transition from acute care are at risk for adverse outcomes. The Bronx RHIO, a regional electronic health information network, provides an opportunity to improve coordination among sites. We piloted a project to deliver a care transitions intervention (CTI) after acute care discharges. Program Information: CTIs were delivered via home visits and telephone calls by a CTI coach, and contained components of education, self-management and empowerment. After discharge from acute care, and for patients discharged to skilled nursing facility for short term rehabilitation, the coach continued to follow the patient until discharge to home to deliver home visits. Use of RHIO included notification for acute events and discharge, and delivery of clinical information. Conclusion: Health information technology has the potential to be used during care transitions across care spectrum. It requires linkage of facilities to the health information network and timely delivery of relevant clinical information.

### RELOCATION OF OLDER ADULTS AND TRANSITIONS

M.S. Anderson<sup>1,2</sup>, D.M. Gentry<sup>2</sup>, 1. *Nursing, Jefferson College of Health Sciences, Roanoke, Virginia*, 2. *Carilion Clinic, Roanoke, Virginia*

The largest health care system in southwestern Va. started a care transitions team after detailed interviews from stakeholders addressing issues of concern with long term care. Based on data addressing some of the details of discharges and readmissions from long term care, several initiatives are ongoing- including revamping the care transitions team, and expansion and growth of our geriatrics team. Educational programs in long term care involving nurse practitioners have grown. The NPs are part of the geriatrics team and are placed in LTC. The manager of the case management department at the hospital participates in the care transition team and has recently worked with the Quality Director to test a tool for readmission risk assessment. Progression of the team's work with outcomes will be shared.

### EASING THE TRANSITION TO SPECIALIZED DEMENTIA CARE: THE LAKEVIEW RANCH BUDDY PROGRAM

J. Berry<sup>1</sup>, R.J. Karasik<sup>2</sup>, 1. *The Dementia Care Foundation, Darwin, Minnesota*, 2. *St. Cloud State University, St. Cloud, Minnesota*

Transitions for persons with dementia are particularly challenging due to diminished cognitive and coping abilities. Ironically, transitional "behaviors" can often lead to additional transitions. To counter this, the Lakeview Ranch Model of Specialized Dementia Care™ developed a resident buddy program which assigns short term 1:1 staffing to each transitioning resident using a consistent, extensively trained staff person. Focusing on the resident's emotional needs and providing a single familiar face for the resident's waking hours during the first 4-10 days helps reduce the resident's fears and allows the creation of a trusting & safe relationship with a familiar person who may also learn more quickly about the resident's likes, dislikes, and needs. The staff buddy also helps promote positive interactions with other residents. Since committing resources to the new resident buddy program 5 years ago, Lakeview Ranch has significantly reduced the new resident transition period from 2-3 months to 7-10 days.

## SESSION 1175 (SYMPOSIUM)

### SYSTEMS ISSUES IN NURSING HOMES: EXPLORING LINKS AMONG NURSE STAFFING, CARE DELIVERY, AND OUTCOMES

Chair: *T.J. Roberts, School of Nursing, University of Wisconsin - Madison, Madison, Wisconsin*

Discussant: *K.S. McGilton, Toronto Rehabilitation Institute, Toronto, Ontario, Canada*

Nursing homes face a number of organizational barriers to providing high quality care. One of the most challenging is setting appropriate staffing levels and implementing evidence-based practices to ensure that the needs of residents are adequately addressed in spite of fiscal constraints. Research has shown inconsistent links between nurse staffing practices and outcomes. Understanding the nature of the relationships between nurse staffing and outcomes and systematic approaches to nurse staffing that may promote high quality is imperative. The presentations in this session will focus on the influence of nurse staffing patterns and practices on care delivery and outcomes in nursing homes. The studies address all levels of nursing staff (nursing assistants, licensed nurses, and nursing management) and their associations with care delivery or staff and resident outcomes. The first presentation reports on a study of consistent assignments for nursing assistants. Results show wide variation in understanding and implementation of the practice, highlighting the need for more rigorous research on the implementation of this practice and its relationship to positive clinical outcomes. The second presentation focuses on a particular clinical condition – development of pressure ulcers – and how nurse staffing practices may present barriers or facilitators to its prevention. The third presentation demonstrates how the ratio of RNs to LPNs influences care assessment and planning processes. The final presentation focuses on staffing practices from the perspective of the Director of Nursing, highlighting the administrative, budgetary, and policy-level complexities associated with ensuring adequate nurse staffing.

### UNDERSTANDING BARRIERS TO SYSTEMATIC IMPLEMENTATION OF CONSISTENT ASSIGNMENTS IN NURSING HOMES

*T.J. Roberts, K. Nolet, B. Bowers, School of Nursing, University of Wisconsin - Madison, Madison, Wisconsin*

The nursing home culture change movement has embraced consistent assignment (CA) of certified nursing assistants to residents, as it is generally believed to increase familiarity between staff and residents, fostering individualized care for residents and enhancing quality of life. While commonly promoted as improving resident outcomes, research on outcomes of CA is inconsistent, hindering systematic implementation of the practice. The purpose of this study was to determine the state of the science on CA, focusing on how CA has been defined and implemented across studies. Additionally, nursing assistant staffing data were collected from 20 nursing homes using CA and analyzed to compare how CA was implemented within and across homes. The literature review and data collection demonstrate wide variation in CA implementation. Results have implications for future research on the impact of CA on resident and staff outcomes.

### THE DIRECTOR OF NURSING AND STAFFING IN NURSING HOMES

*E.O. Siegel<sup>1</sup>, V. Santillan<sup>1</sup>, H.M. Young<sup>1</sup>, M. Leo<sup>2</sup>, 1. Betty Irene Moore School of Nursing at UC Davis, Sacramento, California, 2. Kaiser Permanente – Center for Health Research, Portland, Oregon*

The purpose of this paper is to examine the Director of Nursing's (DON) roles and responsibilities associated with staffing in nursing homes. Data were collected through in-depth, semi-structured telephone interviews with a convenience sample of DONs and other nursing home leaders throughout the U.S. that had knowledge and expertise about

the DON position (n=29). Data were analyzed using microanalysis coding and thematic analysis. The findings highlight the DON's broad scope of roles and responsibilities for staffing and the administrative, budgetary, and policy-level complexities associated with adequately managing staffing resources. DONs respond to staffing challenges in a variety of ways, with some DONs focused on personally covering for staff shortfalls and others focused on enhancing human resource management practices or "making the case" to the executive team for more staffing resources. Policy, practice, and education implications of the findings will be discussed.

### NURSE STAFFING AND PRACTICE PATTERNS IN NURSING HOMES

*C. Mueller<sup>1</sup>, K. Corazzini<sup>2</sup>, R.A. Anderson<sup>2</sup>, 1. Nursing, Univ of MN-School of Nursing, Minneapolis, Minnesota, 2. Duke University, Durham, North Carolina*

While numerous staffing studies have related higher ratios of RNs to nursing staff in nursing homes to improved quality of care, such studies are predominately quantitative studies that do not elucidate the causal mechanisms of the relationships between staffing ratios and outcomes. This study draws upon comparative case study data of Directors of Nursing from 48 nursing homes in North Carolina and Minnesota to describe how higher ratios of RNs to nursing staff affects patterns of nursing practice in nursing homes, specifically how assessment and care planning occur. Results indicate that adequate ratios of RNs provide a critical threshold without which professional nursing assessment and care planning cannot occur. Ultimately, staff mix restricts or enhances access of vulnerable nursing home residents to comprehensive nursing assessment and care planning.

### FACILITATORS AND BARRIERS TO PRESSURE ULCER PREVENTION IN 2 VA COMMUNITY LIVING CENTERS (CLCS)

*M.E. Dellefield<sup>1</sup>, J.L. Magnabosco<sup>2</sup>, A. Kelly<sup>1</sup>, 1. VASDHS, San Diego, California, 2. Center for Implementation Practice and Research Support VAGLAHS, Los Angeles, California*

Prevention of pressure ulcers (PUs) is an important quality indicator. Implementation of preventive practices is difficult to sustain. Purpose of mixed methods study is to describe nursing assistant, licensed vocational nurse, and registered nurse attitudes, beliefs, knowledge, values, and work practices perceived as facilitators/barriers to PU prevention care. 16 nurses were interviewed. 45-60 minute individual interviews with an embedded questionnaire were audio-recorded. Qualitative data analyzed with micro-coding; quantitative data analyzed with descriptive statistics. Findings: quality of human and technical resources impact staff's ability to perform preventive care. Facilitators: wound team structure at facility and unit level; consistent staffing and work practices that promote team work; surveillance/ early detection practices; individual intrinsic staff motivation/belief in preventability of PUs. Barriers: limited supervisory feedback and under-utilization of medical record data. Findings indicate that further study of impact of attitudes, beliefs, knowledge, values and work practices on delivery of PU preventive care is warranted.

## SESSION 1180 (SYMPOSIUM)

### THE ECONOMIC COSTS OF CARE: THE CANADIAN CASE

Chair: *J. Fast, Department of Human Ecology, University of Alberta, Edmonton, Alberta, Canada*

In this symposium we explore the economic consequences that caregivers experience when they care for family members and friends with long term health problems or disabilities. Findings will be framed by two taxonomies of the economic costs of care, one for caregiver costs and one for employer costs, developed by symposium presenters. Duncan et al will describe the sources, magnitude and main predictors of

care-related out-of-pocket expenses and their relationship to other (economic and non-economic) consequences of care. Fast and colleagues will explore the relationship between the incidence, timing and duration of care responsibilities across the life course for caregivers' employment. Lero et al will describe how Canadian employers are responding to a rising number of employees with care responsibilities in their workplaces. Taken together these presentations provide a holistic picture of the threats to the economic security of Canadian caregivers, and their employers, and measures that may act to mitigate these threats.

#### **CAREGIVING ACROSS THE LIFE COURSE AND EMPLOYMENT PROSPECTS OF CANADIAN CAREGIVERS**

J. Fast<sup>1</sup>, D. Dosman<sup>3,1</sup>, D. Lero<sup>2</sup>, 1. *Department of Human Ecology, University of Alberta, Edmonton, Alberta, Canada*, 2. *University of Guelph, Guelph, Ontario, Canada*, 3. *Statistics Canada, Ottawa, Ontario, Canada*

This paper Statistics Canada General Social Survey (2007) data to explore the implications of the incidence, timing and duration of episodes of caregiving across the life course for the labour force behavior of Canadian caregivers. We find that 62% of women and 51% of men reported having provided care to a family member or friend with a long term health problem or disability at some time since they were 15 years of age, averaging 2 such episodes. More episodes of care, caring for more years in total, and providing more hours of care during the past 12 months, all significantly increased the odds that current caregivers would experience employment consequences in the present, including reducing hours of work, missing full days of work, and being out of the work force entirely. These effects were more likely to be experienced by women than men. Policy and practice implications are discussed.

#### **THE AVAILABILITY OF WORKPLACE PROGRAMS, POLICIES & PRACTICES TO SUPPORT EMPLOYED CAREGIVERS IN CANADA**

D. Lero<sup>1</sup>, N. Spinks<sup>2</sup>, J. Fast<sup>3</sup>, J. de Guzman<sup>1</sup>, 1. *Centre for Families, Work and Well-Being, University of Guelph, Guelph, Ontario, Canada*, 2. *Vanier Institute of the Family, Ottawa, Ontario, Canada*, 3. *University of Alberta, Edmonton, Alberta, Canada*

A growing proportion of employees are providing care to a family member with a long-term health condition or physical limitation. Results are presented from a comprehensive on-line survey of 280 Canadian workplaces designed to assess the extent to which employers currently have formal programs, policies or practices and/or informal supports to enable employed caregivers to better manage their work and caregiving responsibilities and reduce avoidable costs to employers. We find that many workplaces offer flexible work schedules and periods of unpaid leave to employees, but most have not consciously considered the unique issues faced by employed caregivers, their needs for information and support, or the importance of training managers to respond effectively. Comparisons are drawn across workplaces varying by sector, firm size and unionization status, and between supports provided to parents of young children and employed caregivers.

#### **CARE-RELATED OUT-OF-POCKET SPENDING: PREVALENCE AND CONSEQUENCES FOR CANADIAN CAREGIVERS**

K.A. Duncan<sup>1</sup>, S. Shoostari<sup>1</sup>, K. Roger<sup>1</sup>, J. Fast<sup>2</sup>, 1. *Family Social Sciences, University of Manitoba, Winnipeg, Manitoba, Canada*, 2. *University of Alberta, Edmonton, Alberta, Canada*

Although care-related out-of-pocket spending is an important aspect of caregiving, it is not well understood in the Canadian context. We use data from Statistics Canada's 2007 General Social Survey to examine the prevalence, correlates and social and economic consequences of out-of-pocket expenses for caregivers as the result of unpaid caregiving to family members and friends. We find that 35% of family/friend caregivers aged 45 and older reported out-of-pocket expenses. The major-

ity of these caregivers spent \$6,000 or less per year, but 3% reported spending more than \$24,000 per year out-of-pocket. Significant predictors of these expenditures include characteristics of the caregiver, the care receiver, the care dyad and other factors. We conclude with a discussion of the implications of the results, including the social inclusion/exclusion of caregivers and care receivers.

### **SESSION 1185 (PAPER)**

#### **ASSISTED LIVING QUALITY OF CARE RESIDENT SATISFACTION AND ALZHEIMERS CARE OPTIONS**

#### **AN INTERNATIONAL COMPARISON OF THE OHIO DEPARTMENT OF AGING – RESIDENT SATISFACTION SURVEY: APPLICABILITY IN A U.S. AND CANADIAN SAMPLE**

H.A. Cooke<sup>1</sup>, T. Yamashita<sup>2</sup>, J. Brown<sup>2</sup>, J. Straker<sup>2</sup>, S. Baiton-Wilkinson<sup>3</sup>, 1. *University of Victoria, Victoria, British Columbia, Canada*, 2. *Miami University, Oxford, Ohio*, 3. *Fraser Health Authority, Vancouver, British Columbia, Canada*

The assessment of resident satisfaction within long-term care is an integral measure of care quality that ensures the reflection of residents' voice within the quality improvement process and the appropriateness and adequacy of care and services provided. To date, the majority of resident satisfaction surveys available for use in assisted living settings have been developed in the U.S. Testing and reporting of their psychometric properties remains limited and sporadic. The Ohio Department of Aging – Resident Satisfaction Survey (ODA-RSS), which consists of 42 items across 10 domains (e.g., Care and Services, Meals and Dining, Employee Relations), has been in use in Ohio since 2007. However, its applicability for use in assisted living settings outside of the U.S. is unknown. Drawing on data collected in 2009 from 9,739 residential care facility (RCF) residents in Ohio, and in 2010 from 938 assisted-living residents in British Columbia (B.C.) Canada, confirmatory factor analyses were conducted to assess the instrument's psychometric properties within the two samples. While the ODA-RSS appears well-suited for assessing resident satisfaction in Ohio RCFs, it is less so in B.C. assisted living settings. Adequate reliability and validity was observed for all eight measurable instrument domains in the Ohio sample; however, such was the case for only four domains (Care and Services, Employee Relations, Employee Responsiveness and Communications) in the B.C. sample. Instrument applicability is discussed in the context of the long-term care milieu (e.g., policy implementation, resident characteristics, facility infrastructure) in each study location.

#### **COMPARATIVE ANALYSIS OF ALZHEIMER'S CARE OPTIONS: SYSTEMS AND HEALTH POLICIES WITHIN THE UNITED STATES AND SPAIN**

B. Kite, S. Anantha, *School of Public Health, UT Health Science Center at Houston, Houston, Texas*

Alzheimer's prevalence within the United States and Spain is increasing due to technological advances in diagnostic techniques and an overall increase in life expectancy. This rise in prevalence necessitates an overhaul of patient care facilities as well as private and governmental support concerning long-term care. Through a comparative analysis of available Alzheimer's long-term care within the US and Spain, we will identify specific private and public options available and the influence that current relevant policies have upon their healthcare systems. Analyzing the various determinants of Alzheimer's long term care such as: the role of universal and private healthcare, the powers and responsibilities of the national and local forms of government, the involvement of NGOs and private companies will reveal what further developments in health policy could help close gaps of access and service. Evaluation of specific facility options such as day care, palliative care, respite care, hospice care, independent living, government and NGO centers which



are available for patients with differing stages of Alzheimer's will contribute to formulating health policies aimed towards improved efficacy. Although both the US and Spain are classified as industrialized nations, their health care policies and standards are very different. Examining which solution systems prove effective when provided for the aging population afflicted with Alzheimer's in each respective country and observing their responses to the challenges will help strengthen the health system structure and functional differences.

### **USING ORAL HISTORY METHODS TO PROMOTE PERSON-CENTERED CARE IN ASSISTED LIVING**

D. Gammonley, C. Lester, L. Duran, D. Fleishman, G. Cravero, *School of Social Work, University of Central Florida, Orlando, Florida*

Purpose: A demonstration project evaluated impacts on staff of an oral history project using service learning in an assisted-living facility. Results identified factors contributing to resident and staff engagement, staff knowledge and use of person-centered care, and strategies for gathering oral histories with student service-learning teams. Design and Methods: Fifty staff completed a pre-test survey assessing perceived knowledge of residents and use of person-centered care practices using two standardized instruments: (1) the IC-KNOW scale (Chappell, Reid & Gish, 2007) assesses perceptions of how well they know the residents they care for and; (2) the Person-Centered Care Assessment Tool (Edvardsson, Fetherstonhaugh, Nay & Gibson, 2009) assesses the extent of personalizing care. Following the oral history project, staff was invited to view and discuss an edited 15 minute compilation video at a convenient time during their workday. Nonparametric analyses were used to evaluate impacts. Results: Staff from across the spectrum of service providers within this long established not-for-profit facility participated. At baseline they reported high levels of knowledge and person-centered care, 56% expressed enthusiasm for viewing a video. Among staff completing the post-test (N=37) 73% viewed the video. Staff members identified benefits for providing person-centered care and indicated it enhanced their knowledge of residents. Implications: Individualizing care using videotaped oral histories is a promising strategy to know each person and promote staff-resident relationships. Staff members are willing to take the time to view oral history videos and see potential benefits for their ability to deliver care. Future research should consider impacts on residents.

### **THE INFLUENCE OF FUNCTIONAL INDEPENDENCE ON SATISFACTION AMONG ASSISTED LIVING RESIDENTS**

K. Abrahamson<sup>1</sup>, K. Morgan<sup>2</sup>, B.R. Fulton<sup>2</sup>, 1. *Western Kentucky University, Bowling Green, Kentucky*, 2. *Press Ganey Associates, South Bend, Indiana*

Assisted living is a prevalent and expanding form of long term care delivery. In comparison to nursing homes the assisted living marketplace remains relatively unregulated and includes a wide variety of services, options, and caregiver skill levels. Admission criteria regarding resident level of function varies between facilities and states. The purpose of our analysis was to assess the influence of functional ability in terms of ADLs (bathing, dressing, eating, toileting, mobility) and IADLs (house cleaning, shopping, meal preparation, medication management, transportation, and financial assistance) on satisfaction with the available activities, caregivers, facility management, and overall facility satisfaction among a large, national sample of assisted living residents. We hypothesized that more functionally independent residents would express higher levels of satisfaction. Data came from the 2008 Press Ganey Assisted Living Survey (n=1246) and were analyzed through structural equation modeling. We found that satisfaction with caregivers, activities, and self-rated health increased satisfaction with management and the facility overall; longer length of stay predicted lower overall satisfaction. Unexpectedly, IADL independence directly predicted lower levels of satisfaction with activities, caregivers, and the facility overall. Independence with ADLs directly predicted higher facility satisfaction,

but had no significant influence on satisfaction with activities, caregivers, or management. Results indicated that the relationship between functional independence and resident satisfaction with assisted living is complex, that there is a differing influence of IADL versus ADL assistance on the resident experience, and that improved service offerings specifically aimed toward instrumental needs may positively influence satisfaction scores within assisted living facilities.

### **AN EXAMINATION OF RESIDENT TRANSITIONS TO ASSISTED LIVING USING THE THEORY OF SELECTIVE OPTIMIZATION WITH COMPENSATION**

N.L. Fields, *The Ohio State University, Columbus, Ohio*

Assisted living (AL) is a rapidly growing industry for providing care and support to older adults and their caregivers. The transition to AL is of growing interest as research suggests that residential relocation is an increasingly common experience among older adults. Based on the results of a written survey administered to a state wide, geographically representative purposive sample of Medicaid Assisted Living Waiver providers (N = 28), this paper provides an analysis using the theory of Selective Optimization with Compensation (SOC). Through the theoretical lens of SOC, the findings of this pilot study suggest that pre-admission education may contribute to resident adjustment to AL. Study findings also suggest that there is a clear disconnect between what AL providers believe is important for resident transitions and what is actually happening in their facilities. Pre-admission education allows prospective AL residents to learn about what the AL does and does not provide. Furthermore, pre-admission education may provide opportunities for AL residents to better utilize selective strategies (e.g. choice of social activities) to compensate for changes in independence as well as optimize supportive services (e.g. assistance with ADLs) that are provided in AL. Potential directions for improving resident transitions to AL are presented through an examination of the perspective of AL administrators and the role of pre-admission resident education in AL. The application of SOC within the context of resident transitions may also have implications for AL regulation as well as policies related to the admission and discharge of AL residents.

### **SESSION 1190 (PAPER)**

#### **TRANSPORTATION AND MOBILITY; AVOIDING WITHDRAWAL AND ISOLATION**

##### **INDIVIDUAL READINESS AND UTILIZATION OF A COMMUNITY MOBILITY RESOURCE**

M. Berg-Weger<sup>1</sup>, T.M. Meuser<sup>2</sup>, 1. *School of Social Work, Saint Louis University, St. Louis, Missouri*, 2. *University of Missouri-St. Louis, St. Louis, Missouri*

As our society strives to better serve those members who are living longer and/or living with a progressive disability, practitioners and researchers need assessment tools and practice strategies to support optimal independence and quality of life. Mobility is a key factor in the individual's ability to maintain autonomy and well-being. While tools exist to evaluate functional and instrumental aspects of mobility in older adults, most existing measures are less effective for understanding the emotional and motivational factors on an individual, personal level or the preparation for mobility loss and change. This presentation describes a community-based, clinical application of a new person-centered measurement tool, the Assessment of Readiness for Mobility Transition (ARMT) (Meuser, Berg-Weger, Chibnall, Harmon, King and Yakimo, 2011). Three objectives were pursued in partnership with an affiliate office of ITNAmerica: (1) Quantify readiness via the ARMT in new ITN members and track prospective service utilization; (2) Determine how ARMT scores may predict service utilization patterns; and (3) Examine qualitative indicators of the readiness construct and service utilization on a case level. Face-to-face and telephone interviews were

conducted with 50 new ITN members, ages 60-90. ARMT scores for one third (33%) of respondents were in the low readiness/high risk range. Preliminary utilization data indicated a more haphazard pattern of adoption and utilization of ITN services for low readiness participants (i.e., in comparison to higher readiness respondents). Detailed findings will be presented and discussed with respect to mobility transition assessment and counseling interventions.

### **AN EVALUATION OF OREGON'S WHEELCHAIR USER ONLY HANDICAP PARKING PROGRAM**

J. Lottes, *Portland State University, Portland, Oregon*

Many seniors and people with mobility impairments depend on the availability of handicap parking. Over the past decades, the number of handicap parking permits has far outgrown the number of dedicated parking spots, and many qualified individuals report having trouble finding parking. In the State of Oregon, 6% of drivers have obtained handicap parking placards, but only 1.8% of parking spots are designated as handicap parking. This mismatch between demand and supply is of grave concern to persons whose mobility impairments are severe enough to confine them to wheelchairs; these individuals cannot resort to a regular parking spot when all handicap parking spots are taken. To improve access to handicap parking for the most severely disabled, in 2010 Oregon began reserving some specifically designated handicap parking spots for wheelchair users only. This study evaluates these changes, which represent the first "tiered" handicap parking system in the nation. The study includes analysis of DMV data on placard issuance (regular and wheelchair) and parking violations, surveys of holders of both wheelchair user and regular placards, and observations of parking behavior. Results show that the wheelchair user parking system holds promise in prioritizing parking for the most severely disabled, but there are issues with implementation, including poor signage and driver education. In addition, the program does little to curb handicap parking abuse, and holders of regular permits, including many seniors, who do not use a wheelchair fear being deprived from parking privileges. Policy implications and recommendations for practice are discussed.

### **INFORMAL CAREGIVERS OF OLDER ADULTS: PREDICTORS OF CHANGES IN LIFE, HEALTH, AND FINANCES**

J.M. Vivoda<sup>1,2</sup>, D.W. Eby<sup>2</sup>, L.J. Molnar<sup>2</sup>, L. Kostyniuk<sup>2</sup>, 1. *Health Behavior and Health Education, University of Michigan, Ann Arbor, Michigan*, 2. *University of Michigan Transportation Research Institute, Ann Arbor, Michigan*

The functional limitations associated with chronic illnesses often require the aid of an informal caregiver. Previous research has found that caregiving is associated with increased isolation, physical and emotional stress, and financial hardship. The purpose of this study was to examine the predictors of overall changes in life, health, and finances, among informal caregivers of older adults. People who had provided transportation or other unpaid care to at least one older adult during the past 12 months were interviewed (N=300). Providing transportation was identified as one of the most common tasks performed by informal caregivers. Changes in life related to caregiving (both positive and negative) were assessed using questions covering a range of possible areas (including financial, emotional, and relational factors); caregiver health was also self-reported. Significant factors associated with an overall change in life related to caregiving included the number of ADLs with which one assists, frequency of providing assistance, number of people one cares for, recipient's driving status, and several caregiver demographic variables. Caregiver health was associated with number of ADLs, frequency of providing assistance, work status, and demographic variables. Finally, financial changes were associated with number of ADLs, frequency of providing assistance, providing transportation, recipient's driving status, proximity of the recipient, and caregiver demographics. Several other transportation-related variables were examined,

but were not statistically significant. Identifying transportation assistance as a key caregiving activity, and understanding how transportation variables impact these outcomes, has implications for policy and practice in both the transportation and health fields.

### **IMPACT OF LIMITATIONS IN DRIVING AND FUNCTIONAL STATUS ON DEPRESSIVE SYMPTOMS IN OLDER ADULTS**

A.C. Harmon, *University of Michigan School of Public Health, Ann Arbor, Michigan*

**PURPOSE:** Driving represents a unique aspect of older adults' ability to live independently. We examined the effects of driving limitations on older adults' depressive symptomatology, above and beyond that of Instrumental Activities of Daily Living (IADL) limitations. The interaction between these two predictors was also studied. Results will help professionals identify critical intervention points to improve older adults' mental health outcomes as challenges to independence occur. **METHODS:** Data from the 2008 Health and Retirement Study (HRS) were analyzed to assess how self-reported limitations in driving (0-4; 0=no limitations; 1=driver with geographic limitations; 2=driver has not driven in past 30 days; 3=driver with no access to car; 4=non-driver) and difficulties with IADLs (0=none, 1=any) affect older adults' (65+) depressive symptoms, as measured by the Center for Epidemiological Studies Depression Scale (CES-D). CES-D scores were regressed on driving and IADL limitations. Interactions between five levels of driving limitations and IADL functioning were also examined to identify groups at risk for more depressive symptoms. **RESULTS:** Individuals with any IADL limitations had significantly more depressive symptoms than their counterparts with no IADL limitations ( $b=1.412$ ,  $p<0.001$ ). Driving limitations also directly affected symptoms, with moderation by IADL status. Older adults with no driving or IADL limitations had significantly lower CES-D scores ( $p\leq 0.050$ ) than all other combinations. Significant interactions were also found by driving limitations within and between IADL (none/any) groups. **IMPLICATIONS:** Findings direct attention to the need to include driving limitations in addition to, and in conjunction with, IADL limitations when assessing older adults' mental health.

### **A LIVABILITY INDEX FOR AGE-FRIENDLY COMMUNITIES**

J. Lynott, R. Harrell, *AARP Public Policy Institute, Washington, District of Columbia*

This session will share a framework for measuring localized community-livability that is sensitive to the needs of older adults. This framework for developing a livability index integrates personal preferences (what people want as reported in surveys and focus groups), objective measures (what the community looks like as measured through national datasets), and policy interventions (efforts underway to improve the community). This index will be a web-based tool that allows the user to type in a zip code to obtain a livability score for the community. The score measures the degree to which one's community offers a high quality of life and fosters continued independence among older residents based on a set of metrics that represent the critical attributes of a livable community. Attributes were identified by merging the common variables of 19 surveys conducted by AARP between 2003 and 2012 into a single dataset of more than 15,000 respondents. Attributes include safe and secure environments, proximity and access to health care, housing variety (affordability and type), proximity to retail, reliable public transportation, walkability, and recreational opportunities. This tool is being designed with a simple user interface but with a robust theoretical foundation. As such, it is intended to draw national attention to livability issues specific to the wants and needs of older adults. Planners and policy makers will better understand how they can address the needs of older adults through more informed infrastructure and service planning. It will also serve to educate more casual users.

## VASCULATURE, CNS AND AGING MECHANISMS

## CNS CHANGES IN INFLAMMATION AND ER STRESS AFTER MILD HEAD INJURY IN YOUNG AND OLD MICE

K. Glenn<sup>1,2</sup>, G. Dankle<sup>1</sup>, H. Wen<sup>1</sup>, N. Bode<sup>1</sup>, A. Chan<sup>1</sup>, R. Jorge<sup>1,2</sup>, P. Gonzalez-Alegre<sup>1</sup>, 1. *Internal Medicine, University of Iowa, Iowa City, Iowa*, 2. *VA Medical Center, Iowa City, Iowa*

Traumatic brain injury (TBI) is a leading cause of morbidity and mortality in the US. Among TBI patients, older age is an independent predictor of worse outcome, and trauma, including TBI, is the 7th leading cause of death in those over 65 years of age. In these elderly TBI patients, a simple fall from a standing position is the method of injury in 40% of the cases. Though there are many factors responsible for the profound differences in outcome to simple falls in young and elderly patients, we sought to characterize differences at the cellular level. To do this, we developed a model of mild TBI using fluid percussion or sham injury in young and old female mice. To examine possible age-related differences to neuronal injury we examined markers of inflammation, apoptosis, and ER stress in protein samples from mouse cerebellum, cortex, and hippocampus. As expected, we found a vigorous inflammatory response to injury in both young and old mice. Additionally, we found elevation in some ER stress markers such as Protein Disulfide Isomerase, and Binding Immunoglobulin Protein after injury. Interestingly, while injury resulted in a dramatic increase in a marker of apoptosis, C/EBP Homologous Protein, the pattern of increase was significantly different between the young and old animals. In conclusion, we have found significant neuronal responses to mild TBI, and the first clues of some age-related differences, suggesting that further refinement of this model will allow us to explore the age-related differences in outcome to mild TBI.

## PTX3-A NOVEL REGULATOR IN EFFEROCYTOSIS IN ADVANCED ATHEROSCLEROSIS

B. Cheng, T. Guo, *Department of Geriatrics, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China*

Apoptotic Cells Are Removed by Neighboring Phagocytes (Efferocytosis), Which Is An Important Event In Advanced Atherosclerosis. Recent Reports Have Elucidated Some Key Molecular Regulators In Efferocytosis Including Complement C1q, MFGE8, and MERTK. The Long Pentraxin 3 (PTX3) Is An Important Molecule Involved In Apoptotic Cell Clearance In the Immune Response. The Papers Associated With PTX3 In Atherosclerosis Were Published Explosively In This Years. Immunohistochemical Study of Human Atherosclerotic Lesions Indicated That PTX3 Is Expressed In Advanced Atherosclerotic Lesions (Macrophages, Mainly Foam Cells). PTX3 Is Likely More Specific Than HsCRP as An Indicator of Coronary Plaque Vulnerability. Therefore, We Expect PTX3 to Be A New Molecule for Efferocytosis In Advanced Atherosclerosis. Recently We Modeled Efferocytosis In Advanced Plaques. We Observed That PTX3 Was Mainly Located at the Membrane of Late Apoptotic Macrophages. The Anti-PTX3 Monoclonal Ab Inhibited the Engulfment of Late Apoptotic Macrophages by Phagocytes In A Dose-Dependent Manner. These Results Suggest That PTX3 Located at the Membrane of Late Apoptotic Macrophages Mediates Their Phagocytosis by Phagocytes In A Cell Model of Advanced Atherosclerosis. But It Is Unclear the Effect of PTX3 In An Animal Model of Advanced Atherosclerosis. Therefore, Designing An Atherosclerotic Animal Model and Observing the Effect of PTX3 On Coronary Plaque Vulnerability Require Further Investigation

## NICORANDIL REGULATING TRX AND TXNIP INFLUENCED EXPRESSION OF VCAM-1 AND NOS

B. Qi, *Department of Geriatrics, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China*

Background: Thioredoxin (Trx) Is A 12-KDa Protein With Redox-Active Dithiol In the Active Site Cys-Gly-Pro-Cys- And Constitutes A Major Thiol Reducing System, And It Is Widely Conserved In Almost All Species From Bacteria To Higher Eukaryotes. Thioredoxin Interacting Protein, the Endogenous Inhibitor of Thioredoxin, Inhibits Thioredoxin Antioxidative Function By Binding To Its Redox-active Cysteine Residues. We Investigated the Hypothesis That Treated With KATP Sensitive Potassium Channel Opener Nicorandil Causes Regulating of Trx And Txnip, And Then Influence Expression of Inflammatory Markers VCAM-1 And NOS. Methods: SD Rats With Intraperitoneal Injection of Streptozotocin (STZ) Induced Diabetes. Rats With Fasting Blood Glucose 16.7mmol/L After 10 Days of STZ Injection Were Divided Into Two Groups, Controlling With normal SD Rats Without STZ Injection. One Group Was Used As The Diabetic Control And Another Treated By Gavage Feeding With Nicorandil 3mg/kg.d. After 6 Weeks, Detecting Trx Protein Expression In Carotid artery By Immunohistochemistry, And Trx mRNA Levels By Reverse Transcriptionpolymerase Chain reaction (RT-PCR). Assay Expression Levels of Txnip mRNA, VCAM-1 mRNA And NOS mRNA By Reverse Transcriptionpolymerase Chain Reaction (RT-PCR) Too. Results: Trx Protein Expression In Three Group Carotid Artery. Controlling With Diabetic Control Group, Nicorandil Can Upregulated the Expression of Trx mRNA And Then Down-regulated Expression of Txnip mRNA. But Controlling With Normal Group, the Expression of Trx mRNA In Other Two Groups Are Decreased. The Levels of VCAM-1 mRNA Decreased In Nicorandil Treated Group, Levels of NOS mRNA Increased In Nicorandil Treated Group, Controlling With Diabetic Group. Conclusion: The Expression of Trx Is Decreased In STZ-Induced Diabetic Rats And Txnip Expression Is Increased In STZ-Induced Diabetic Rats. Nicorandil Could Upregulated Trx Expression And Down-Regulated Txnip Expression In STZ-Induced Diabetes Rats. Then Decrease Levels of VCAM-1 And Increase Levels of NOS. Thus Protect Early Vascular Disease In Diabetes.

## THE RECEPTOR FOR ADVANCED GLYCATION ENDPRODUCTS (RAGE) REGULATES ATHEROSCLEROSIS IN AGING

G. Daffu, X. Shen, R. Rosario, R. Ramasamy, A. Schmidt, *Medicine, New York University, New York, New York*

Atherosclerosis is a leading cause of morbidity and mortality in the Western world. With advanced age, the incidence of atherosclerosis is higher and severity is more pronounced. Advanced glycation end-products (AGEs), the nonenzymatic modification of proteins by glucose, have been shown to accumulate in aging tissues. AGEs elicit a wide range of cell-mediated responses leading to vascular dysfunction. Studies have demonstrated that mice with a deletion of the Receptor for Advanced Glycation Endproducts (RAGE) demonstrate significantly reduced atherosclerosis in the non-diabetic and diabetic states. Here, we demonstrate that aging significantly decreases cholesterol efflux to ApoA1 and HDL in WT C57BL/6 mice. We show that young and old RAGE null mice have significantly higher cholesterol efflux to HDL compared to young and old WT mice respectively, with young RAGE null mice demonstrating superior cholesterol efflux. mRNA expression levels for cholesterol transporters ABCA1 and ABCG1 in mouse bone marrow-derived macrophages (BMDMs) correspond with efflux findings. Both ABCA1 and ABCG1 mRNA levels in BMDMs are higher in young RAGE null when compared to young WT or old RAGE null mice. These expression levels are also significantly higher in old RAGE null when compared to old WT. Furthermore, ABCA1 protein levels are higher in young WT mouse BMDMs, whereas, ABCG1 protein levels are not impacted by aging in mouse BMDMs. Taken together, these

findings suggest that deletion of RAGE facilitates cholesterol efflux and that RAGE-blocking therapeutics may alleviate atherosclerosis development in aging.

**EFFECTS OF AGING AND DIABETES ON ENDOTHELIAL SENEESCENCE: THE ROLE OF NITRIC OXIDE SYNTHASE**  
S.C. Rogers<sup>1</sup>, X. Zhang<sup>1,2</sup>, G. Azhar<sup>1,2</sup>, S. Luo<sup>1,2</sup>, J.Y. Wei<sup>1,2</sup>, *1. Geriatrics, University of Arkansas for Medical Sciences, Little Rock, Arkansas, 2. Central Arkansas Veterans Healthcare System, Little Rock, Arkansas*

**Introduction:** Aging and diabetes are known risk factors for cardiovascular disease. Hyperglycemia causes pathophysiology resembling accelerated aging, but mechanisms linking diabetes and aging to cardiovascular disease are incomplete. Cellular senescence occurs with advancing age and may contribute to loss of endothelial integrity and vascular complications. Nitric oxide (NO) produced by nitric oxide synthase (NOS) supports vascular function and may slow endothelial senescence. However, loss of NO bioavailability is implicated in cardiovascular pathologies and senescence-associated alterations in NOS expression may enhance vascular complications. **Methods/Results:** We used a HUVEC in-vitro model to investigate effects of hyperglycemia on endothelial cell senescence. Cells at passage 2 (population doubling 6) and passage 15 (population doubling 35) were used as “early” and “late” cells, respectively. We also analyzed potential regulatory effects of miRNA and transcription factors on NOS associated with hyperglycemia in cellular senescence. After 48-hour hyperglycemia exposure, early passage HUVECs showed slightly increased cell senescence compared to that of normal glucose control. High glucose exposure in late passage cells resulted in significantly greater cell senescence compared to both early and late passage controls. **Discussion:** The results indicate that early passage endothelial cells respond better to hyperglycemic stress, presumably through more efficient NO function, as compared to late passage HUVECs. The reduction in NO bioavailability may, in part, be attributed to altered regulation of NOS genes by SRF and/or miRNAs -21, -33a or -199a. These observations will help identify new targets for preventive therapy in elderly with insulin resistance, peripheral vascular disease, and/or diabetes.

### **SUBCLINICAL THYROID DYSFUNCTION AND COGNITIVE DECLINE IN OLD AGE: RESULTS FROM THE PROSPER STUDY**

L. Wijsman<sup>1</sup>, A.J. de Craen<sup>1</sup>, S. Trompet<sup>1</sup>, J. Gussekloo<sup>1</sup>, D.J. Stott<sup>4</sup>, N. Rodondi<sup>2</sup>, R. Westendorp<sup>1</sup>, S. Mooijaart<sup>1,3</sup>, *1. Gerontology & Geriatrics, Leiden University Medical Center, Leiden, Netherlands, 2. University of Bern, Bern, Switzerland, 3. Institute for Evidence-Based Medicine in Old Age, Leiden, Netherlands, 4. University of Glasgow, Glasgow, United Kingdom*

**Background:** Subclinical thyroid dysfunction has been implicated as a risk factor for cognitive decline in old age, but results are inconsistent. We investigated the association between subclinical thyroid dysfunction and cognitive decline in the PROspective Study of Pravastatin in the Elderly at Risk (PROSPER). **Methods:** Prospective longitudinal study of men and women aged 70-82 years with pre-existing vascular disease or more than one risk factor to develop this condition (N=5,494). Participants taking antithyroid medications and/or amiodarone were excluded. Thyroid function was measured at baseline: subclinical hyper- and hypothyroidism were defined as thyroid stimulating hormones (TSH) <0.45 mU/L or > 4.50 mU/L respectively. Cognitive performance was tested at baseline and at four subsequent time points during a mean follow-up of 3 years, using five neuropsychological performance tests. **Results:** Subclinical hyperthyroidism and hypothyroidism were found in 119 (2.2%) and 427 (7.8%) participants, respectively. We found no consistent association of subclinical hyper- or hypothyroidism with altered cognitive performance compared to euthyroid participants on the individual cognitive tests. Similarly, there

was no association with rate of cognitive decline during follow-up. **Conclusion:** We found no consistent evidence that subclinical hyper- or hypothyroidism contribute to cognitive impairment or decline in old age.

### **AGE-ASSOCIATED PRO-INFLAMMATORY SECRETORY PHENOTYPE IN VASCULAR SMOOTH MUSCLE CELLS FROM THE NON-HUMAN PRIMATE M. MULATTA: REVERSAL BY RESVERATROL TREATMENT**

A. Csiszar<sup>1</sup>, D. Sosnowska<sup>1</sup>, E.G. Lakatta<sup>2</sup>, W.E. Sonntag<sup>1</sup>, Z. Ungvari<sup>1</sup>, M. Wang<sup>2</sup>, *1. Reynolds Oklahoma Center on Aging, Department of Geriatric Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, 2. Laboratory of Cardiovascular Science, Gerontology Research Center, NIA, NIH, Baltimore, Maryland*

There is increasing evidence that age-associated chronic low-grade inflammation promotes the development of both large vessel disease (myocardial infarction, stroke, peripheral arterial disease) and small vessel pathologies (including vascular cognitive impairment) in older persons. However, the source of age-related chronic vascular inflammation remains unclear. To test the hypothesis that cell-autonomous mechanisms contribute to the pro-inflammatory changes in vascular phenotype that accompanies advancing age, we analyzed the cytokine secretion profile of primary vascular smooth muscle cells (VSMCs) derived from young (~13 year old) and aged (~21 year old) Macaca mulatta. Aged VSMCs cultured in the absence of systemic factors exhibited significantly increased secretion of IL-1 $\alpha$ , MCP-1 and TNF $\alpha$  compared to young control cells. Secretion of IL-6 also tended to increase in aged VSMCs. This age-associated pro-inflammatory shift in the cellular secretory phenotype was associated with an increased mitochondrial O<sub>2</sub>- production and NF- $\kappa$ B activation. Treatment of aged VSMCs with a physiologically relevant concentration of resveratrol (1  $\mu$ M) exerted significant anti-inflammatory effects, reversing aging-induced alterations in the cellular cytokine secretion profile and inhibiting NF- $\kappa$ B. Resveratrol also attenuated mitochondrial O<sub>2</sub>- production and up-regulated the transcriptional activity of Nrf2 in aged VSMCs. Thus, in non-human primates cell-autonomous activation of NF- $\kappa$ B and expression of an inflammatory secretome likely contribute to vascular inflammation in aging. Resveratrol treatment prevents the pro-inflammatory properties of the aged VSMC secretome, an effect that likely contributes to the demonstrated vasoprotective action of resveratrol in animal models of aging.

### **CIRCULATING FACTORS INDUCED BY CALORIC RESTRICTION IN THE NON-HUMAN PRIMATE MACACA MULATTA ACTIVATE ANGIOGENIC PROCESSES IN ENDOTHELIAL CELLS**

A. Csiszar<sup>1</sup>, D. Sosnowska<sup>1</sup>, Z. Tucek<sup>1</sup>, P. Toth<sup>1</sup>, R. Colman<sup>2</sup>, R. Weindruch<sup>3,4</sup>, R. Anderson<sup>3,4</sup>, Z. Ungvari<sup>1</sup>, *1. Reynolds Oklahoma Center on Aging, Department of Geriatric Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, 2. Wisconsin National Primate Research Center, University of Wisconsin, Madison, Wisconsin, 3. Department of Medicine, School of Medicine and Public Health, University of Wisconsin, Madison, Wisconsin, 4. Geriatric Research, Education and Clinical Center, William S. Middleton Memorial Veterans Hospital, University of Wisconsin, Madison, Wisconsin*

Moderate caloric restriction (CR) without malnutrition increases healthspan in virtually every species studied, including nonhuman primates. In mice, CR exerts significant microvascular protective effects increasing microvascular density in the heart and the brain, which likely contribute to increased tolerance to ischemia, improved cardiac performance and cognitive function. Yet, the underlying mechanisms by which CR confer microvascular protection remain elusive. To test the hypothesis that circulating factors triggered by CR regulate endothelial angiogenic capacity, we treated cultured human endothelial cells with

sera derived from *Macaca mulatta* on long-term (x years) CR. Cells treated with sera derived from ad libitum fed control monkeys served as controls. We found that factors present in CR sera increase endothelial NO production, up-regulate VEGF signaling and stimulate angiogenic processes, including endothelial cell proliferation and formation of capillary-like structures. Treatment with CR sera also tended to increase cellular migration (measured by a wound-healing assay using electric cell-substrate impedance sensing [ECIS] technology) and adhesion to collagen. Collectively, we find that circulating factors induced by CR promote endothelial angiogenic processes, suggesting that increased angiogenesis may be a potential mechanism by which CR improves cardiac function and prevents vascular cognitive impairment.

#### **FUNCTIONAL GENOMICS ANALYSIS OF THE HIPPOCAMPAL TRANSCRIPTOME PROVIDES INSIGHT INTO MECHANISMS OF CNS AGING AND COGNITIVE DECLINE**

W.M. Freeman<sup>1</sup>, H. VanGuilder Starkey<sup>1</sup>, G. Bixler<sup>1</sup>, J.A. Farley<sup>2</sup>, W.E. Sonntag<sup>2</sup>, *1. Pharmacology, Penn State College of Medicine, Hershey, Pennsylvania, 2. Reynolds Oklahoma Center on Aging, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

In both humans and animal model organisms, advanced aging is accompanied by a variety of CNS changes including synapse loss, glial activation, and metabolic dysfunction. Deficits of hippocampal spatial learning and memory are also evident in a subset (~50%) of subjects, including both human and animal models. The goal of our current work is to comprehensively characterize and compare age-related and cognitive decline-specific molecular changes that occur in the hippocampus. Whole-genome gene expression analysis was performed on hippocampal synaptic preparations, subregion dissections (CA1, CA3, DG), and unfractionated hippocampus from adult and aged F344xBN rats. Rats were assessed for spatial learning and memory performance by Morris water maze testing before sacrifice. Meta-analysis of the resultant data clearly demonstrates that molecular markers (MHCII) of glial activation are induced across hippocampal subregions with aging and do not correlate to deficits in spatial learning and memory. Markers of complement activation and STAT3 signaling are induced with aging in pyramidal cell-containing regions (CA1 and CA3) to a greater extent than in the granule cell-containing dentate gyrus (DG). Distal (synaptosome) mRNA changes associated with advanced age included down-regulation of neurotransmission-related genes and antigen presentation, whereas whole hippocampal changes recapitulated the neuroimmune activation evident in subregion analyses. Smaller numbers of gene expression changes were associated specifically with cognitive deficits, and age-related changes in gene expression were not exacerbated with poor cognitive performance. In summary, these studies indicate a potentially additive process of age-related neuroimmune activation and impaired neurotransmission that combine with cognitive impairment-specific inhibition of synaptic plasticity.

#### **GROWTH HORMONE AND IGF-1 DEFICIENCY EXACERBATE HIGH FAT DIET-INDUCED ENDOTHELIAL IMPAIRMENT IN OBESE LEWIS DWARF RATS: IMPLICATIONS FOR VASCULAR AGING**

L. Bailey-Downs<sup>1,2</sup>, D. Sosnowska<sup>1</sup>, P. Toth<sup>1</sup>, M. Mitschelen<sup>1</sup>, J.A. Farley<sup>1</sup>, W.E. Sonntag<sup>1</sup>, A. Csiszar<sup>1</sup>, Z. Ungvari<sup>1</sup>, *1. Reynolds Oklahoma Center on Aging, Donald W. Reynolds Department of Geriatric Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, 2. Department of Physiology, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

Previous studies suggest that the age-related decline in circulating growth hormone (GH) and IGF-1 levels significantly contribute to vascular dysfunction in aging by impairing cellular oxidative stress resistance pathways. Obesity in the elderly is increasing at alarming rates and

there is evidence suggesting that elderly individuals are more vulnerable to the deleterious cardiovascular effects of obesity than younger individuals. However, the specific mechanisms through which aging, GH/IGF-1 deficiency and obesity interact to promote the development of cardiovascular disease remain unclear. To test the hypothesis that low circulating GH/IGF-1 levels exacerbate the pro-oxidant and pro-inflammatory vascular effects of obesity, GH/IGF-1 deficient Lewis dwarf rats and heterozygous control rats were fed either a standard diet (SD) or a high fat diet (HFD) for 7 months. Feeding a HFD resulted in similar relative weight gains and increases in body fat content in Lewis dwarf rats and control rats. HFD-fed Lewis dwarf rats exhibited a relative increase in blood glucose levels, lower insulin and impaired glucose tolerance as compared to HFD-fed control rats. Analysis of serum cytokine expression signatures indicated that chronic GH/IGF-1 deficiency exacerbates HFD-induced inflammation. GH/IGF-1 deficiency also exacerbated HFD-induced endothelial dysfunction, oxidative stress and expression of inflammatory markers (TNF-alpha, ICAM-1) in aortas of Lewis dwarf rats. Overall, our results are consistent with the available clinical and experimental evidence suggesting that GH/IGF-1 deficiency renders the cardiovascular system more vulnerable to the deleterious effects of obesity.

#### **AGE AND CAVEOLIN-3 KNOCKDOWN ARE INVOLVED IN ALTERING CHOLESTEROL HOMEOSTASIS IN CARDIAC MYOCYTES**

J.M. Schilling<sup>1,2</sup>, H.N. Fridolfsson<sup>1,2</sup>, M. Paneerselvam<sup>1,2</sup>, I. Niesman<sup>1,2</sup>, B.P. Head<sup>1,2</sup>, D.M. Roth<sup>1,2</sup>, H.H. Patel<sup>1,2</sup>, *1. UCSD, San Diego, California, 2. VASDHS, San Diego, California*

Cardiovascular disease (CVD) is a leading cause of mortality in the United States with >50% of mortality attributed to coronary artery disease. 80% of deaths caused by CVD occur in patients 65 years of age and older. The percentage of people over the age of 65 years is increasing dramatically and by 2050 the elderly will account for >2 billion people worldwide. Caveolae are membrane micro-domains enriched in cholesterol, glycosphingolipids, sphingomyelin, and the protein caveolin and are critical to ischemic tolerance. The function and structure of caveolae is dependent on caveolin-3 and cholesterol. Although caveolins have been studied in cardiac protective responses, the physiological consequence of membrane cholesterol depletion in cardiac myocytes is unclear. We hypothesized, that cellular cholesterol homeostasis is altered in Cav-3 knock out (KO) and aged wild type (WT) mice. Our data show that 1) the number of caveolae and tolerance to ischemia is reduced in aged hearts, 2) genes involved in cholesterol biosynthesis, transport/processing, and transcriptional regulation show altered expression on gene arrays with Cav-3 knockdown and age, and 3) cholesterol is reduced in membrane homogenates in hearts of Cav-3 KO and aged mice. Membrane cholesterol in combination with Cav-3 could therefore play a key role in the response to ischemic stress. Altering these components may lead to better ischemic tolerance in the aged heart.

#### **DISRUPTION OF NRF2 SIGNALING IMPAIRS ANGIOGENIC CAPACITY OF ENDOTHELIAL CELLS: IMPLICATIONS FOR MICROVASCULAR AGING**

M.N. Valcarcel-Ares<sup>1,2</sup>, T. Gautam<sup>1</sup>, L. Bailey-Downs<sup>1</sup>, D. Sosnowska<sup>1</sup>, R. De Cabo<sup>3</sup>, W.E. Sonntag<sup>1</sup>, Z. Ungvari<sup>1</sup>, A. Csiszar<sup>1</sup>, *1. Reynolds Oklahoma Center on Aging, Department of Geriatric Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, 2. Aging and Inflammation Research Lab, INIBIC - CHU A Coruña, Coruña, Spain, 3. Laboratory of Experimental Gerontology, National Institute on Aging, Baltimore, Maryland*

Age-related impairment of angiogenesis and the resulting microvascular rarefaction and decline in tissue blood supply play a significant role in the development of vascular cognitive impairment and heart failure in elderly patients. However, the mechanisms underlying age-related

impairment of angiogenesis remain unknown. The redox-sensitive transcription factor Nrf2 plays a key role in preserving a healthy endothelial phenotype and maintaining the functional integrity of the young vasculature. Recently we demonstrated that aging is associated with Nrf2 dysfunction in endothelial cells, which alters redox signaling and likely promotes the development of large vessel disease. Much less is known about the consequences of Nrf2 dysfunction at the level of the microcirculation. To test the hypothesis that Nrf2 regulates angiogenic capacity of endothelial cells, we determined whether disruption of Nrf2 signaling (by siRNA knockdown of Nrf2 and over-expression of Keap-1, the cytosolic repressor of Nrf2) impairs angiogenic processes in cultured human endothelial cells (ECs) stimulated with VEGF and IGF-1. In the absence of functional Nrf2 ECs exhibited impaired proliferation and adhesion to vitronectin and collagen. Disruption of Nrf2 signaling also reduced cellular migration (measured by a wound-healing assay using electric cell-substrate impedance sensing [ECIS] technology) and impaired the ability of ECs to form capillary-like structures. Collectively, we find that Nrf2 is essential for normal endothelial angiogenic processes, suggesting that Nrf2 dysfunction may be a potential mechanism underlying impaired angiogenesis and microvascular rarefaction in aging.

### FROM THE CONGO TO THE MGH: REDISCOVERING CNS AMYLOID ANGIOPATHY AS A CAUSE OF ICH IN THE SILVER GENERATION

A.Z. Hashmi, *Geriatric Medicine, Massachusetts General Hospital, Boston, Massachusetts*

Case Description: 75 year old lady Ms.M.K from the Congo admitted, June 2012 with Status Epilepticus. PMH: HTN, DM, Dementia, h/o DVT (on Coumadin), Family History unknown, no substance abuse. Admission BP 158/104 HR: 91, GCS 3/15 Respiratory failure: Intubated, admitted to MICU. Loaded with Phenytoin, then on 4 AED's. Labs: CBC, BMP normal, PT 17.4 INR 1.5. Imaging: CT Brain: 3.8 x 3.7cm ICH within Left parietal lobe; Interval MRI: Micro-hemorrhages in posterior lobes. Radiology interpretation: pattern consistent with Amyloid Angiopathy. Exam: quadriplegic, non-verbal, minimal response to painful stimuli, s/p tracheostomy s/p PEG placement. Subsequently transferred to STR/SNF after 6 weeks. Passed away 6 months later post repeat ICH. Family decline autopsy. Discussion: First described in 1854, we currently know amyloid fibrils as insoluble fibers derived from amyloid precursor protein undergoing conformational change to form antiparallel beta pleated sheets. Multi-organ deposition: cardiac, hepatic, renal, tongue. Cerebral Amyloid Angiopathy (C.A.A): Specific to CNS. Prevalence: Age 65-74:2-3% > 75 years: 84.8%. CAA induces ICH. Pathophysiology: Amyloid deposits (Abeta1-40 different from Abeta 1-42 in plaques) replace smooth muscle in walls of small to medium sized arteries. Increased arterial wall fragility, necrosis and subsequent rupture. Clinical Features: None pathognomonic. CAA Neuroimaging hallmarks: Sparing of regions characteristic for hypertensive ICH: basal ganglia, thalamus, pons; posterior lobe predilection;"micro-hemorrhages: Diagnostic Gold Standard: Biopsy but rarely available and "patchy" distribution may cause false negatives. Treatment: No definitive treatment – conservative treatment as for any ICH- Role of statins and ACE Inhibitors being studied for the future.

### HIGH FAT DIET-INDUCED OBESITY PROMOTES CEREBROVASCULAR AUTOREGULATORY DYSFUNCTION IN AGED MICE

P. Toth, Z. Tucek, L. Bailey-Downs, D. Sosnowska, T. Gautam, W.E. Sonntag, Z. Ungvari, A. Csiszar, *University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

Diet-induced obesity in the elderly promotes the development of vascular cognitive impairment, which develops in the absence of Alzheimer-type senile plaques as a result of decreased cerebral blood flow due to vascular alterations. To test the hypothesis that obesity in

aging impairs local vasoregulatory mechanisms in cerebral arteries, young (3 mo) and aged (24 mo) C57BL/6 mice were fed a high fat diet (HFD) or a standard diet (SD) for 6 months. In middle cerebral arteries (MCA) isolated from obese aged mice stepwise increases in transmural pressure (from 10 to 160 mmHg) elicited impaired steady-state myogenic constriction as compared to responses obtained in vessels of young SD- and HFD-fed and aged SD-fed mice. MCAs from aged obese mice also exhibited impaired dynamic myogenic responses and flow-induced constriction. Furthermore, obesity impaired metabolic vasodilation in response to adenosine in young mice, whereas its effect was exacerbated in aged mice. Collectively, aging exacerbates obesity-induced cerebrovascular autoregulatory dysfunction, which likely promotes microvascular damage contributing to the development of vascular cognitive impairment in aged obese individuals.

### AGING EXACERBATES MICROVASCULAR ENDOTHELIAL DAMAGE INDUCED BY INFLAMMATORY FACTORS PRESENT IN THE CIRCULATION DURING SEPSIS

Z. Tucek<sup>1</sup>, T. Gautam<sup>1</sup>, W.E. Sonntag<sup>1</sup>, P. Toth<sup>1</sup>, A. Csiszar<sup>1</sup>, H. Saito<sup>2</sup>, C. Szabo<sup>3</sup>, Z. Ungvari<sup>1</sup>, *1. Reynolds Oklahoma Center on Aging University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, 2. University of Kentucky, Lexington, Kentucky, 3. University of Texas Medical Branch, Galveston, Texas*

The elderly show a significantly elevated mortality rate during sepsis than younger patients, due to their higher propensity to microvascular dysfunction and consequential multi-organ failure. We tested whether aging renders vascular endothelial cells more susceptible to damage induced by inflammatory factors present in the circulation during sepsis. Primary microvascular endothelial cells derived from young (3 m.o.) and aged (24 m.o.) F344xBN rats were treated with sera obtained from sepsis patients and healthy controls. Apoptotic cell death (caspase 3 and caspase 8 activities) induced by treatment with septic sera was exacerbated in aged endothelial cells as compared to responses obtained in young cells. In aged endothelial cells, compared to young cells, DAF fluorescence, indicating NO production, was decreased both under basal conditions and after treatment with septic sera. Treatment with septic sera elicited greater increases in mitochondrial production of reactive oxygen species (MitoSox fluorescence) and NF-kappaB activation (reporter gene assay) in aged endothelial cells, as compared to young cells. Collectively, aging increases sensitivity of microvascular endothelial cells to oxidative stress and cellular damage induced by inflammatory factors present in the circulation, which likely contributes to the increased vulnerability of elderly patients to sepsis. (Funding: AHA, AFAR, NIH).

### RESVERATROL REVERSES INCREASED HYPOTHALAMIC NADPH OXIDASE ACTIVITY AND VASCULAR DYSFUNCTION WITH AGE

N. Tumer<sup>1,2</sup>, S. Gomez<sup>3</sup>, N. Kirichenko<sup>1,2</sup>, B. Erdos<sup>1</sup>, Y. Sakarya<sup>1,2</sup>, P.J. Scarpace<sup>1</sup>, M.A. Whidden<sup>4</sup>, *1. Pharmacology, University of Florida, Gainesville, Florida, 2. VA Medical Center, Gainesville, Florida, 3. Namik Kemal University, Tekirdag, Turkey, 4. West Chester University, West Chester, Pennsylvania*

Resveratrol is a natural phytoalexin which possesses anti-aging and vasoprotective effects. We examined resveratrol treatment on hypothalamic NADPH oxidase activity (NOX), aortic TNF $\alpha$ , and vascular function in mesenteric arteries in 6 mo and 24 mo old male F-344xBN rats. Resveratrol (15 mg/kg) was provided in drinking water for 14 days. Hypothalamic NOX was elevated with age and decreased with resveratrol such that resveratrol reversed the age-related increase. There were parallel changes in p47 and p67 regulatory subunits of NADPH. Resveratrol also decreased aortic TNF $\alpha$  in young and old. Concentration response curves to resveratrol and acetylcholine (ACh) were evaluated in pressurized isolated mesenteric arteries. Resveratrol reversed the age-

related decrease in Ach-induced vasodilation. Ach responses in young and old control groups were also tested after 20 min pre-incubation of isolated mesenteric arteries with 20  $\mu$ M of resveratrol. This in vitro pre-treatment with resveratrol restored the Ach-induced vasodilatation to young level. Our data indicate that age-related dysfunction in endothelium-dependent vasodilation in mesenteric arteries is reversed by oral resveratrol or in vitro resveratrol incubation. The underlying mechanism may involve decreases in aortic TNF $\alpha$  or hypothalamic NOX. Supported by Department of Veteran Affairs Rehabilitation R&D, GRECC, NIA, and American Heart Association.

#### **EFFECT OF KLOTHO POLYMORPHISMS ON EFFICACY OF SSRIS IN LATE-LIFE MAJOR DEPRESSIVE DISORDER PATIENTS**

G. Paroni<sup>1</sup>, G. D'Onofrio<sup>1</sup>, D. Seripa<sup>1</sup>, M. Urbano<sup>1</sup>, C. Gravina<sup>1</sup>, F. Ciccone<sup>1</sup>, F. Panza<sup>1</sup>, A. Pilotto<sup>1,2</sup>, *1. Geriatrics, I.R.C.C.S. Casa Sollievo della Sofferenza, San Giovanni Rotondo, Italy, 2. Azienda ULSS 16 Padova, S. Antonio Hospital, Padova, Italy*

Klotho protein, encoded by the KL gene at locus 13q12, is an anti-aging hormone-like protein playing a pivotal role in longevity and age-related diseases. No data are available regarding its role in Major Depressive Disorders (MDD) of the elderly. We evaluated the KL SNPs rs564481 and rs9536314 in 103 elderly patients (28 males and 75 females, mean age 77.46 $\pm$ 6.64) with a clinical diagnosis of MDD according to DSM-IV criteria, treated with SSRI for 6-months. Patients were evaluated with the Hamilton Rating Scale for Depression 21-items (HDRS-21) at baseline and after 6-months of treatment. According to the NICE criteria, a reduction  $\geq$ 10% in HDRS-21 score was considered a response to therapy, whereas a reduction  $<$ 10% as non-response to therapy. At six-months, 87 patients (84.5%) responded and 16 patients (58.1%) did not respond to SSRI treatment. A significant higher frequency of T/T genotype of rs564481 was found in responders than in non-responders ( $p=0.015$ ). Conversely a significantly higher frequency of G/G genotype of rs9536314 was found in non-responders than in responders ( $p=0.007$ ). These results suggest that the SNPs rs564481 and rs9536314 of the KLOTHO gene may influence the clinical efficacy of SSRIs in patients with MDD.

#### **INCREASED DEPRESSIVE SYMPTOMS ARE ASSOCIATED WITH LARGER GRAY AND WHITE MATTER REGIONAL VOLUME**

M. Mortby<sup>1,4</sup>, A.L. Janke<sup>2,4</sup>, P. Sachdev<sup>3</sup>, K.J. Anstey<sup>1,4</sup>, N. Cherbuin<sup>1,4</sup>, *1. Centre for Research on Ageing, Health and Wellbeing, Australian National University, Canberra, Australian Capital Territory, Australia, 2. Centre for Advanced Imaging, University of Queensland, Brisbane, Queensland, Australia, 3. Neuropsychiatric Institute, University of New South Wales, Sydney, New South Wales, Australia, 4. Dementia Collaborative Research Centres, Canberra, Australian Capital Territory, Australia*

Background: Depression is a known risk factor for cognitive decline and dementia, but the evidence on associations between brain structure and depressive symptomatology is mixed. This study investigates the association of depressive symptoms with regional gray/white matter volumes in a large cohort of cognitively healthy, older, community-dwelling individuals (68-73 years) from the PATH Through Life project at wave 3 (N=244). Method: Pre-processing and voxelwise analysis of regional gray/white matter volumes of T1-weighted images was conducted in SPM8. Individuals on antidepressant medication were excluded from these analyses (n=19). Results: Voxelwise analyses controlling for age, sex, anxiety, MMSE, BMI, diabetes and hypertension showed a positive association between increased depressive symptoms and greater regional gray matter volumes in the parietal, temporal and occipital lobes, and white matter volumes in the temporal and limbic cortex ( $\alpha=0.001$ ). No negative association was found. Conclusion: While these findings contrast with the growing evidence of pre-frontal and

orbitofrontal cortex degeneration in depression, they complement other findings suggesting increased gray matter volumes in the cingulate gyrus as a marker of early neuronal pathology. Possible explanations for the current findings include that increased regional gray/white matter volumes may reflect neuronal overgrowth, deficits in the pruning process of neurogenesis, neural maturation following antidepressant treatment or the impact of early inflammatory processes in depression. Future research should consider i) increased regional volumes as a marker for early neurodegenerative processes and ii) the role that inflammatory processes play in the association between increased regional volumes, depressive symptoms and cognitive decline.

#### **HISTORICAL BLOOD PRESSURE MEASUREMENTS IN OLDER ADULTS INDICATE UNDERLYING SMALL VESSEL DISEASE IN THE LEFT HEMISPHERE. (CNS)**

C. Rosano<sup>1</sup>, K.Z. Abebe<sup>1</sup>, H. Aizenstein<sup>1</sup>, T.B. Harris<sup>2</sup>, K. Yaffe<sup>3</sup>, S. Satterfield<sup>4</sup>, A.B. Newman<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. National Institute on Aging, Bethesda, Maryland, 3. University of California, San Francisco, San Francisco, California, 4. University of Tennessee Health Science Center, Memphis, Tennessee*

BACKGROUND: Higher systolic blood pressure (SBP) is a known risk factor for stroke and small vessel disease (SVD). However, single SBP measures alone do not necessarily capture historical patterns of SBP. OBJECTIVE: Compare the prevalence of SVD in older adults with historical fluctuating SBP patterns and in those with stable or declining historical patterns. METHODS: Group-based trajectory models (GBTM) identified subjects based on SBP patterns from baseline in 1997-98 to time of neuroimaging in 2006-08 in 315 adults (73 years old, 60% women, 45% black). SVD was computed for commissural, association and projection fibers. RESULTS: In 2006-08, 18.8% of the participants had normal SBP ( $<$  120 mmHg), 55.1% had moderate SBP (120-140mmHg) and 26.1% had high SBP (140-160mmHg). The normal SBP group had a stable historical pattern, while the groups exhibiting moderate and high SBP in 2006-08 was further divided into those with historical stable SBP and historical fluctuating SBP patterns. Compared with those with normal SBP, there was an increasing gradient of probability of having SVD in the anterior commissural and left hemisphere for those with moderate-stable, moderate-fluctuating, high-stable, and high-fluctuating SBP (odds ratios, [95% CI]: 1.88 [1.00, 3.51], 2.85 [0.89, 9.15]; 2.81 [1.36, 5.84]; 3.42 [1.01, 11.58], respectively,  $p=0.048$ ). Results were similar after exclusion of participants with stroke and after adjustment for antihypertensive medication use, age, education, cognition, history of hypertension or impaired glucose. DISCUSSION: In addition to current SBP values, prior history of fluctuating SBP should be considered in assessing prevalence of SVD in community-dwelling older adults.

#### **BRAIN ANATOMICAL CORRELATES OF GAIT VARIABILITY IN HIGH FUNCTIONING OLDER ADULTS: REPEATABILITY ACROSS TWO INDEPENDENT STUDIES. (CNS)**

C. Rosano<sup>1</sup>, M.J. Olson Hunt<sup>1</sup>, J. Brach<sup>1</sup>, A.B. Newman<sup>1</sup>, S. Studenski<sup>1</sup>, J. Verghese<sup>2</sup>, L. Weissfeld<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. Albert Einstein College of Medicine, New York, New York*

Background: Step length variability (SLV) is associated with falls. Initial studies in Parkinson's disease patients indicate that SLV is potentially amenable to intervention. Purpose: To identify the neural substrates of SLV in two cohorts of community-dwelling dementia-free elderly. Methods: Gray matter volumes and coefficient of variation of step length were obtained in participants of the Cardiovascular Health Study (n=220, 78.1 yrs old, 63% women, 78% white) and the Healthy Brain Project (n=293, 82.7 yrs old, 57% women, 60% white). Gray matter volumes were computed for: basal ganglia (caudate, putamen, pallidum,

thalamus), pre- and post-central gyri, supplementary motor cortex; middle frontal gyrus, cingulate cortex, posterior parietal cortex (medial, superior lateral, inferior lateral), medial temporal lobe (hippocampus, parahippocampus, entorhinal cortex, amygdale). Sparse partial least square methods examined volumetric data with age, sex, obesity, race and total gray matter volume to address collinearity, multiple comparisons and over-fitting. Variables were ranked based on the percentage of times they were selected (had non-zero parameter estimates) across models obtained using all possible combinations of tuning parameters. Variables selected > 90% of the times are reported. Results: Anterior and posterior cingulate, superior parietal, thalamus and total parenchyma were selected in both datasets. The frontal middle gyrus, hippocampus and motor-related regions (pre- and post-central gyri; supplementary motor cortex, inferior parietal, putamen, pallidum) were selected in the Cardiovascular Health Study only. Conclusion: Volume of cingulum, superior parietal and thalamus are related to SLV. Future studies should assess whether these regions may exhibit neuroplasticity in response to interventions improving SLV.

## SESSION 1200 (POSTER)

### AGING AND COGNITION

#### INCREASED DURATION OF DAILY MENTAL STIMULATING ACTIVITY REDUCES NUMBER OF DAILY STRESSORS IN OLDER ADULTS

A. Trujillo<sup>1</sup>, J.C. Allaire<sup>1</sup>, A.C. McLaughlin<sup>1</sup>, S. Neupert<sup>1</sup>, M. Gandy<sup>2</sup>, I. North Carolina State University, Raleigh, North Carolina, 2. Georgia Institute of Technology, Atlanta, Georgia

Excessive stress can result in reduced memory capacity, as well as detrimental effects on cognitive performance (McEwen & Sapolsky, 1995; Neupert, Almeida, Mroczek, & Spiro, 2006; Sapolsky, 2000). The current study investigated the extent to which engagement in mentally stimulating daily activities (e.g. reading, puzzles, video games) is related to daily stress. It was hypothesized that on days when older adults engaged in more cognitively challenging daily activities they would experience less stress. The sample consists of 113 community-dwelling elders with a mean age of 78 years (range = 63 – 96; SD = 7.32). Participants completed 15 daily packets over a three-week period, providing a total of 1172 observations. The daily packet consisted of questions on frequency and duration of mental activities, and number of daily stressors was assessed through the Daily Inventory for Stressful Events (Almeida, Wethington, & Kessler, 2002). Using multi-level modeling, analyses revealed that there was significant within- (56%) and between-person (44%) variability for overall mean daily stressors. Analyses revealed that on days participants spent more time on cognitively demanding activities they also reported fewer daily stressors. This relationship was stronger in participants who lived alone, compared to those who did not live alone. Discussion will focus on how undertaking challenging mental tasks may remove attention from some of the causes of stress.

#### INTENSIVE COGNITIVE PRACTICE IN OLDER ADULTS: GAINS, STRUCTURE, PREDICTORS, AND TRANSFER

J.M. Dzierzewski<sup>1</sup>, M. Marsiske<sup>1</sup>, M.P. Buman<sup>2</sup>, A. Aiken Morgan<sup>3</sup>, P.R. Giacobbi<sup>4</sup>, B.L. Roberts<sup>5</sup>, C.S. McCrae<sup>1</sup>, 1. *Clinical & Health Psychology, University of Florida, Gainesville, Florida*, 2. *Arizona State University, Phoenix, Arizona*, 3. *Duke University Medical Center, Durham, North Carolina*, 4. *University of Arizona, Tucson, Arizona*, 5. *University of Florida, Gainesville, Florida*

Introduction: Practice with cognitive stimuli is a major part of any cognitive intervention. The current study examined 18 weeks of broad computer-administered cognitive practice in middle aged and older adults and investigated (a) gains across different measures were correlated, (b) what factors predicted the magnitude of practice-related gain,

and (c) whether gains in practiced measures transferred to unpracticed measures. Methods: Participants included 88 adults aged 50-87 years (Mean=63.56) who completed 18 consecutive weeks of cognitive practice (processing speed and executive processing), pre and post cognitive practice neuropsychological assessment (used as transfer variables), and baseline demographic questionnaires (assessing common individual difference variables: age, education, estimated IQ, and psychiatric symptoms). Results: Latent growth curve models revealed substantial growth in practiced cognitive tasks across the 18-week study period. Curve-of-factors analyses indicated: (1) Sizeable higher-order gain across all measures (linear estimate,  $p < .01$ ; quadratic estimate,  $p < .01$ ), (2) Higher educational attainment was associated with more constant gain in general learning ( $p < .05$ ) and more state-anxiety symptoms was related to deceleration in general learning ( $p < .05$ ), and (3) Overall gain in practiced measures was correlated with pre-post improvements in 1-Back ( $p < .01$ ) and 2-Back RT ( $p < .05$ ). Conclusion: The cognitive gains associated with practice (i.e., 0.48-1.40 standard score increase) were comparable to or larger than those associated with tutor-guided interventions. Such findings are consistent with the notion that practice may be a viable alternative to structured cognitive interventions in late-life. Additionally, the presence of a general learning factor may suggest the possibility of classifying older adults as cognitive gainers versus non-gainers.

#### KNOWLEDGE DIFFERENTIALLY SUPPORTS ACCURACY OF FOOD LABEL USE FOR OLDER RELATIVE TO YOUNGER ADULTS

L.S. Miller<sup>1</sup>, T.N. Gibson<sup>1</sup>, D.T. Thach<sup>2</sup>, 1. *University of California, Davis, California*, 2. *Western University of Health Sciences, Pomona, California*

Nutrition fact panels (NFPs) contain a wide variety of nutrition information which could be used to support healthy food choices, yet some evidence suggests that NFPs are difficult to use, particularly for older adults. Older adults have been shown to benefit from their prior knowledge when performing nutrition comprehension tasks (Miller et al., 2011). We investigated age and knowledge effects on NFP accuracy to determine whether knowledge mitigates accuracy declines in later life. Forty-one younger and 27 older adults performed three tasks: locating information on an NFP, determining healthfulness of an NFP, and identifying the type of food represented by an NFP. Participants viewed NFPs on a computer screen at their own pace and selected answers using a response box. Knowledge groups were created by taking a median split, within age group, on a multiple-choice task that assessed a variety of areas of nutrition knowledge. Accuracy data were analyzed in a mixed ANOVA with age and knowledge as between-subjects variables and task as the repeated measure. Results showed a main effect of Knowledge,  $F(1,64) = 4.2$ ,  $p < .05$ ,  $\eta^2 = .06$ , such that the high-knowledge group (HK) had higher scores than the low-knowledge group (LK). There was a nonsignificant effect of Age,  $F < 1$ , which was qualified by a significant Age x Knowledge interaction,  $F(1,64) = 6.3$ ,  $p < .05$ ,  $\eta^2 = .09$ . There were significant age declines in the LK group that were not evidence in the HK group. These data show that knowledge differentially supports accuracy of older adults' use of NFPs.

#### AGE-RELATED DIFFERENCES BETWEEN INTENTION-BASED AND STIMULUS-BASED ACTIONS: AN ERP STUDY

Y. Niu, J. Li, *Institute of Psychology, Chinese Academy of Sciences, Beijing, China*

We recorded Event-Related Potentials (ERPs) during an adapted Acquisition-Test task to investigate the differences of motor cognition between young and older adults under intention-based and stimulus-based conditions. For Acquisition phase, the temporal bisection task was used in which case participants were asked to make left or right key presses at the midpoint between isochronous pacing letters successively presented in the center of the computer screen, either by their own will



to generate a random sequence of letters (for intention-based situation), or according to the letter previously presented (for stimulus-based situation). For Test phase, each group was divided into two subgroups to complete consistent task or inconsistent task, respectively. During Acquisition phase, previous evidence that readiness potentials (RP), reflecting action preparation, was strongest in the intention-based condition, whereas P3, reflecting stimulus evaluation, was most pronounced in the stimulus-based condition was found for both age groups. However, the amplitude of RP, P3 and the differential wave subtracted between action conditions differed between two age groups, suggesting that motor cognition declined with aging in a way of two kinds of action decreasing unequally. Contingent negative variation (CNV) was compared between consistent and inconsistent tasks during Test phase, with more pronounced difference under intention-base condition for both age groups, providing electrophysiological evidence directly for the action-effect binding and stimulus-response binding. Again, CNV was more negative in amplitude for older adults, indicating less efficiency in motor preparation and more effort demanded to make a response. Keywords motor cognition, aging, RP, P3, CNV

### AGING AND NEW WORD UNDERSTANDING

S. Hindin, E. Zelinski, *Gerontology, Univ Southern California, Los Angeles, CA, California*

New word understanding is important for aging adults because it contributes to function in the social and business world. A loss in new word understanding in old age may exist because other cognitive abilities can limit the ability to learn new words. A multiple choice measure testing understanding of new words in the context of short passages was used in a longitudinal design and both cross-sectional and longitudinal analyses were conducted. Participants in the Long Beach Longitudinal Study were tested on new word understanding items at every other testing wave, around every 6 years. Three possible testing times are available for the first panel, two testing points for the second panel. 1641 participants ages 29-100 ( $M=68.9$ ,  $SD=13.8$ ) with a majority over 55, 53.6% female, with a mean education of 14.4 years ( $SD=2.8$ ) were tested. New vocabulary items were Rasch scaled for accurate comparison of differing items. New vocabulary was modeled linearly for latent change with age as the base including missing data and a significant mean latent slope of  $-.24$  was found. The latent slope and intercept level are highly correlated (.67) showing those who did better the first time, showed less decline. New vocabulary is nonlinear throughout adulthood; those under age 59 show no change. A mean latent slope of  $-.38$  was found for those over 59, however cognitive abilities may mediate this. Cross-sectional analyses revealed similar results.

### COGNITIVE FUNCTIONING IN THE CONTEXT OF INCIDENTAL WHITE MATTER HYPERINTENSITIES

K. Thompson<sup>1</sup>, N.A. Pachana<sup>1</sup>, G. Byrne<sup>2</sup>, B. Miloyan<sup>1</sup>, 1. *University of Queensland, St Lucia, Queensland, Australia*, 2. *Royal Brisbane & Women's Hospital, Herston, Queensland, Australia*

The purpose of this study was to detect differences in neuropsychological test performance between middle-aged (48-65) and older (65-85) female adults who presented with varying degrees of White Matter Hyperintensities (WMH). MRI and neuropsychological testing were administered to a sample of 166 neurologically healthy participants ( $age=65.1\pm 10.8$ ) further classified into one of three WMH categories (normal, mild WMH, significant WMH) by an experienced neuroradiologist. A series of MANCOVAs were performed to explore age- and WMH-group differences on cognitive test performance. After controlling for premorbid intelligence (National Adult Reading Test [NART]), results revealed only a main effect of age  $F(4, 156) = 20.175$ ,  $p < 0.0001$  on overall cognitive function. Significant differences were identified between middle-aged and older adults on measures of processing speed  $F(1, 159) = 57.942$ ,  $p < .0001$ ; verbal memory  $F(1, 159) = 18.488$ ,  $p < .0001$ ; problem solving,  $F(1, 159) = 10.786$ ,  $p = 0.001$ ; and

inhibitory control  $F(1, 159) = 30.541$ ,  $p < 0.0001$ , suggesting that middle-aged adults outperformed older adults in these cognitive domains. A subsequent set of ANCOVAs evaluating age- and WMH-group differences on subjective measures of cognitive function revealed no significant group or interaction effects. These results do not lend support to the notion that a combination of advancing age and severity of WMH burden promote greater cognitive dysfunction.

### SOCIAL RELATIONSHIPS WITH FAMILY, FRIEND AND SPOUSE: WHICH ARE ASSOCIATED WITH COGNITIVE PERFORMANCE?

C. Coyle<sup>1</sup>, S. Agrigoroaei<sup>2</sup>, 1. *Univ Mass Boston, Boston, Massachusetts*, 2. *Brandeis University, Waltham, Massachusetts*

Studies of social networks have found positive relationships between social support and cognitive performance. However much less work has focused on the role of the sources of social support (family, friends, spouse) and considered both the levels of social support and social strain as indicators of the quality of social interactions. This study aims to examine the quality of relationships from three different sources (family, friend and spouse) and cognitive performance for young, middle-aged, and older adults. Participants ( $N = 3,084$ ) who were married or partnered and ages 28-84 years were included from the national Midlife in the U.S. (MIDUS) study. Two cognitive factors, episodic memory and executive functioning were measured using the Brief Test of Adult Cognition by Telephone (BTACT). Multiple regression analyses, controlling for age, sex, race, education, and physical health conditions, revealed that the overall quality of the relationship has a significant relationship with cognitive performance and that this association changed as a function of source and age group, but that the sources of these interactions differ among young, middle-age, and older adults. For example, the interaction between age and friendship quality was significantly related to poorer executive function ( $p < .05$ ). Results from these analyses indicate that the sources of social relationships (both social strain and social support) have varying degrees of impact on cognitive function within each age group.

### THE ASSOCIATION BETWEEN RACIAL PREFERENCE AND COGNITIVE PERFORMANCE IN MID AND LATE LIFE

M.S. Yang<sup>1</sup>, S. Agrigoroaei<sup>2</sup>, P. Huffman-Oh<sup>1</sup>, E. Dugan<sup>1</sup>, 1. *Gerontology, UMass Boston, Boston, Massachusetts*, 2. *University of Brandeis, Waltham, Massachusetts*

Past studies have found that discrimination had a negative association with cognitive performance. However, there is less evidence for the relationship between a more subtle measure, race preference, and cognitive performance. The purpose of this study was to explore how race preference is associated with executive functioning and episodic memory tasks. We analyze data from wave two of the Midlife in the United States (MIDUS) national longitudinal study (2004-2006). The analytic sample size was  $N=3,616$ . Age of subjects ranged from 28-85 years old (mean age 55.80,  $SD 12.31$ ), 90% were non-Hispanic Whites, 94% had at least a high school degree, 67% were married and 55% were female. To measure the level of race preference, the respondents were asked "How much do you preferred to be with other people who are the same race as yourself?"; and, "How important do you think it is for people who are in your racial group to marry other people who are the same race?" Episodic memory and executive functioning were measured using the Brief Test of Adult Cognition by Telephone (BTACT) Descriptive and multiple regression statistics were conducted. Individuals who had higher level of race preference performed poorer on executive functioning, while controlling for age, gender, education, race, physical health, and openness. Future research will focus on understanding the mechanisms of the association between race preference and cognitive performance.

## CROSS CULTURAL/CROSS NATIONAL STUDIES

**THE ROLE OF AGE AND WORKPLACE TRAINING AND DEVELOPMENT ON WORK OUTCOMES: A JAPAN-US COMPARISON**J. Lee, M. Pitt-Catsoupes, *Boston College, Brighton, Massachusetts*

A major line of research has examined the effect of workplace T&D on employee outcomes, such as higher organizational commitment. However, much less attention has been paid to whether the effects of workplace T&D differ according to the employee's age and cultural contexts. Based on theories about labor market institutions and cross-cultural differences, in this paper we investigate the effect of age on the perceived importance of/use of/satisfaction with T&D, and whether the positive relationships between T&D and organizational commitment differ by culture. Using a sample of 2,760 employees working at four multi-national corporations with work sites in both Japan and the U.S., we found that respondents working in Japan viewed workplace T&D as less important, and reported less use of those opportunities than their counterparts in the US. However, respondents working in Japan are more satisfied with their workplace T&D. In addition, younger workers viewed workplace T&D as more important, reported more use of those opportunities than older workers, regardless of country. Lastly, the positive relationships between access to/satisfaction with T&D opportunity and organizational commitment were stronger for respondents working in Japan than for those in the U.S. while the positive relationships between the use of T&D opportunity and organizational commitment was weaker for respondents working in Japan than for their counterparts in the U.S.. This study focuses attention on the importance of considering age and cultural contexts when designing, implementing, and evaluating workplace training and development initiatives.

**FAMILY AVAILABILITY, NATIONAL HEALTHCARE INFRASTRUCTURE, AND SUPPORT PREFERENCES FOR OLDER ADULTS WITH CHRONIC DISEASE IN EUROPE**C.A. Mair<sup>1</sup>, A.R. Quinones<sup>2</sup>, *1. Dept. of Sociology and Anthropology, University of Maryland, Baltimore County, Baltimore, Maryland, 2. Oregon Health & Science University, Portland Veteran Affairs Medical Center, Portland, Oregon*

Support for older adults with chronic illness is largely dependent on informal and formal care resources, such as family availability and national healthcare infrastructure. In addition, older adults' preferences for family versus state-based care are important to consider when designing health programs for aging populations. Cross-national variation in elderly rates of chronic diseases, family availability, healthcare infrastructure, and support preferences reveals international differences in health support for aging populations. A more thorough understanding of this cross-national variation will provide insight for health care policy-makers to explore new options for national and local policies aimed at promoting older adults' health. In this paper, we explore these factors across 14 countries of Europe. This study analyzes individual-data on health status, family structure, and preferences for support from the Survey of Health, Ageing, and Retirement in Europe (SHARE) in combination with detailed nation-level data on European healthcare infrastructure from the Organisation for Economic Cooperation and Development (OECD). We use multilevel modeling to investigate to what extent chronic disease prevalence, family availability, and formal infrastructural resources are associated with older adults' preferences for care. Results indicate that individual-level health limitations and family support availability combine with nation-level resource options to shape older adults' preferences for care. We interpret these findings in light of cross-national differences in order to offer policy and program suggestions that consider variation in physical health, family availabil-

ity, national healthcare infrastructure, as well as older adults' preferences for their own care.

**STRUCTURAL FACTORS ASSOCIATED WITH CAREGIVER'S BURDEN IN ALZHEIMER'S DISEASE IN EL SALVADOR**E. Valdivieso, *Psychology, Universidad Centroamericana UCA, San Salvador, San Salvador, El Salvador*

The present study attempted to explore the structural conditions within the family of an individual with Alzheimer's disease, in El Salvador. Present literature emphasize mostly on factors within the person: personality traits, coping strategies, and previous physical health conditions. But little is known about structural conditions outside an individual. This study was conducted at the Alzheimer's Disease Caregivers Association in San Salvador. Twenty-two participants were interviewed. Participants were asked about their current condition on care giving and the factors they perceived are responsible of the burden they experience. Caregivers reported that being a woman is an important risk factor for burden, given that society expects from them to be a 24 hour caregiver, continue working on their jobs, and take care of their children. They reported to feel pressured by other family members to fulfill in a satisfactory manner all these multiple roles. All participants reported that there is an insufficient and inadequate health service for their family member with AD. Most cases mentioned that the diagnoses are based on a single 30-minute interview, without further exploration (neuropsychological assessment, neuroimaging tests). This leads them to hesitate on the diagnosis. The great immigration of young adults to the US and other developed countries was recognized as an important influence on the burden. Siblings, cousins and other family members have migrate, leaving them as solely caregivers. A caregiver's burden in Alzheimer's disease is possibly more pronounced in developing countries, like ES. Economic factors and the consequent gender inequity are deepening this burden.

**THE RELATION BETWEEN SELF-ASSESSED AND OBJECTIVE COGNITIVE AND PHYSICAL HEALTH AMONG THE 50+**D. Weber<sup>1,2</sup>, V. Skirbekk<sup>1,2</sup>, *1. World Population Program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, 2. Wittgenstein Centre for Demography and Global Human Capital, Vienna, Austria*

The recent availability of nationally representative samples using standardized questionnaires from WHO Study on global AGEing and adult health (SAGE) allow one to compare health levels across nations. These data are used to compare objective and subjective health (both cognitive and physical) for Ghana, India, Mexico and Russia. Here, those aged 50 and above were asked about self-reported physical and mental health. The objective cognitive health measures we study are immediate and delayed recall. In the memory test ten words of basic difficulty are read out in the local language and asked to be repeated immediately and after approximately ten minutes. Additionally, each interviewee was visited by health personnel, who measured grip strength, lung function and blood pressure as well as BMI and the waist-hip-ratio. Our self-assessed cognitive and physical questions include: "How would you best describe your memory at present?" and "In general, how would you rate your health today?". The purpose of the study is to evaluate the validity of self-reported data by comparison with mental health and to see to which extent it differs by country, age group and gender. Applying a multilevel regression approach we assess the relation of cognitive and physical health measures to the self-assessed health. We control for socio-economic factors, housing, marital status and other respondent characteristics.

## RIGHTS-BASED ADVOCACY WORK AND WITCHCRAFT ACCUSATIONS IN GHANA

A. Crampton, *Social and Cultural Sciences, Marquette University, Milwaukee, Wisconsin*

Witchcraft accusation against older adults, particularly women, has become part of elder advocacy work in Sub-Saharan Africa. HelpAge International and affiliated organizations publish articles, conduct educational campaigns, and work to protect the legal rights of the accused. These interventions, however, do not draw significantly from available research on witchcraft as integral to cultural values and local social realities. Instead, witchcraft accusations are constructed in rights-based advocacy discourse as elder abuse without empirical data on intervention outcomes. In this study, the cultural context of witchcraft beliefs and the impact of rights based intervention were examined as part of a ten-month study on elder advocacy. Data were collected between 2004 and 2005, and included participant observation, semi-structured interviews, and document examination. Participant observation was conducted in three 'witches camps,' and four villages and cities selected by an elder advocacy organization for a rights-based campaign. Interviews were conducted with older women accused of witchcraft, accusers, and professionals who intervene. Relevant documents included advocacy materials, radio and news print campaigns, and news reports. Results help explain past intervention failure as a failure to address the underlying causes of witchcraft accusations, and to engage with spiritual belief systems counter to those of advocates. Review of more recent advocacy work through document examination indicates these problems persist. Work by Mary Douglass provides a theoretical framework for understanding these failures as the result of imposing moral categories that are rejected in local contexts. Study implications include practical application to culturally sensitive elder advocacy work.

## SESSION 1210 (POSTER)

### DELIRIUM

#### DELIRIUM AND BEHAVIORAL SYMPTOMS OF DEMENTIA

P. Landreville<sup>1,3</sup>, P. Voyer<sup>2,3</sup>, P. Carmichael<sup>3</sup>, 1. *School of psychology, Université Laval, Québec, Quebec, Canada*, 2. *Faculty of Nursing, Université Laval, Québec, Quebec, Canada*, 3. *Axe Vieillessement, Centre de recherche FRSQ du Centre hospitalier affilié universitaire de Québec, Québec, Quebec, Canada*

Although delirium and behavioral symptoms are common in persons with dementia, the relation between them has received little attention. The purpose of this study was to explore the relation between delirium and behavioral symptoms of dementia (BSD). Participants were 155 persons with a diagnosis of dementia, 109 (70.3%) of whom were found delirious according to the Confusion Assessment Method (CAM). BSD were assessed using the Nursing Home Behavior Problem Scale. Results show that participants with delirium presented significantly more BSD than participants without delirium. More specifically, they presented more aggressive/uncooperative behavior, wandering/trying to leave, sleep problems, irrational behavior, and agitation. Delirium was still associated with wandering/trying to leave, sleep problems and irrational behavior after controlling for cognitive problems and use of antipsychotics and benzodiazepines. Some of the relationships between participant characteristics and BSD differed according to the presence or absence of delirium. BSD were not related to antipsychotics use over time in participants with delirium. These findings are consistent with recent studies showing an association between delirium and neuropsychiatric symptoms in persons with dementia. They may have practical implications for the detection of delirium superimposed on dementia and caregiver burden.

## INTERVENTIONS FOR DELUSIONS IN NURSING HOME RESIDENTS WITH DEMENTIA

J. Cohen-Mansfield<sup>1,2</sup>, H. Golander<sup>1,3</sup>, G. Arnheim<sup>4</sup>, R. Cohen<sup>1</sup>, 1. *Herczeg institute on aging, Tel Aviv University, Tel Aviv, Israel*, 2. *Department of Health Promotion, School of Public Health, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel*, 3. *Department of Nursing, Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel*, 4. *Sanatorium "Gan Shalva" Ltd., Hod-Hasharon, Israel*

This is a qualitative and quantitative study examining institutional staff members' responses to delusions experienced by nursing home residents. Participants were 38 nursing home residents aged 65 and over, diagnosed with dementia, from 8 nursing homes in Israel. Data collection took place between June 2007 and January 2009. Assessments included: BEHAVE-AD, NPI-NH, EAPSID, ADL, and MMSE. A wide variety of interventions for dealing with dementia-related symptoms was found. This included general approaches for a variety of symptoms, as well as symptom-specific interventions. Caregivers are not always aware that multiple approaches are available to them when dealing with dementia, and the most effective approaches may be those tailored to the individual. Combining interventions may increase overall effectiveness. Caregiver's experience and institutional culture may affect choice of intervention used, either positively or negatively.

## SESSION 1215 (POSTER)

### DEPRESSION

#### VASCULAR BURDEN, DEPRESSION, AND COGNITIVE DECLINE AMONG AFRICAN-AMERICAN OLDER ADULTS

J.S. Carmasin<sup>1</sup>, B.T. Mast<sup>1</sup>, J.C. Allaire<sup>2</sup>, K.E. Whitfield<sup>3</sup>, 1. *University of Louisville, Louisville, Kentucky*, 2. *North Carolina State University, Raleigh, North Carolina*, 3. *Duke University, Durham, North Carolina*

The current study examined the extent to which vascular burden was associated with depression and cognitive decline in 434 African-American older adults from the Baltimore Study of Black Aging (BSBA). We performed logistic regression analysis to determine the effect of vascular burden on time-2 depression (measured approximately 2.5 years after baseline assessment). We controlled for age, gender, education, baseline depression, activities of daily living (ADLS), and independent activities of daily living (IADLS). The model was significantly better at predicting the presence of time-2 depression than a constant only model,  $\chi^2(7) = 96.53$ ,  $p < .001$ . The model explained approximately 20% of the variability in time-2 depression,  $r\text{-sq}_{cs} = .20$ . Vascular burden was a significant independent predictor of the presence of time-2 depression, Wald  $\chi^2(1) = 6.90$ ,  $p = .01$ . Age, gender, and baseline depression were also significant predictors of time-2 depression. Path analysis revealed that vascular burden was associated with worsening of depression ( $\beta = .106$ ,  $p = .02$ ) and cognitive decline ( $\beta = -.064$ ,  $p = .05$ ). These results suggest that vascular burden is a useful predictor of future depression and cognitive decline in this population.

#### AGE AS A MODERATOR OF THE EFFECT OF DEPRESSIVE SYMPTOMS ON IMMEDIATE RECALL MEMORY

K.R. Thomas<sup>1</sup>, M. Marsiske<sup>1</sup>, P. Belchior<sup>2</sup>, A. Yam<sup>1</sup>, 1. *Clinical and Health Psychology, University of Florida, Gainesville, Florida*, 2. *McGill University, Montreal, Quebec, Canada*

Both age and depression are related to memory performance. This study examined the joint and interactive effects to determine whether very old individuals with more depressive symptoms might evince disproportionately poorer memory performance. Ninety-four healthy older adults were administered neurocognitive, experimental, and mood measures. Participants ranged in age from 65 to 90 years (mean=73.55 years), were 62% female, and, on average, had completed a Bachelor's degree. Participants were cognitively intact and generally not depressed (mean

MMSE=28.26, SD=1.74; mean Geriatric Depression Scale [GDS]=4.39, SD=3.70). Participants were classified as young-old (65-74, n=56) or old-old (75+, n=38). Using OLS regression, the dependent variables were the Hopkins Verbal Learning Test (HVLT) immediate and delayed recall performances. Gender ( $\beta=-.220$ ,  $p<.05$ ), age category ( $\beta=-.212$ ,  $p<.05$ ), and the age by GDS interaction ( $\beta=-.312$ ,  $p<.01$ ) were significant predictors of HVLT immediate recall,  $R^2=0.25$ . When controlling for immediate recall, gender ( $\beta=-.169$ ,  $p<.01$ ) and immediate recall ( $\beta=.830$ ,  $p<.01$ ) were the only significant predictors of delayed recall,  $R^2=0.72$ . Results indicate that very old adults, particularly those with higher levels of depressive symptoms, were at greatest risk for immediate recall problems. Previous work has suggested that attention/working memory is sensitive to the effects of age and depressive symptoms. Immediate recall, which reflects initial learning and encoding of word lists, has been shown to have an attentional component. Thus, future research should examine whether disproportionate reductions of attention/working memory due to depression and aging help to explain this observed "double jeopardy" in immediate recall.

#### **FACTORS ASSOCIATED WITH DEPRESSIVE SYMPTOMS AMONG THE SOON-TO-BE-OLD, THE YOUNG-OLD, AND THE OLD-OLD**

R.K. Akashi<sup>1</sup>, A. Mui<sup>2</sup>, 1. Faculty of Sociology and Social Work, Meiji Gakuin University, Tokyo, Japan, 2. Columbia University School of Social Work, New York, New York

The fact that depression stands as the most prevalent psychopathology among the older generation indicates the importance of studying later-life depression (Bouhuys & Ormel, 2003). This research aims to investigate depressive symptoms among the soon-to-be-old, the young-old, and the old-old and their associated factors. A review of gerontology literature found that factors predicting depressive symptoms among older adults are diverse. Based on Lazarus and Folkman's stress and coping model (1984), this research categorized a variety of factors into 1) socio-demographic factors, 2) the respondents' previous level of psychological well-being; 3) stress factors; and 4) coping resources. In this secondary data analysis, using a dataset of the Aging, Status, and Sense of Control study (2001) (N=1,441), separate hierarchical regression models found that out of 21 variables in the four categories tested, no factor was common to all the three groups, and 10 factors varied among them. For the soon-to-be-old, the significant factors were: less than high school education, happiness in 1995, depressive symptoms in 1995, perceived health, and perceived social support. For the young-old, the significant factors were: gender, marital status, less than high school education, anxiety in 1995, and perceived health. For the old-old, the significant factors were: depressive symptoms in 1995, anxiety in 1995, functional limitations, perceived social support, and social contact. The finding that the significant factors of depressive symptoms are mostly unique to each age group suggests the necessity for age-group specific policy, program, and practice as the overarching interventions are not suitable for diverse older population.

#### **DEPRESSION PREVALENCE RATES AND AGES OF ONSET IN THE LONG LIFE FAMILY STUDY (LLFS) AND THE NEW ENGLAND CENTENARIAN STUDY (NECS) COHORTS**

J.D. Gass<sup>1</sup>, P. Sebastiani<sup>2</sup>, S.L. Andersen<sup>1</sup>, T.T. Perls<sup>1</sup>, 1. Medicine/Geriatrics, Boston University School of Medicine, Boston, Massachusetts, 2. Boston University School of Public Health, Boston, Massachusetts

Objective: To evaluate the prevalence and age of onset of depression in a cohort selected for familial longevity. Methods: We examined the depression-free survival of 1493 probands and their siblings and 192 spouses in the Long Life Family Study (LLFS) based on self or proxy report. There were two comparison groups: 1,797 centenarians from the New England Centenarian Study (NECS), and 436 NECS controls. Because prevalence rates can be misleading due to censoring (living

subjects who may develop depression later in life), we analyzed disease-free survival with Kaplan Meyer curves using the last age of contact for censoring. We also conducted a Bayesian analysis of disease-free survival using Weibull regression (proportional hazards and accelerated failure) and included random effects for relatedness. Finally, we estimated the mean age at which 25% of each cohort reported depression. Results: Survival curves demonstrate the NECS centenarians reporting the longest depression-free survival, followed by LLFS probands and siblings, LLFS controls, and NECS controls. When we looked at the ages at which each group reached a 25% prevalence of depression, we again found that NECS centenarians have the oldest age of onset, followed by LLFS proband generation participants and controls. Conclusions: These results indicate that centenarians and those with familial longevity are more likely to delay the onset of depression than referent cohorts. Differences between the two referent cohorts could be due to the older ages of the LLFS control sample.

#### **PERCEIVED CRITICISM, DEPRESSIVE SYMPTOM SEVERITY, AND PSYCHOLOGICAL WELL-BEING IN OLDER ADULT OUTPATIENTS: A PROSPECTIVE EXAMINATION**

P. Bamonti<sup>1</sup>, P. Duberstein<sup>2</sup>, D. King<sup>2</sup>, A. Fiske<sup>1</sup>, 1. West Virginia University, Morgantown, West Virginia, 2. University of Rochester Medical Center, Rochester, New York

Among treatment-seeking older adults, positive social ties are related to depression outcomes prospectively. Less is known regarding the role of negative social ties in relation to depression and well-being outcomes among patients in treatment. The current study adds to this literature through the cross-sectional and prospective examination of patients' appraisal of family members perceived criticism in relation to self-reported depressive symptom severity and psychological well-being. Participants were 114 adults (age M = 69.8, SD = 8.5 years, range 59-97) receiving mental health treatment. Participants completed measures within one month of their intake (time 1) and again six months later (time 2). Cross-sectional examination revealed that individuals who reported higher perceived criticism also reported greater depression symptom severity ( $B = .38$ ,  $SE = .12$ ,  $p < .01$ ). The prospective relation between perceived criticism and depression symptom severity at time 2 was non-significant after controlling for depression symptom severity at time 1 ( $B = .18$ ,  $SE = .11$ ,  $p > .05$ ). Cross-sectional examination of the relation between perceived criticism and psychological well-being revealed an inverse association ( $B = -2.00$ ,  $SE = .42$ ,  $p < .001$ ). Prospective examination revealed that individuals with higher perceived criticism reported lower levels of psychological well-being, even after controlling for psychological well-being at time 1 ( $B = -1.19$ ,  $SE = .49$ ,  $p < .05$ ). These findings suggest that perceived family criticism is prospectively associated with dampened psychological well-being. Additional research is needed to examine how perceived criticism and family functioning are related to treatment outcomes in older adults.

#### **HOW DOES CHANGE IN DEPRESSIVE SYMPTOMATOLOGY INFLUENCE TRAJECTORIES IN WEIGHT, COGNITIVE FUNCTION AND BEHAVIORS IN PATIENTS WITH DIABETES?**

C. Chiu<sup>1</sup>, F. Lu<sup>1,2</sup>, L.A. Wray<sup>4</sup>, E.A. Beverly<sup>3</sup>, 1. Institute of Gerontology, College of Medicine, National Cheng Kung University, Tainan, Taiwan, 2. Department of Family Medicine, College of Medicine, National Cheng Kung University, Tainan, Taiwan, 3. Joslin Diabetes Medical Center, Harvard Medical School, Boston, Massachusetts, 4. Department of Biobehavioral Health, Pennsylvania State University, University Park, Pennsylvania

The overall purpose of this study was to investigate associations between longitudinal changes in depressive symptoms and trajectories in weight, cognitive function and health behaviors. Data on 581 patients with diabetes (mean age 67, SD=8.3) who were interviewed face-to-

face in 1996 and followed up in the 1999, 2003, and 2007 waves of the Taiwan Longitudinal Study on Aging was used. Mixed effect regression analyses compared a) patients with persistently low depressive symptoms with those whose depressive symptoms increased (at least 5 points on CES-D) over 7 years from 1996 to 2003 and b) patients with persistently high depressive symptoms with those whose symptoms decreased (at least 5 points on CES-D) from 1996 to 2003 on their weight, cognitive and behavioral change during 1999, 2003 and 2007. Compared to those with persistently low depressive symptoms, those whose depressive symptoms increased did not differ in their patterns of cognitive function, but they had a significantly faster increase in BMI and decrease in amount of exercise they participated in. Although the groups had almost identical cognitive function at baseline, those whose depressive symptoms decreased had a significantly lower rate of decline in cognitive function compared to those with persistently high depressive symptoms. We concluded that weight management and maintain of healthy behaviors may be jeopardized by increment in depressive symptoms even for those with low depressive symptoms at baseline. In persons with diabetes who have high score of depressive symptoms, improvement in depressive symptomatology may reserve cognitive function.

### DEPRESSION, PAIN, AND POLYPHARMACY IN NURSING HOMES

S. Meeks<sup>1</sup>, I. Kostiva<sup>1</sup>, D. Antimisaris<sup>2</sup>, 1. *Dept. of Psychological & Brain Sciences, Univ Louisville, Louisville, Kentucky*, 2. *University of Louisville, Louisville, Kentucky*

Nursing home residents have high rates of polypharmacy and high risk for adverse drug events from the “prescribing cascade” of medication use leading to iatrogenic symptoms leading to more medication. Mood disorders may lead to expressions of distress that result in additional treatment; we hypothesized that depression would be a significant risk for polypharmacy. We analyzed data from two studies of nursing home residents: a review of 203 charts from 10 different facilities, and self-report and chart data from 110 residents of 12 facilities. We examined the inter-relationships among depressive symptoms, psychopharmacological agents, medical conditions, and pain in predicting polypharmacy. Both depression diagnosis and symptoms were related to the number of medications in both samples ( $r=.17-.25$ ). Diagnosis of depression was correlated with the use of antidepressants, and antidepressant use was significantly correlated with polypharmacy ( $r=.36$ ,  $p<.001$ ). Being on an antidepressant also predicted being on anxiolytics and hypnotics. With significant racial differences and total number of non-mental health diagnoses controlled, pain was a significant predictor of polypharmacy but depression was not. Anxiolytic and antidepressant use predicted polypharmacy, and pain mediated the anxiolytic effect on polypharmacy but not the antidepressant effect. That is, pain may increase the likelihood that anxiolytics are prescribed, and also increases other types of medication prescribing. Pain does not necessarily increase the number of antidepressants, which are independently related to polypharmacy. These findings may point to the role of emotion and pain, both of which can be treated non-pharmacologically, in managing chronic illness.

### RELATIONSHIP BETWEEN HOMEBOUND STATUS AND DEPRESSION TENDENCY IN COMMUNITY-DWELLING ELDERLY

K. Fujita, Y. Kaneko, Y. Motohashi, *Department of Public Health, Akita University Graduate School Of Medicine, Akita, Japan*

OBJECT: We aimed to verify the relationship between being homebound and depression, i.e. a ‘downward spiral’, among community-dwelling elderly. METHODS: We conducted a population-based cohort study with self-administered questionnaires in rural Akita, Japan (population aging rate: 35.2%). All residents age 30 and over were baseline surveyed in October, 2008, and follow-up surveyed in July, 2010. Replies

to follow-up surveys were obtained from 944 (75.8%) of 1,245 persons replying to baseline surveys of those 65-89 years old. Depression was assessed using Kessler’s 6-Item Psychological Distress Scale (K6), score range 0-24, and depression was defined as  $K6 \geq 9$ . Homebound status was estimated by frequency of going outdoors. Logistic regression analysis examined correlations between depression and homebound status, independently of potential confounders. RESULTS: Excluding 433 subjects with incomplete data, 511 were analyzed. Of 445 subjects without depression at baseline, 30 (6.7%) were assessed as having depression at follow-up. Of 371 subjects whose frequency of going out was “ $\geq$ once a day” at baseline, 83 (22.4%) went out “ $\leq$ once every 2-3 days” at follow-up. On multiple logistic regression analysis, the odds ratio for depression, comparing “ $\geq$ once a day” and “once every 2-3 days” was 3.02 (1.28-7.14), while that for “ $\leq$ once per week” was 0.75 (0.18-3.06). The odds ratio for reduced frequency of going out, versus “ $K6 \leq 3$ ”/“ $K6 > 3$ ” was 1.73 (1.05-2.85). Conclusion: Our results suggest a downward spiral relationship between “homebound status” and depression.

### PAIN VARIABILITY AND ITS PREDICTORS: DEPRESSION, AFFECT, COGNITION, FUNCTIONALITY, AND HEALTH

K. Zakoscielna<sup>1</sup>, P.A. Parmelee<sup>1,2</sup>, 1. *University of Alabama, Tuscaloosa, Alabama*, 2. *Center for Mental Health and Aging, Tuscaloosa, Alabama*

A strong correlation has been found between pain and variables such as depression, affect, cognition, functionality, and health. Pain variability, however, has neither been concisely studied, nor has its relationship with the previously mentioned variables. The purpose of this secondary data analysis is to determine whether depression, affect, cognition, functional status, and health are predictors of day-to-day pain variability in older adults in long-term care settings. Drawn from a sample of older long-term care residents, 56 adults aged 68 years and older were included in the multiple linear regression analyses. Pain variability was measured over 30 days of self-reported pain levels. The Geriatric Depression Scale (GDS), Philadelphia Geriatric Center Positive and Negative Affect Scales, Memory-Information-Concentration test, Physical Self-Maintenance Scale (PSMS), and perceived health were used as predictors. Results show a significantly positive association between total GDS score and pain variability ( $p<.05$ ,  $\beta=.468$ ). Results also showed that there is a positive correlation between pain variability, positive affect variability and negative affect variability ( $p<.05$ ,  $r=.246$ ;  $p<.05$ ,  $r=.301$  respectively). Additionally, a negative correlation was found between pain variability, mean negative affect, and perceived health ( $p<.05$ ,  $r=-.332$ ;  $p<.05$ ,  $r=-.430$  respectively). These results indicate that with increased pain variability, daily affect variability (both positive and negative) increases, while perceived health and overall negative affect decrease. Understanding the relationships that affect pain variability may potentially alleviate changeability of pain, as well as improve affect and decrease depressive symptoms in older adults.

### THOUGHT SUPPRESSION AND SELF-BLAME MEDIATE THE RELATIONSHIP BETWEEN EVENTS AND DEPRESSIVE SYMPTOMS

S. Scott, M. Sliwinski, J. Smyth, *Penn State, University Park, Pennsylvania*

Recurrent, negative thoughts often follow stressful experiences. The way individuals manage these thoughts may help to explain the relationship between life events and depression symptoms. Attempting to suppress unwanted thoughts can actually make them more intrusive and frequent. The strategy of blaming oneself for these thoughts has also been related to emotional vulnerability. Participants ( $n=322$ , age range=19-83) completed surveys of recent life events, depressive symptoms, thought suppression, and self-blame. Thought suppression and self-blame were positively correlated with life events and depressive symptoms. Although the direct path between events and symptoms

remained significant, the tendency to engage in maladaptive thinking – both thought suppression and blame – partially mediated this relationship, suggesting that part of the relationship between stressors and depressive thinking is through maladaptive strategies for managing negative thoughts. These account for unique variance and may be components of a broader set of ineffective strategies for coping with stress.

### THE GERIATRIC DEPRESSION SCALE: CORRELATION BETWEEN TELEPHONE AND IN-PERSON ADMINISTRATIONS

K.B. Dassel<sup>1</sup>, H. Ewen<sup>2</sup>, 1. *Western Kentucky University, Bowling Green, Kentucky*, 2. *Miami University, Oxford, Ohio*

The Geriatric Depression Scale (GDS) is a brief 30-item questionnaire used to screen for cognitive, somatic, and affective symptoms of depression within the older adult population. The purpose of this pilot study was to explore the association between telephone (GDS-T) and in-person (GDS-P) administrations of the GDS in a group of spousal caregivers (N = 40) of persons with cognitively impairment. Caregivers were administered the GDS-T first and then completed the GDS-P within a two week follow-up period (mean = 13.8 days; S.D. = 12.4). The caregivers averaged 75.6 (S.D. = 6.1) years of age with 14.9 (S.D. = 2.7) years of education. The caregiver sample was 60% female, cognitively intact (Mini Mental State Exam scores = 29.1; S.D. = 0.8), and rated their health between good and excellent. The relationship between the mean total scores two administration versions of the GDS was assessed using a paired-samples t-test and a Pearson correlation coefficient. The mean scores for the GDS-T was 3.1 points (S.D. = 2.4) and 3.4 points (S.D. = 2.2) for the GDS-P. Results of the paired-samples t-test revealed no significant differences between the two test administrations ( $t(1, 39) = -.70$ ;  $p = 0.49$ ). Results of the Pearson correlation between the two administration formats was found to have a moderate level of association ( $r = 0.60$ ;  $p < .001$ ). In conclusion, results of this pilot study suggest that the GDS-T is a valid administration format that can be used with older adult caregivers.

### CROSS-LAGGED EXAMINATION OF TOTAL CHOLESTEROL AND DEPRESSIVE SYMPTOMS: FINDINGS FROM THE NAS

J. Proulx<sup>1</sup>, R. Nath<sup>1</sup>, H. Igarashi<sup>1</sup>, Y. Jeong<sup>1</sup>, C.M. Aldwin<sup>1</sup>, A. Spiro<sup>2</sup>, 1. *Oregon State University, Corvallis, Oregon*, 2. *VA Boston Health Care System and Boston University School of Public Health, Boston, Massachusetts*

Clinicians often recommend changes in medications and lifestyle that are intended to lower cholesterol in their patients, due to the increased health risks associated with high cholesterol. However, some studies indicate an inverse relationship between serum lipids, especially total cholesterol (TC) and depression (Shin, Suls, & Martin, 2008). However, these studies are controversial, in part due to their cross-sectional design (Sansone, 2008). The current study uses longitudinal data collected two time over a three year interval from 1,028 men who were participants of the Normative Aging Study (NAS); Mage at baseline = 65.48, SD = 7.83, range 43 – 90). Depressive symptoms (DS) were measured by the Brief Symptom Inventory subscale,  $\alpha = .85$  (Derogatis & Melisaratos, 1983). Preliminary analyses used a zero-inflated Poisson cross-lagged path model in Mplus 6.0 to examine bidirectional relations between TC and DS over three years. Results showed a modest relationship between TC at T1 and DS at T2: a one SD (37.03) increase in cholesterol raised the odds of not having depressive symptoms at T2 by a factor of 1.40 ( $B = .008$ ,  $p < .01$ ), controlling for age at baseline. This longitudinal study supports earlier cross-sectional work suggesting an increased risk of depression when treating high cholesterol.

## SESSION 1220 (POSTER)

### ENVIRONMENTAL ISSUES AND AGING

#### ASSOCIATIONS BETWEEN NEIGHBOURHOOD BUILT ENVIRONMENT AND WALKING AMONG COMMUNITY-DWELLING SENIORS LIVING IN SMALL TOWNS OR RURAL AREAS: RESULTS FROM THE NUAGE STUDY

M. G  n  reux<sup>1,2,3</sup>, M. Roy<sup>2</sup>, M. Levasseur<sup>2</sup>, J. Breau<sup>4</sup>, H. Payette<sup>2,1</sup>, 1. *Department of community health sciences, Faculty of medicine and health sciences, University of Sherbrooke, Sherbrooke, Quebec, Canada*, 2. *Research center on aging, Health and social services center - University institute of geriatrics of Sherbrooke, Sherbrooke, Quebec, Canada*, 3. *Direction de la sant   publique et de l'  valuation de l'Agence de la sant   et des services sociaux de l'Estrie, Sherbrooke, Quebec, Canada*, 4. *Department of medicine, Faculty of medicine and health sciences, University of Sherbrooke, Sherbrooke, Quebec, Canada*

Objective: In large cities, several features of the built environment have been associated with seniors' walking. However, little knowledge is currently available for such associations in small towns or rural areas. This study thus aimed to examine associations between features of the built environment and walking frequency and duration among community-dwelling seniors living in small towns or rural areas. Method: This study was based on a cross-sectional sample of 904 older adults (2006-2007; females=50.7%) aged 67-82 years from the Quebec Longitudinal Study on Nutrition and Aging and living in the Sherbrooke area (Qu  bec, Canada). Data were self-reported and collected by means of interviewer-administered questionnaire. Features of the neighbourhood built environment were: 1) perceived ease of walking, 2) feeling of day-time security, and 3) proximity to  $\geq 1$  neighborhood resources (services, amenities) within a 5-minute walk of the participant's residence (yes/no). Outcomes were walking frequency ( $\geq 5$  versus  $< 5$  days/week) and duration ( $\geq 1$  versus  $< 1$  hour/day). Using multivariate logistic regression, associations were adjusted for sociodemographic characteristics (age, sex, and education level), and multimorbidity (number of chronic conditions). Results: More than two fifths (41.2%) and one quarter (26.7%) of seniors respectively walked frequently and for long periods. Walking frequently was independently associated with perceived ease of walking (OR=2.17;95%CI=1.28-3.69), feeling of day-time security (OR=3.17;95%CI=1.15-8.71) and proximity to  $\geq 1$  neighborhood resources (OR=1.76;95%CI=1.01-3.05). None of the built environment features were associated with walking duration. Conclusions: Future studies should investigate why features of the built environment were associated with walking frequency but not with walking duration.

#### RESPONSES TO AIR QUALITY ALERTS: DO ELDERLY AMERICANS SPEND LESS TIME OUTDOORS?

A. Sexton, *Abt Associates, Minneapolis, Minnesota*

Air pollution levels can vary dramatically from day to day based on predictable weather variables. Thus episodic policies aimed at reducing exposure on high pollution days may be cost effective relative to policies aimed at reducing pollution exposure across all days. Episodic approaches seek to reduce exposure by increasing averting behavior among at-risk individuals. This paper uses data from the American Time Use Survey (ATUS), a nationally representative survey, to study whether the elderly—those most at risk due to health complications from high pollution—respond to daily information on air-quality levels or to air-quality alerts issued during periods of high pollution by reducing their vigorous outdoor activities (VOAs), and thus minimizing their exposure. The ATUS contains information on all VOAs, thus allowing for a comprehensive study of elderly individuals' responses to air-quality information. Results show that on average elderly individuals respond to air-quality alert days by spending 59 percent less time in VOAs on

that day, which represents a 65-minute reduction. Further, there is no evidence that they make-up forgone VOAs at other times when the health risk is lower. Although averting behavior in response to air-quality alerts is a positive result regarding public health, there are negative health affects associated with an overall reduction in VOAs. After attending this session, participants will have a better understanding of the overall effects of air quality and air-quality alerts on behavior of the elderly population, and will also be informed as to the important policy implications that these results suggest.

#### **HOME AND COMMUNITY ENVIRONMENTAL FEATURES, ACTIVITY PERFORMANCE, AND COMMUNITY PARTICIPATION TO SUPPORT AGING IN PLACE AMONG OLDER ADULTS WITH FUNCTIONAL LIMITATIONS**

H. Yang, J.A. Sanford, *CATEA, Georgia Institute of Technology, Atlanta, Georgia*

This paper describes relationships among home and community environmental features, activity performance (i.e., independence-dependence and ease-difficulty) in the home, and community participation potential (i.e., frequency of going into community) to support aging in place as a comprehensive understanding of the interrelationships among home and community environments, performance, participation is still lacking. The study employed a cross-sectional survey design. A subset of data on older adults with functional limitations (N = 122), sixty three (63) with mobility and 59 with other limitations, were utilized in this study from a larger project's subject pool. Results showed significant and positive correlations between environmental barriers, activity dependence and difficulty at home, and less community participation potential in the mobility limitation group. While kitchen and bathroom features were most limiting to home performance, bathtub or shower was the only home feature that explained community participation (adjusted  $r^2 = .055$ ,  $P < .05$ ). Compared to environmental features, home performance explained much more community participation. Difficulty in getting in and out of a bathtub/shower accounts for almost one-third of community participation (adjusted  $r^2 = .306$ ;  $P < .001$ ). In the community, destination social environment was the only community feature that explained community participation (adjusted  $r^2 = .130$ ;  $P < .01$ ). Study results help to prioritize intervention and suggest that environmental modifications should be conceived as a continuum of interventions from home to community in order to support both the activities and community participation that are necessary for successfully aging in place.

#### **FACILITATING AGE-FRIENDLY COMMUNITY USING SOCIAL CAPITAL APPROACH AND UNIVERSITY-LOCAL PARTNERSHIP**

S. Pasupuleti, S. Balaswamy, *Criminal Justice & Social Work, The University of Toledo, Toledo, Ohio*

Rapidly increasing aging population necessitated improving environment for older adults so that they can successfully age in their familiar environment. By 2020, there will be 97,000 individuals 60+ in Lucas County, which is a 27% increase. The "Age Friendly Toledo initiative" has been in place for making the community by improving - physical, social and emotional support systems. Community-wide efforts are being made to transform the Toledo community to become age-friendly to accommodate the changing demographics using the WHO's guidelines elements. Since 2006, the World Health Organization (WHO) is advocating for global efforts to transform communities as age-friendly. This two year project combines a social capital approach and community organization principles to facilitate collaboration among diverse stakeholders to build inclusive age-friendly community in a city with meager resources. The first phase consisted of monthly meetings with identified stakeholders, recruitment and training of volunteers, formation of a local committee and data collection on needs. Surveys are designed on the key domains postulated by WHO like outdoor spaces and build-

ings, transportation, housing, social participation, respect and social inclusion, civic participation and employment, communication and information and finally community support and services. The study focused to assess service needs and gaps in the city/county with help of focus groups, archival data and field observations. Findings suggest challenges in collaboration due differing interests, resource constraints, resistant to investments, diverse views on allocation of scarce resources, and economic uncertainties. Elders views were positive, reflects resiliency, and self-sustainability. Implication for theory and practice will be discussed.

#### **THE HAZARDS OF BAD AIR: FINE AIR PARTICULATE MATTER AND COGNITIVE FUNCTION IN OLDER U.S. ADULTS**

J.A. Ailshire, *Andrus Gerontology Center, Univ Southern California, Los Angeles, California*

Impaired cognitive function has serious negative health, social, and economic consequences for older adults, their caregivers, and society. Although a number of individual risk factors for cognitive decline and low cognitive function have been identified, relatively little research has focused on potential environmental risk factors, such as air pollution. This study examines the link between residential air pollution exposure and cognitive function among older U.S. adults. The study sample includes 9,660 non-Hispanic white and non-Hispanic black men and women ages 60 and older who participated in the 2000 Health and Retirement Study, a nationally representative study of older adults, and lived in their residence since 1999. Individual data were combined with data on 1999 levels of fine air particulate matter (PM) from the Environmental Protection Agency's Air Quality System monitors. Cognitive function was measured in terms of episodic memory and mental status. In unadjusted models mean cognitive function declined with increasing levels of fine PM. Cognitive function continued to be lower among individuals living in the most polluted areas, even with adjustment for demographic and socioeconomic characteristics and health status. Associations between cognitive function and fine PM were stronger among women, suggesting that exposure to pollution may be more detrimental to the cognitive function of older women. This is the first study to show how exposure to air pollution influences cognitive function in a national sample of older men and women, and suggests that fine air particulate matter may be an important environmental risk factor for reduced cognitive function.

### **SESSION 1225 (POSTER)**

#### **EPIDEMIOLOGY**

#### **REEXAMINING THE ASSOCIATION BETWEEN FERTILITY AND LIFESPAN: TESTING THE DISPOSABLE SOMA THEORY IN A MODERN HUMAN SAMPLE OF TWINS**

E. Chereji<sup>1</sup>, N.L. Pedersen<sup>2,1</sup>, C. Prescott<sup>1</sup>, 1. *University of Southern California, Los Angeles, California*, 2. *Karolinska Institute, Stockholm, Sweden*

Research on the existence and direction of the relationship between fertility and lifespan has yielded mixed results. One evolution-based theory, the disposable soma theory (DST), proposes a trade-off between fertility and lifespan in females with natural selection favoring allocation of resources toward reproduction at the expense of longevity. The present study used data from the Swedish Twin Registry to test whether additional children are related to decreased lifespan (as proposed by the DST) and whether demographic covariates explain any relationship found. Data from pairs of twins were analyzed to elucidate whether the association between fertility and lifespan is accounted for by individual-level factors or by genetic and environmental factors shared by family members. Fertility and longevity information from female and male

twins (N=15,622) born 1901-1925 were analyzed using survival analysis. Contrary to the DST, women with children had significantly longer lifespans relative to those who were childless [males without kids (ref)=1.00, males with kids=1.06, females without kids=1.20, females with kids=1.27]. Although women in general lived longer than men, the survival advantage associated with parenthood was similar for the sexes and the effect did not depend on number of offspring. Adjustments for demographic factors and co-twin fertility did not alter the prediction for an individual's survival, indicating that the association is attributable to individual-level factors associated with fertility rather than family-level environmental or genetic factors shared by co-twins. These results, derived from a large, population-based sample, are inconsistent with the disposable soma theory as applied to modern humans.

### **METABOLIC FUNCTIONING AND TRAJECTORY OF GRIP STRENGTH AMONG OLDER JAPANESE ADULTS: A BIOPSYCHOSOCIAL PERSPECTIVE**

J. Liang<sup>2</sup>, L. Nyquist<sup>2</sup>, J.M. Bennett<sup>2</sup>, S. Shinkai<sup>3</sup>, Y. Fujiwara<sup>3</sup>, A.E. Aiello<sup>2</sup>, A. Botosaneanu<sup>1</sup>, 1. *Yale University, New Haven, Connecticut*, 2. *University of Michigan, Ann Arbor, Michigan*, 3. *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

**Background.** Socioeconomic differences in physical performance have been documented in older adults. Despite the increase in obesity and related metabolic dysfunction, the association between metabolic functioning, psychosocial resources and physical performance trajectories in older adults has not been evaluated. **Methods.** We used longitudinal data from 1,381 Japanese adults aged 70 years or older to assess the association between psychosocial characteristics (education, gender, age, self-rated well-being), metabolic functioning (percent body fat, weight, triglycerides, HDL-cholesterol, HbA1c) and trajectories of grip strength (GS). Hierarchical linear models with time-constant and time-varying covariates estimated the GS trajectory (intercept and rate-of-change). **Results.** GS declined over 9 years following a linear trajectory. Women showed a lower GS intercept ( $b = -12.191, p < 0.001$ ) but a slower rate of decline ( $b = 0.195, p < 0.01$ ) compared with men. Higher education was associated with a stronger GS at baseline ( $b = 0.184, p < 0.01$ ) but not with differences in the rate of change over time. Higher baseline body-weight was associated with stronger baseline GS ( $b = 0.268, p < 0.001$ ) and a faster rate of decline in GS ( $b = -0.018, p < 0.05$ ); percent body-fat was negatively related to GS intercept ( $b = -0.220, p < 0.001$ ) and positively to the rate of decline ( $b = 0.021, p < 0.05$ ). There were no significant correlations between GS trajectory parameters and triglycerides, HDL-cholesterol, or HbA1c. Metabolic functioning fully mediated the educational differences in GS intercept and partially mediated gender differences in GS rate-of-decline. **Conclusion.** Differences in metabolic functioning profiles partly explain psychosocial differences in muscular strength in older adults.

### **PHYSICAL ACTIVITY AND MORTALITY RISK AMONG OBESE AND NON-OBESE OLDER ADULTS**

B.A. Shaw<sup>1</sup>, J. Newsom<sup>2</sup>, 1. *University at Albany, School of Public Health, Rensselaer, New York*, 2. *Portland State University, Portland, Oregon*

**Introduction:** Prior research has found physical inactivity to be a predictor of mortality among middle aged adults, regardless of weight status. The purpose of this study was to examine the degree to which inactivity continues to predict mortality among older adults in various body mass index (BMI) categories. **Methods:** Baseline data came from a sample of close to 20,000 adults, ages 51 and older, who participated in the 1998 Health and Retirement Study (HRS). Each respondent was asked if they participated in vigorous physical activity at least three times per week; those who responded negatively (56% of sample) were defined as inactive. BMI was also assessed at baseline. Mortality status and date of death were tracked until 2008. The mortality risk associated with inactivity was estimated separately for normal-weight, overweight, and

obese adults, after controlling for sociodemographic variables and baseline functional status. **Results:** Inactivity was associated with an increase in mortality risk of approximately 50-70%, with negligible variation across BMI categories. However, among normal-weight and overweight adults, the risk of inactivity declined significantly with increasing age, while no such decrease was evident among obese adults. **Conclusions:** During later life, physical inactivity is increasingly common with advancing age, and its prevalence is particularly high among obese adults. Nevertheless, the health impact of inactivity does not diminish among older obese adults as it does among non-obese adults. Efforts to identify and address factors, other than functional ability, that may be inhibiting physical activity among obese individuals are still needed in later life.

### **THE ASSOCIATION OF DIABETES WITH INCIDENT COGNITIVE AND MENTAL HEALTH OUTCOMES IN OLDER PUERTO RICANS**

M. Crowe<sup>1</sup>, A. Garcí a Gurucharri<sup>2</sup>, O.J. Clay<sup>1</sup>, K. Markides<sup>3</sup>, A. Dávila<sup>2</sup>, 1. *University of Alabama at Birmingham, Birmingham, Alabama*, 2. *University of Puerto Rico, Río Piedras, Puerto Rico*, 3. *University of Texas Medical Branch, Galveston, Texas*

**Objective:** We examined diabetes as a predictor of incident cognitive impairment, depressive symptoms, and comorbidity of these outcomes in a nationally representative sample of adults age 60+ years in Puerto Rico. **Methods:** There were 2,726 participants from the Puerto Rican Elderly: Health Conditions study who completed cognitive testing at baseline and four-year follow-up, and who did not have early-onset diabetes (onset <age 30). Cognitive impairment was defined as scoring <1.5 standard deviations below a predicted score based on age and education for the Minimalist Cabán (MMC). The 20-point MMC includes items related to verbal and visual memory, orientation, and executive function. Scores on the 15-item Geriatric Depression Scale were categorized as normal (0-4), mild (5-8), moderate (9-11), or severe (12-15). Incident depression was defined as change to a higher category at follow-up. **Results:** Diabetes was associated with 43% greater risk of incident cognitive impairment (OR=1.43, 95% CI: 1.15-1.79), 60% greater risk of incident depression (OR=1.60, 95% CI: 1.25-2.04), and 83% greater risk of comorbid cognitive impairment and depression (OR=1.83, 95% CI: 1.31-2.57) in models adjusted for age, gender, race, and years of education. Associations with cognitive impairment and comorbidity remained statistically significant after additional adjustment for vascular health conditions and diabetes-related complications. The relationship between diabetes and incident depression was explained by diabetes-related complications. **Conclusions:** Diabetes is strongly associated with adverse cognitive and mental health outcomes in older Puerto Ricans. Prevention and treatment of diabetes in this population may help to preserve cognitive and mental health in later life.

### **MODELLING THE IMPACT OF CHRONIC DISEASES ON DISABILITY-FREE LIFE EXPECTANCY IN THE VERY OLD**

A. Kingston<sup>1</sup>, J. Bond<sup>2</sup>, J. Collerton<sup>1</sup>, K. Davies<sup>1</sup>, L. Robinson<sup>2</sup>, T. Kirkwood<sup>1</sup>, C. Jagger<sup>1</sup>, 1. *Institute for Ageing and Health, Newcastle University, Newcastle upon Tyne, United Kingdom*, 2. *Institute of Health and Society, Newcastle University, Newcastle upon Tyne, United Kingdom*

**Aims:** Although there has been some research on the effect of different diseases on disability incidence and mortality, results are rarely reported in terms of composite indicators of disability-free life expectancy. Here we describe both the methods and results of the impact of different diseases on total, disabled and disability-free life expectancy using three waves of data from the Newcastle 85+ Study, a large, representative cohort (n=852; including community-dwelling and those in institutional care) all born in 1921 and interviewed at age 85 with follow up at 18 and 36 months. **Methods:** Multi-state models with three states (none/mild disability, moderate/severe disability and death) were



fitted with death as an absorbing state using the msm package in R. We assumed that transitions from non/mild disability to death were via moderate/severe disability. Eight diseases were added singly as covariates into the model but also with a disease count (excluding that disease) to adjust for comorbidity. From the resulting transition intensities remaining years of life and remaining years with and without moderate/severe disability were calculated through microsimulation. Results: Those with dementia lived 0.5 years less overall but 0.2 years more with moderate/severe disability and 0.7 years less with none/mild disability. Those with arthritis lived 0.5 years more but 0.2 years fewer in none/mild disability and 0.7 years more in moderate severe disability. We will present results showing the impact of each disease on the transitions in disability and the life expectancy in each state, alongside the methodology implemented to elucidate our findings.

### RECENT TRENDS IN COMPLEX HEALTH PROBLEMS IN THE OLDEST OLD IN SWEDEN 1992-2010

B. Meinow, I. Kåreholt, M.G. Parker, *Aging Research Center (ARC) Karolinska Institute & Stockholm University, Stockholm, Sweden*

Studies addressing multiple morbid conditions in elderly populations usually focus on disease and physiological indicators relevant for the medical care system. Few studies include both medical and functional indicators, which together indicate the need for integrated care from different providers of medical and long-term care (home-help, institutional care) as well as informal caregivers. When assessing elder-care needs and the wellbeing of the oldest old, trends of complex health problems seem more useful than single health items that may follow diverse trends over time. This study identified severe problems in three health domains (health items/symptoms, mobility, cognition/communication) in three nationally representative samples of the Swedish population aged 77+, including institutionalized people and proxy interviews for those who were too frail to be interviewed themselves. People with severe problems in two/three domains were considered having complex health problems. Changes in the proportion of people with complex health problems between 1992, 2002 and 2010 were analysed with logistic regressions as well as differences according to age, gender, and education. Results showed a significant increase of elderly people with complex health problems from 19% in 1992 to 26% in 2002. Between 2002 and 2010/11 there has been no significant change. Gender, age and education had significant independent effects on the odds of having complex health problems. Patterns were similar for men and women. From a social policy perspective, stable prevalence rates of complex health problems among the oldest old since 2002 emphasize the continuing need for extensive collaboration between medical and social services.

### ASSOCIATIONS BETWEEN HEALTH-RELATED MEASURES AND INCOME IN LOCAL OLDER POPULATIONS: JAGES2010

R. Ohtsuka<sup>1</sup>, K. Kondo<sup>2</sup>, M. Nakade<sup>3</sup>, K. Suzuki<sup>2</sup>, C. Murata<sup>4</sup>, D. Matsumoto<sup>5</sup>, K. Shirai<sup>6</sup>, H. Miura<sup>1</sup>, *1. National Center for Geriatrics and Gerontology, Obu, Aichi, Japan, 2. Nihon Fukushi University, Nagoya, Aichi, Japan, 3. Tokaigakuen University, Nagoya, Aichi, Japan, 4. Hamamatsu University School of Medicine, Hamamatsu, Shizuoka, Japan, 5. Kio University, Kitakatsura-gun Kouryou-tyo, Nara, Japan, 6. University of the Ryukyus, Nakagami-gun Nishihara-tyo, Okinawa, Japan*

**BACKGROUND:** Links between socioeconomic status and health-related measures have been reported in many studies. However few of them compared health-related measures by income in Japan. **OBJECTIVE:** We used data from the Japan Gerontological Evaluation Study (JAGES) to examine the effects of income on health-related measures in local older populations. **SUBJECTS:** From August 2010 to April 2011, postal surveys (including field interviews for a part) were sent to 117,494 older people living in 27 municipalities in Japan who had not been cer-

tified to receive long-term care. Responses were received from 78,769 people (response rate: 67.0%). **METHODS:** We calculated equivalent income and examined health-related measures, including obesity, meat/fish and fruit/vegetable consumption, sports participation, walking, smoking, alcohol consumption, sleep problems and sleep quality. Respondents were grouped into low, middle or high income, and data were analyzed using logistics regression after adjusting for age. **RESULTS:** We compared health-related measures with the high income group as the reference ( $p < .01$  for all results below). In the low income group, more women were obese and, in both men and women, meat/fish consumption frequency, fruit/vegetable consumption frequency and sports participation were lower, walking time was shorter, smoking was more prevalent, alcohol consumption less prevalent, sleep problems were more frequent and sleep quality was poorer. **CONCLUSION:** The results of this study suggested that lower equivalent income was associated with a lower tendency to perform favorable health-related measures in older people. Future studies are needed to examine other social and environmental factors related to health promotion.

### CHOLESTEROL TRAJECTORIES AND MORTALITY: FINDINGS FROM THE NORMATIVE AGING STUDY

L. Lee<sup>1,3</sup>, C.M. Aldwin<sup>4</sup>, Y. Jeong<sup>4</sup>, M. Levenson<sup>4</sup>, A. Spiro<sup>1,2,3</sup>, *1. Department of Epidemiology, Boston University School of Public Health, Boston, Massachusetts, 2. Department of Psychiatry, Boston University School of Medicine, Boston, Massachusetts, 3. Behavioral Science Division, National Center for Posttraumatic Stress Disorder, VA Boston Healthcare System, Boston, Massachusetts, 4. Human Development & Family Sciences, School of Social & Behavioral Health Sciences, Oregon State University, Corvallis, Oregon*

Cholesterol is a major risk factor many illnesses in late life, including cardiovascular disease and Alzheimer's disease (Finch, 2011). However, most studies utilize a two-point design, using baseline cholesterol to predict subsequent illness. We examined individual trajectories in total cholesterol (TC) across 26 years in 991 men from the Normative Aging Study (NAS) (Mage = 60.9 years, SD=6.7, range 50-90 in 1985). Serum total cholesterol was measured enzymatically approximately every 3 years between 1985-2010. The Content Scales of Anger, Anxiety and Depression in the Minnesota Multiphasic Personality Inventory-2, administered in 1986, were used to construct a latent factor representing disposition toward negative emotionality. Hierarchical linear regression was conducted to examine longitudinal change in TC. Results yielded a mild quadratic curve, with mean TC showing a decreasing trend that became slightly more accelerated in later age. There was significant individual variation in TC intercepts and slopes. Preliminary results from a Cox regression implemented in a structural equation modeling framework indicated that both the TC intercept and slope were predictive of mortality (HRintercept = 1.50, 95%CI: 1.34, 1.69; HRslope = 1.33, 95%CI: 1.21, 1.45), suggesting that individuals with higher TC at baseline or less decline in TC over age experienced earlier mortality. The effects were independent of disposition toward negative emotionality. As most of the NAS men were not on statins during the study period, the decrease in cholesterol probably reflects the decrease in weight that occurs in late life.

### SESSION 1230 (POSTER)

#### FALL RISK

#### ASSOCIATION OF FALLS AND ANTIDEPRESSANT USAGE IN OLDER ADULTS

A. Swailes, J.D. Flatt, J. King, E. Luksik, C. Narkevic, S.M. Albert, *BCHS, University of Pittsburgh, Pittsburgh, Pennsylvania*

**Background:** Falls are the primary cause of injury and hospitalization among older adults, and can lead to limited mobility, the inability

to live independently, and death. Previous research suggests that certain medications may lead to more frequent falls. Purpose: To examine the effects of antidepressant usage on fall risk in older adults in the independently-living senior population in Pennsylvania. Methods: Prescription data were collected in a baseline interview via telephone for seniors aged 50 and older. These seniors were contacted monthly during the next 5 months to track falls, injuries, and hospitalizations. Results: At the time of the baseline interview, seniors that reported taking antidepressants ( $n=205$ ) were twice as likely as those who were not taking antidepressants ( $n=1336$ ) to report a fall in the previous 30 days (12.2% vs. 6.1%,  $p<0.01$ ). Conclusions: These preliminary data suggest that antidepressant usage is associated with an increased risk of falling in an elderly population. Fall prevention strategies should consider antidepressant usage as a possible risk factor for falls, and encourage communication between seniors and their healthcare providers about the possible secondary effects of their medications.

### **COGNITIVE IMPAIRMENT AS A POTENTIAL FALL RISK IN COMMUNITY-DWELLING OLDER ADULTS**

J.D. Flatt, A. Swailes, J. King, E. Luksik, C. Narkevic, J. Nutini, C. Petruzzini, S.M. Albert, *University of Pittsburgh, Graduate School of Public Health, Behavioral and Community Health Sciences, Pittsburgh, Pennsylvania*

Background: Falls are a major concern for older adults and lead to increased risks of morbidity and mortality. Research has suggested that older adults with cognitive impairment may be at an increased risk for falls. Purpose: Examine the effects of cognitive impairment on fall risk and circumstances in community-dwelling older adults in Pennsylvania. Methods: Data were collected by telephone for up to 5 months from seniors aged 50 and older. Cognition was assessed via the Memory Impairment Screen (MIS) at baseline and participants were contacted monthly about falls and circumstances. Results: At baseline, older adults with cognitive impairment ( $n=168$ ) were more likely to report falling both in the past year and the past 30 days ( $p<.05$ ) compared to those with no impairment ( $n=1632$ ). Examining those who reported a fall during the 5 monthly follow-ups ( $n=250$ ), cognitively impaired older adults were more likely to be recurrent fallers ( $p<.001$ ). In regards to fall circumstances, older adults with cognitive impairment were more likely to have fallen inside their home (67% vs. 44%,  $p<.05$ ) and when bending or changing position (30% vs. 13%,  $p<.05$ ). Conclusion: These results provide insight into the fall risk and circumstances in older adults with cognitive impairment. Fall prevention efforts should consider cognitive impairment as a risk factor for falls and targeted prevention strategies may be necessary.

### **ATTENTIONAL NETWORK TASK PERFORMANCE AND FEAR OF FALLING IN OLDER JAPANESE ADULTS**

F. Togo<sup>1</sup>, A. Ohnishi<sup>2</sup>, K. Ishimatsu<sup>3</sup>, 1. *Graduate School of Education, The University of Tokyo, Tokyo, Japan*, 2. *National Institute of Occupational Safety and Health, Kawasaki, Japan*, 3. *Graduate School of Health Care Sciences, Jikei Institute, Osaka, Japan*

The present study assessed the associations between attentional performance and fear of falling in 37 male volunteers, aged 60-69 years. Reaction times (RT) for the Attentional Network Task (ANT) were collected. For the ANT, stimuli consisted of a row of 5 items with the third (central) item as either a leftward or rightward pointing arrow. Participants focused on the central target and pressed one key when the central target pointed to the left or a different key when it pointed to the right. The two items (flankers) on either side of the central target were either horizontal lines (neutral condition) or arrows. The congruent and incongruent flanker conditions consisted of flanking arrows pointing in the same and opposite direction as the central target, respectively. On some trials, warning cue was presented 400 ms before the stimuli. Cues were presented at central fixation point, or both above and below the fixation point, or on the target location. We assessed the efficiency

of the segregated alerting, orienting, and executive control networks by measuring how response latencies were influenced by alerting cues, spatial cues, and flanking stimuli, respectively. Participants completed 96 trials of the flanker task. Fear of falling was assessed by the Modified Fall Efficacy Scale. Response latencies did not correlate with the level of fear of falling for spatial cues and flanking stimuli, but correlated significantly for alerting cues. These results indicate that impaired alerting system which controls alert state correlate with falls in the elderly.

### **ADAPTED ACTIVITY CARD SORT: A PATIENT CENTERED MEASURE OF AVOIDANCE DUE TO FEAR OF FALLING**

C. Merz<sup>1</sup>, J. Wetherell<sup>2,1</sup>, 1. *University of California San Diego, San Diego, California*, 2. *VA San Diego Healthcare System, San Diego, California*

Avoidance of activities due to fear of falling (FF) can lead to social isolation, physical disability and loss of independence, yet there is currently no gold standard measure to assess avoidance due to FF. The Survey of Activities and Fear of Falling in the Elderly (SAFFE) fails to capture avoidance among higher functioning older adults, focusing instead on simple activities of daily living (e.g., getting out of bed, preparing simple meals). To develop a new measure of avoidance due to FF, we have modified the Activity Card Sort (ACS): a set of pictures of older adults engaging in various leisure, physical, and social activities. Our adapted ACS has modified the original measure to include activities that would likely be avoided due to FF (e.g., taking a bath) and exclude others (e.g., playing cards), from which participants select their top 5 activities that they would like to do/do more if they were not afraid of falling. To date, we have administered the Adapted ACS to 27 older adults. We will present data on psychometric properties and sensitivity to change for 50 participants completing an intervention for FF. Due to its patient centered approach and ability to capture avoidance of activities among higher-functioning older adults, we propose our Adapted ACS as a new/alternative method of measuring avoidance due to FF.

### **EXPLORING THE ASSOCIATIONS BETWEEN FALL RISKS AND COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM): FINDINGS FROM THE NEW YORK CITY HEALTH INDICATORS PROJECT**

A. Caron, *CUNY School of Public Health, New York, New York*

Background: Falls account for nearly half of all injury-related deaths, 18,000 hospitalizations and 24,000 emergency room visits among older adults in New York City annually. Studies indicate that use of Complementary and Alternative Medicine (CAM) is higher in New York City than national average. This study explored associations between CAM use and falls. Methods: Secondary analysis was performed on cross-sectional data from a 2008 survey including 1273 senior center attendees aged 60 and older. Falls outcome was a self-reported fall or multiple falls within 12 months. CAM therapies were grouped based on the National Health Interview Survey (NHIS) and separately compared to the falls outcome while controlling for competing effects. Multivariate logistic regressions were used to determine which CAM groups impacted falls. Results: Prevalence of falls was 26.8% and consistent with national average. Prevalence of having tried CAM was 92%. Those having tried manipulative body therapy were at a higher risk of falling (OR=1.65 CI 1.26, 2.15). Use of mind body therapy showed a downward trend in fall risk when introduced to the final regression equation (OR= .81 CI .62, 1.01). Conclusions: Results indicated that those having tried certain CAM may be at a higher risk for falling and certain CAM modalities may negatively impact fall risks. Because of their access to high-risk patients, certain CAM practitioners should be included in falls prevention efforts and certain CAM modalities should not be overlooked as a means for older adults to control conditions associated with falling.

## PROSPECTIVE PREDICTORS OF FALLS AND RECURRENT FALLS

C.L. Peronto, T. Chen, J.D. Edwards, *Aging Studies, University of South Florida, Tampa, Florida*

Among older adults, falling leads to physical and psychological traumas (Campbell, Borrie, & Spears, 1989; Malmivaara, Heliö vaara, Knekt, Reunanen, & Aromaa, 1993), and is a leading cause of death due to unintentional injuries among older adults in the US (Centers for Disease Control and Prevention, 2005). The goal of this study was to examine prospective predictors of falls and recurrent falls across three years. Participants (n=509) were community-dwelling and ranged from 63 to 90 years of age (M=73, SD=5.22). Measures of speed of processing, executive function, psychomotor speed, and known risk factors of falling were included in correlation and logistic regression analyses. Results indicated poor executive function (Trail Making Test), slower speed of processing (Digit Symbol Substitution Test), and slower psychomotor speed (Digit Symbol Copy Test) were significantly associated with falls. Poor executive function and speed of processing performance (Stroop, Trail Making Test, and Digit Symbol Substitution Test) as well as slower psychomotor speed were significantly related to recurrent falls. Logistic regression results indicated that only medication use, far visual acuity, and psychomotor speed were significant independent predictors of falls. Regarding recurrent falls, being white, medication use and balance were significant predictors. Although cognitive measures at baseline were significantly associated with falls and recurrent falls at follow-up, these measures did not predict falling after considering known risk factors of falls and psychomotor speed. Thus, it may be that simple measures of psychomotor speed are more salient predictors of falls than cognitive measures.

## FROM RESPONDING TO PREVENTING: A FALL PREVENTION TOOL TO EMPOWER EMERGENCY RESPONDERS

J. Pynoos, P. Beck, E. Nabors, G. Misiaszek, *University of Southern California, Los Angeles, California*

Emergency Medical Services (EMS) personnel are often the first to arrive at the scene of a fall – most of which occur at home. Providing EMS with the tools to prevent rather than only respond to an older person falling is essential in falls prevention (FP). The FP Connect project aims to enhance the capacity of Los Angeles (LA) County EMS/Fire personnel to address fall risks and reduce repeat falls. The goals of FP Connect are: 1) to strengthen the FP referral network within Los Angeles by coordinating community partners so that older adults who fall can receive the support and services they need to age safely in their homes; and 2) to enhance the capacity of LA County Fire Department and its EMS so that they can play a more effective role when responding to older adults who have fallen. Translational research described in this session includes qualitative and quantitative analysis from 1) six on-the-scene ‘ride-alongs’ with EMS/Fire personnel in Los Angeles, Inglewood, and West Hollywood, 2) four pre- and post- focus groups with EMS/Fire personnel, and 3) the use of LA County falls data to determine fall “hot spots” in order to maximize the impact of the intervention. Five fall “hot spots” were determined for pilot locations if the demonstrated falls incidence was greater than 2,500 per 100,000 older adults in the population. Using a mixed-methods approach, the presenters will critically review the impacts on the participating EMS/Fire personnel themselves and their interventions with older adults who have fallen.

## SESSION 1235 (POSTER)

### FAMILY CAREGIVING 2

#### THE FEASIBILITY OF A WEB-BASED PSYCHOSOCIAL ASSESSMENT FOR CAREGIVERS OF PERSONS WITH DEMENTIA

V. Steiner, L.L. Pierce, C.E. Gies, *University of Toledo, Toledo, Ohio*

Over 5 million people live with dementia. Often family caregivers do not seek outside help due to care and time constraints. This quasi-

experimental study examined the experience of using a psychosocial assessment to understand caregivers’ needs, in the assessment’s original face-to-face interview format versus a new self-administered web-based format. Ten family caregivers (5 male; 5 female) from one mid-west state were randomized to an interview or web-based group. Participants in the interview group had the assessment administered by one advanced practice nurse (APN) in a face-to-face format. Participants in the web-based group accessed the study’s web site and completed the assessment online, which was then reviewed by a second APN. Participants in both groups, as well as the nurses, completed a paper/pencil Survey to capture their perception of the assessment experience. No statistically significant differences were found between the two caregiver groups. Overall the caregivers rated the assessment as excellent or good; thought it was easy to complete; and captured their real needs. All participants reported that every caregiver should have access to this assessment. One theme that emerged from the written comments was that the assessment helped caregivers in reviewing their own needs, which they tend to deny or ignore. APNs using the assessment reported that the web-based format was very easy to use, while the interview format was difficult to use. Web-based assessment is an effective and efficient method for healthcare professionals to use to identify caregivers’ needs, providing a means for planning appropriate interventions.

#### SUICIDAL IDEATION IN FAMILY CARERS OF PEOPLE WITH DEMENTIA: AN AUSTRALIAN STUDY

S.T. O’Dwyer<sup>1,2</sup>, W. Moyle<sup>1,2</sup>, S. Van Wyk<sup>1</sup>, *1. Research Centre for Clinical and Community Practice Innovation, Griffith University, Brisbane, Queensland, Australia, 2. Dementia Collaborative Research Centre (Carers and Consumers), Queensland University of Technology, Brisbane, Queensland, Australia*

Background: Family carers of people with dementia experience higher than average rates of depression, anxiety and hopelessness. While these three conditions have all been linked to suicide in other populations, there have been no studies of suicidal ideation or attempts in dementia carers. The aims of this pilot study were to: (1) provide an initial exploration of carers’ experiences of suicidality; (2) identify potential risk and protective factors in this population which could be used to guide further research. Method: In-depth interviews were conducted with family carers of people with dementia. Transcripts were analysed thematically. Results: Nine carers (4 male, 5 female; 25-82 years) participated. Four participants had experienced suicidal ideation while caring. None had attempted suicide. Four emergent themes outlined ‘experiences of suicidal ideation’, ‘coping strategies’, ‘protective factors’ and ‘risk factors’. Risk factors included mental and physical health problems (including depression and hopelessness) and family conflict. Protective factors included social support, faith, and a sense of responsibility. Conclusion: Some family carers of people with dementia contemplate suicide in response to challenges associated with the caring role. The identified risk and protective factors are consistent with other suicide research and potentially modifiable. Future research should focus on confirming the rate of suicidal ideation in this population and developing screening tools and targeted interventions for at-risk carers. After this presentation, participants will be able to discuss the issue of suicidality in dementia carers; explain some of the risk and protective factors; and identify directions for future research and policy development.

#### TREND IN FAMILY SUPPORT OF ELDERLY PEOPLE IN TAIWAN

L.E. Ku, L. Liu, *IOG, NCKU, Tainan, Taiwan*

Background: Family support comprises the backbone of long-term-care provision in Taiwan, yet little is known about how care provisions and the composition of caregivers has changed over time. Methods: Data are drawn from three waves of the Taiwan Longitudinal Study on

Aging (1999, 2003, 2007) to examine the trend of caregiver support for disabilities in activities of daily living (ADLs) in a nationally representative sample of Taiwanese elders 65 and older. Predictors of receiving paid help versus informal support were modeled using Generalized Estimating Equations. Results: Among elders with at least one of six ADLs in Taiwan, the percentage of those receiving any ADL help has decreased from 83% in 1999 to 79% in 2007. In 2007, primary caregivers who provided ADL assistance were adult children (30%), paid helpers (25%), spouses (21%), and other family or friends (24%). A sharp increase was found (from 6% to 25%) for paid helpers but a decline (from 42% to 30%) was observed for adult children caregivers over time. Results showed that the likelihood of receiving paid help was higher in 2003 and 2007, when compared to 1999. Age and female were significant predictors for receiving paid ADL help, as well as higher socio-economic status. However, living with spouse or adult children did not affect the likelihood of receiving paid help. Conclusion: Findings suggest a change in the traditional family support system in Taiwan with the rise of paid help, although family still accounts for a major source of care for ADL-disabled elders.

### THE LABYRINTH AS A TOOL TO MANAGE STRESS OF EMPLOYED FAMILY CAREGIVERS

C. Rudebock<sup>1</sup>, M. Powers<sup>1</sup>, C. Murray<sup>1</sup>, J. Allen<sup>1</sup>, B. Shadden<sup>2</sup>, I.

*University of Central Oklahoma, Edmond, Oklahoma, 2. University of Arkansas, Fayetteville, Arkansas*

Labyrinths, a form of walking meditation, are used in a variety of health-related settings as a tool for stress reduction. Limited empirical research is available using the labyrinth to manage stress especially among family caregivers. The purpose of this study was to evaluate the labyrinth as a tool for managing stress among employed family caregivers. Sixteen employed family caregivers were randomly assigned to one of two groups. The intervention group walked the labyrinth for 12 weeks, while the delayed-intervention control group began walking in the 7th week. Participants completed the perceived stress scale, Zarit Burden Interview, and Job Satisfaction scale at baseline, 6 weeks, and 12 weeks. Data were analyzed using an analysis of variance with repeated measures to determine interaction, group, and time effects. Results indicated no significant interaction or main effects for any dependent variable. However, there was a trend toward a time effect for perceived stress ( $p = .14$ ;  $d = 0.64$ ) with lower levels of perceived stress after the 12-week intervention. Walking logs indicated that both groups were compliant with the labyrinth intervention. Qualitative comments from participants suggested that the labyrinth was a short relaxing pause from an otherwise hectic day. While preliminary, the findings indicated that walking the labyrinth may be an effective way to reduce stress of employed family caregivers. In addition, the labyrinth appears to be a feasible activity to incorporate into a demanding work/caregiving schedule. Further study of the labyrinth as a tool to manage stress among employed family caregivers is warranted.

### DOES STROKE CAREGIVING AFFECT COGNITION? AN INVESTIGATION OF CHANGE OVER TIME

A.L. Botticello<sup>1,2</sup>, P. Chen<sup>1,2</sup>, I. Outcomes & Assessment, Kessler Foundation Research Center, West Orange, New Jersey, 2.

*University of Medicine & Dentistry of New Jersey, Newark, New Jersey*

Purpose Prior research attributes stroke caregiving to diminished health and functioning, but is largely limited by cross-sectional methods. The purpose of this study is to assess stroke caregivers experience greater declines in cognitive functioning over time relative to their non-caregiving peers. Methods Data are from the Health and Retirement Study (HRS), a longitudinal study of a nationally representative cohort of older adults. This analysis uses HRS data collected between 1996 and 2008 from couples living in the same household. Stroke caregivers are defined as persons whose spouse reported experiencing a stroke and

functioning limitations ( $N=333$ ). Non-caregivers are persons whose spouse had neither a history of stroke nor functioning limitations attributable to another chronic condition ( $N=992$ ). Cognitive functioning is assessed in five domains: working memory, semantic memory, and episodic memory, time orientation, and learning. Growth curve models are used to estimate differences by caregiving duration for each domain controlling for gender, race, and the time-varying effects of age, income, wealth, perceived health, and depressive symptoms. Results Preliminary analyses reveal that caregivers experience significantly steeper declines over time relative to non-caregivers in episodic memory, working memory, and learning. Significant variation in the effect for caregiving between individuals is largely independent of age, but is accounted for by individual differences in background, socioeconomic status, and well-being for learning and episodic memory but not for working memory. Implications The findings from this study suggest that the demands of providing long-term assistance to a spouse who has suffered a stroke increases cognitive decline over time.

### EFFECTIVENESS OF DYADIC INTERVENTIONS FOR CARE RECIPIENTS WITH DEMENTIA AND THEIR CAREGIVERS

H. Moon, K.B. Adams, *case western reserve university, Cleveland, Ohio*

The need for dyadic intervention is enhanced with increasing numbers of older adults with early-stage dementia. The purpose of this paper is to review the effects of dyadic interventions on caregivers and care recipients at the early stage of dementia. Four databases, Ageline, Medline, EBSCO and Psycinfo, were searched and relevant literature from 2000 onwards was reviewed. The twelve studies identified used a variety of intervention approaches, including support group, counseling, cognitive stimulation, skill training, and notebook-keeping. The review suggests that intervention programs for early-stage dementia caregiving dyads were feasible and well accepted by participants. The reviewed studies provided rich evidence of the significance of mutual understanding and communication to partners' well-being and relationship quality within the caregiving process. The findings suggest that these intervention approaches improved cognitive function of the CRs, social relations, or the relationship between CG and CR, although evidence of long-term effectiveness is lacking.

### STRESS PROCESS MODEL OF CAREGIVER AND CARE RECIPIENT

K. Martincin, K. Judge, *Cleveland State University, Cleveland, Ohio*

Demographic information such as race and education level, cognitive abilities, level of dependency, relationship strain, and social isolation of the caregiver may create negative outcomes for the individual with dementia (IWD), including depression and worse physical health outcomes. However, few studies have investigated this interaction between characteristics of caregivers and psychosocial outcomes of IWDs. In addition, no conceptual model has been proposed that explicitly links both caregiver and care recipient characteristics and the resulting interactions. The purpose of this poster is to provide a comprehensive review of key caregiver variables that may contribute to outcomes of community dwelling individuals with dementia. Drawing from the Stress Process Model (Pearlin, Megaghan, Lieberman, & Mullan, 1981) for Caregivers and the Stress Process Model for Individuals with Dementia (Judge, Menne, & Whitlatch, 2009), this poster will present a theoretical model for understanding and examining the stress process for caregiving dyads, including how primary stressors, secondary stressors, and an individual's environment can contribute to psychosocial outcomes. Discussion will focus on how this new theoretical model can be used to examine the complex interactions between caregivers and IWDs, along with specific interventions that may mitigate the negative symptoms of dementia for both care partners. Two measurable objectives of this poster are first increased awareness of the current use of the Stress

Process Model and second increased awareness of potential new uses of the Stress Process Model, including use for the caregiving dyad of IWDs.

## SESSION 1240 (POSTER)

### FAMILY LIFE

#### LOVE DURING DIVORCE: DOES AGE MATTER?

J.G. D'Ambrosio, A.C. Faul, *Kent School of Social Work, Univ Louisville, Louisville, Kentucky*

Love is an anomaly for people experiencing divorce. This paper explores if maturation helps marital relationships end with understanding, generosity, humility and altruistic love. A research study tested predictors that can increase or decrease anger and hatred toward former spouses. It also tested mediators inherent in humans that can mediate the negative relationship between hate and the showing of love actions toward former spouses. The study starts with the development and validation of the Sorokin Psychosocial Love Inventory (SPSLI), a scale based on Sorokin's Love theory that measures both hateful and loving actions for individuals going through a divorce. A sample of 523 divorcing individuals was recruited and asked to complete a survey where data on basic demographics, the SPSLI, together with various measures related to anger, attorney influence, equity, adult attachment styles, empathy, altruism, compassion, sympathy and collectivism were gathered. Through structural equation modeling it was found that infidelity, differences in priorities and abuse as reasons for divorce tend to result in increased hate and anger, as well as negative lawyer influences, and a predisposition toward anger. Surprisingly it was also found that older adults tend to feel more hate toward their former spouses, contradictory to what was expected. This paper explores if older adults become more realistic in their attitudes toward love and relationships. However, the data also indicates the ability of older divorcing individuals to allow altruistic values and collectivist attitudes mediate the hate they feel toward former spouses, resulting in the ability to show love.

#### THE INFLUENCE OF FAMILY RELATIONS ON NEGATIVE EVENTS IN THE LIVES OF ADULTS: A SIBLING ANALYSIS

M.J. Hogerbrugge, A.E. Komter, W. Vollebergh, *Faculty of Social and Behavioral Sciences, Utrecht University, Utrecht, Netherlands*

Past research in the field of psychology has consistently shown the influence of childhood family relations on both internalizing and externalizing problems of children during childhood, adolescence, and even in(to) adulthood. Similarly, one of the most well established findings in the field of sociology is the link between various forms of social integration, including integration into family, and suicide. This study integrates these psychological and sociological branches of research by answering the question to what extent current family relations (e.g., family integration) affect the likelihood that an adult family member experiences internalizing and externalizing problems, which include, among others, having mental health problems, being seriously ill or handicapped, having a drug or alcohol addiction, having financial problems, and criminal conviction. Using longitudinal panel data from three waves of the Netherlands Kinship Panel Study, a multilevel analysis was conducted to examine how much of the variance in the experience of internalizing and externalizing problems among adult siblings can be attributed to the family environment, relative to the variance found at the individual level. By adding measures for characteristics of the current extended family, such as the amount of contact between siblings and parents, patterns of support exchange, the size of the extended family, the geographical distance between family members, and controls for the family environment during adolescence, we showed the processes and mechanisms through which current family relations exert an influence on the likelihood of experiencing internalizing and externalizing problems during adulthood.

#### LIVING WITH ALZHEIMER'S DISEASE: CHILDREN OF DAUGHTER CAREGIVER'S IN AN INTERGENERATIONAL HOUSEHOLD

R.C. Montano<sup>1,2</sup>, A. Donovan<sup>1</sup>, *1. Capella University, San Diego, California, 2. Eve Mar, San Diego, California*

Daughter caregivers, who take on responsibility of caring for a parent with Alzheimer's disease, while simultaneously being involved in their own contemporary family relationships with children, create intergenerational households. The purpose of this session is to understand the care dynamic within the intergenerational household when Alzheimer's disease is present. A qualitative case study with four daughter caregivers and eight teenage to young-adult children, was conducted to examine and understand (a) the impact on the daughter caregiver-child relationship, when the daughter caregiver takes on responsibility of caring for a parent with moderate Alzheimer's disease or higher, and (b) the role children of daughter caregivers' play in this intergenerational household. The focus of this study was to explore and understand participants' subjective perspectives regarding caregiving as a social phenomenon in the natural setting. The case study approach allowed the researcher to view the familial relationship as a bounded entity using Adlerian and structural family theories to guide the research. After attending this session, participants will be able (a) to promote positive perceptions children have about familial caregiving in the intergenerational household; (b) to evaluate levels of willingness children have for contributing to the care dynamic; (c) to encourage intergenerational bonding and preservation of familial experiences despite the debilitating impacts of Alzheimer's disease on the grandparent within the contemporary family; and (d) to identify contemporary family distress in order to balance roles and preserve relationships.

#### INTERGENERATIONAL RELATIONSHIPS AMONG THE MAASAI OF TANZANIA

J.M. Kalavar<sup>1</sup>, C. Buzinde<sup>2</sup>, M. Kokkel<sup>3</sup>, J. Simon<sup>4</sup>, *1. Penn State University, New Kensington, Pennsylvania, 2. Penn State University, State College, Pennsylvania, 3. College of African Wildlife Management, Moshi, United Republic of Tanzania, 4. African Wildlife Foundation, Arusha, United Republic of Tanzania*

This project examined the impact of cultural tourism on intergenerational relationships among the Masaai of Tanzania, an indigenous ethnic community whose culture has been commodified for international tourism. Marginalized indigenous communities worldwide are undergoing transitory periods of change as a result of globalization, technological innovations, etc. Consequently, to increase their resource base, many indigenous communities adopt tourism as a tool to enhance community well-being. Examining intergenerational relationships among the Masaai community requires an understanding of the gender-based age grading system which is unique to their ethnic group. Unlike occidental societies which tend to define generations based on age, the Masaai draw on cultural ceremonies and natural events to differentiate between, for instance, adolescence, adulthood and late adulthood. Using six focus groups of varying ages, data was collected primarily from two selected villages, Esilalei and Oltukai, located near famous wildlife parks. Findings suggest that cultural tourism is perceived differently by different age groups of the Masaai people. Though cultural bomas (homesteads) visited by tourists represent economic opportunities for participants, there is considerable exploitation of this indigenous group. The elderly Masaai men and women bemoan the loss of cultural traditions and family structure while the younger generation prioritizes wealth. A rise in alcoholism, increase of elder neglect and mistreatment, and family lifestyle changes were evident. Definitions of community well-being and the impact of cultural tourism varied by gender and age of the Masaai people. Findings from this study carry the potential to influence our understanding of intergenerational relationships within under-researched indigenous contexts.

## LONGITUDINAL ANALYSIS OF LONELINESS AND INTERGENERATIONAL FAMILY CONTACT AMONG JAPANESE OLDER ADULTS

E. Takagi<sup>1</sup>, Y. Saito<sup>2</sup>, 1. *Health Science, Towson University, Towson, Maryland, 2. Nihon University, Tokyo, Japan*

This study investigated how longitudinal trend of intergenerational living arrangement and family contact are related to the sense of loneliness expressed by Japanese older adults. We analyzed five waves of data in the Nihon University Longitudinal Study of Aging (NUJLSOA) between 1999 and 2009 (n=13620). We pooled interval observations with two to three year apart and constructed 7737 cases of pooled data on loneliness. We examined intergenerational family contact represented as: 1) coresidence with a child, 2) frequency of face-to-face contact with children, and 3) frequency of contact with children by phone. We also included a number of variables to describe the level of older parents' family resources, such as living alone and widowhood. The results indicated that both coresidence with children and relatively frequent face-to-face contact with children were associated with lessened sense of loneliness among older parents. On the other hand, both statuses of living alone and widowhood were associated with heightened sense of loneliness. We also observed a strong positive association between parent's poor health status (both self-rated health and ADL disability) and older parents' sense of loneliness. We contend that despite the changing cultural climate that values independence in later years, intergenerational support and contact play a critical role in maintaining older adults' psychological well-being in Japan. We discuss our results in relation to the current Japanese socio-cultural context where the traditional family norm is in decline and growing numbers of older adults are living alone.

## INTERGENERATIONAL AGE GAP AND LINEAGE MEMBER'S WELL-BEING

R. Sun, *Department of Sociology, Cleveland State University, Cleveland, Ohio*

The improvement in life expectancy over the last century has enhanced the prevalence of multi-generation lineages, where four or even more generations live at the same time. Ethnographic studies documented a link between the timing of fertility, which determines intergenerational age gaps, and their impact on family members' well-being. To date, however, there has been no study based on large sample data to systematically examine such a relationship. We used the third wave of the National Survey of Families and Households, 2001-2003, to assess whether the mean and variation of age gaps between generations within a family lineage are associated with a family member's well-being, and whether such associations vary by race. Well-being outcomes are measured by self-rated health, depression level, and the General Well-Being Scale. The mean and standard deviation of age gaps between two adjacent generations within a three- or four-generation lineage were calculated. We used linear and logistic regressions for the analysis. The results indicate that family members who belong to a lineage with longer age gaps are more likely to report better health, lower degree of depression, and better general well-being than those from shorter age gap lineages. But such associations are only found for whites, not blacks. Higher variation in age gaps is related to lower well-being outcomes for both whites and blacks. In conclusion, the age gaps between generations matter to individual member's well-being within a family lineage.

## PROMOTING RESILIENCE: COUNSELING GRANDPARENTS TO RAISE EFFECTIVE GRANDCHILDREN

R. Maiden, *Psychology, Alfred University, Alfred, New York*

The goals of this paper is to provide a case study that demonstrates feasible guidelines for mental health practitioners to counsel grandparents raising their grandchildren with the goal of enhancing the resilience of their grandchildren. One might say that these grandchildren who

rise from the ashes of broken homes and relationships, chaotic family circumstances, and impoverishment are the poster children for resilience. These children are frequently faced with adversity, trauma, tragedy, and significant sources of daily stressors within their families that few of us ever experience on a consistent basis—often including the presence alcohol and drug abuse, and verbal, physical, and sexual assault. Of course, not all multi generational families experience such negative life events. Nevertheless, the majority of those seen in counseling do. The sensitive clinician can help these children “bounce back” through utilizing family systems and cognitive-behavioral therapies. The counselor needs to focus on family rules, communications, and meta-communications—the hidden meaning of the communication. They also need to teach grandparents how to parent their grandchildren through implementing a modified cognitive-behavioral program and to address and revise their own irrational beliefs about raising children, often a mirror image of how they were raised which just keeps the negative cycle ongoing generation after generation. . Moreover, the counselor needs to be willing to go beyond the counseling session to external venues running interference with school authorities, lawyers, courts, foster care, social service systems, and to collaborate with a whole host of other external agencies to assist in healing these families.

## UNDERSTANDING U.S. CHINESE OLDER ADULTS' EXPECTATIONS AND PERCEIVED RECEIPTS OF FILIAL PIETY: A CROSS-SECTIONAL STUDY

F. Huang<sup>1</sup>, M.A. Simon<sup>2</sup>, E. Wong<sup>3</sup>, B. Wong<sup>3</sup>, E. Chang<sup>1</sup>, Y. Li<sup>1</sup>, X. Dong<sup>1</sup>, 1. *Rush University Medical Center, Chicago, Illinois, 2. Northwestern University, Chicago, Illinois, 3. Chinese American Service League, Chicago, Illinois*

Background: Despite research in recent years have started to address ways in which the practice of filial piety may impact the health of Chinese older adults, little is known concerning the changing expectations or actual receipts of care in the context of immigration. Methods: This cross-sectional study categorized filial piety into six different domains, including care, respect, please, make happy, obey and offer financial support. In an interview format, we accessed participants' expectations of filial piety and the perceived receipt of filial care from adult children. Results: Among the surveyed participants (N=1,112) in Chicago Chinese community, mean age was 74.8 and 64 % were female. Concerning filial piety expectations, 95.14% of the participants placed above average expectations on respect, followed by make happy (93.96%) and greet (91.4%). Least expectations were placed on financial support (40.66%). Regarding perceived receipt of filial care 78.5% felt that their children exhibit above average amounts of respect; yet, 38.7% felt their children provided average and below care, 29.46% felt their children evoked average and below level of happiness. With respect to discrepancies, most cases occur in financial support; 40.66% of the participants expected above average expectations of financial support, yet 61.7% participants perceived the receipt of above average financial support. Conclusion: Filial piety is an integral aspect of the intergenerational relationship in the Chinese community, and a population-based longitudinal study is necessary for further scrutiny of the relationship between filial piety and its impact on well-being.

## SIBLING RELATIONSHIPS IN ADULTHOOD: EFFECTS OF STAGES OF LIFE, SEX CONSTELLATION, AND BIRTH ORDER

M. Lim<sup>1</sup>, Y. Chee<sup>2</sup>, 1. *Ewha Womans University, Department of Psychology, Seoul, Republic of Korea, 2. Ewha Womans University - Human Ecology Research Institute, Seoul, Republic of Korea*

Although there have been studies on sibling relationships in a certain age period such as in adolescence or later life, little is known about changes and characteristics of sibling relationships over varying developmental stages considering effects of sex constellation and birth order. Guided by adult attachment theory and life course perspectives, this

study examined whether (1) sibling relationships (warmth, conflict) are different throughout adult life stages (early, middle, older adulthood); (2) sibling relationships differ by sex constellation (sisters, brothers, mixed-sex groups) and birth order (firstborns, middleborns, lastborns). Data were collected from 1,037 adults aged 20-90 in Korea, with one closest sibling in mind. MANOVA and Contrast Analysis indicated that while warmth significantly declined from early to middle adulthood and then maintained through older adulthood, conflict declined from early to middle adulthood with an increase in older adulthood though not significant. In early adulthood, sisters showed higher levels of both warmth and conflict than brothers and mixed-sex siblings. Also, interaction effects of sibling sex and life stages revealed that sisters' conflict decreased drastically from early adulthood to middle adulthood, presenting lower conflict than brothers. Mixed-sex group showed the lowest warmth and conflict throughout the adulthood. In the entire adulthood, middleborns showed greater warmth and lower conflict compared to firstborns and lastborns, indicating the closest sibling relationships with others. Firstborns and lastborns showed no significant differences in warmth and conflict. Life stages and birth order interactions were not significant. Findings in the cultural context and implications for future research will be discussed.

## SESSION 1245 (POSTER)

### FRAILTY: MEASUREMENT AND RISKS

#### DEVELOPMENT AND VALIDATION OF A MULTIDIMENSIONAL PROGNOSTIC INDEX FOR OLDER SUBJECTS LIVING AT HOME

A. Pilotto<sup>1,2</sup>, P. Gallina<sup>1</sup>, A. Fontana<sup>2</sup>, D. Sancarlo<sup>2</sup>, S. Maggi<sup>3</sup>, S. Bazzano<sup>1</sup>, L. Ferrucci<sup>4</sup>, D. Donato<sup>1</sup>, 1. Azienda ULSS 16 Padova, S. Antonio Hospital, Padova, Italy, 2. Geriatrics, I.R.C.C.S. Casa Sollievo della Sofferenza, San Giovanni Rotondo, Italy, 3. National Research Council (CNR), Padova, Italy, 4. National Institute on Aging, Baltimore, Maryland

Mortality prediction in older patients living at home represent a cornerstone to optimize the care processes. Aim of the study was to develop and validate a Multidimensional Prognostic Index for mortality (MPI) based on information collected by the Regional Standardized Comprehensive Geriatric Assessment Chart (SVAMA) in a large population of older subjects living at their home. We selected 12,020 subjects aged >64 (M=4415, F=7605; mean age=81.84±7.97) who underwent a complete SVAMA evaluation (January 2004–December 2010) at the Azienda ULSS 16 Padova, Italy. The study population was divided in two cohorts: 1) development cohort included 7876 subjects (M=2909, F=4967) and 2) validation cohort included 4144 subjects (M=1506, F=2638). The MPI-SVAMA was calculated from the linear combination of nine domains evaluated by six validated scores, i.e. cognitive status by Short Portable Mental Status Questionnaire, Activities of Daily Living, motility capabilities by Barthel motility index, pressure sores risk by Exton-Smith scale, nursing care and social support needs by a structured interview, and age, gender and main diagnosis. The MPI-SVAMA score ranged from 0 to 1 and three grades of severity were calculated on the basis of determined cut-offs. The discriminatory power (C-index) for mortality of MPI-SVAMA were 0.827 and 0.832 at 1-month and 0.791 and 0.792 at 1-year in development and validation cohorts, respectively. The discriminatory power for institutionalization was 0.798 and 0.783 at one-month and 0.787 and 0.779 at 1-year in development and validation cohorts, respectively. The MPI-SVAMA efficaciously evaluated mortality and institutionalization risk in older resident at home.

### THE PAULSON-LICHTENBERG FRAILTY INDEX

D. Paulson, P.A. Lichtenberg, Department of Psychology and Institute of Gerontology, Wayne State University, Detroit, Michigan

Frailty is a common, medically-relevant late-life syndrome that confers risk for decline in independence, health and longevity. Frailty is emerging as a significant healthcare concern for the aging US population. Fried's frailty phenotype is a commonly-used index, but offers limited utility with large publicly-available datasets such as the Health and Retirement Survey (HRS). The Paulson-Lichtenberg Frailty Index (PLFI) is theoretically based in Fried's frailty phenotype with greater emphasis on subjective frailty indicators and includes variables in the HRS database. In this model, frail individuals reported 3 or more of the following: wasting (loss of 10% or more of body weight over 2 years), slowness, weakness, falls and fatigue. PLFI validity was tested in a sample of 8,845 adults over the age of 65 (mean age=74.5 years) drawn from the HRS data. To facilitate interpretation, Fried's (2001) analyses describing their frailty phenotype were simulated in this study. The sample was predominantly female (58.8%) and Caucasian (85.4%). Using the PLFI, frailty was identified in 12.2% of respondents ages 65-74, 17.5% of those between ages 75-84, and 32.3% over the age 85 and over. Frail elders were more likely to be older, female, Black, have fewer years of education, lower income, worse self-rated health, report greater disease burden, more depressive symptoms, and greater disability ( $p < .001$  for all comparisons). PLFI score was highly predictive of future hospitalization and mortality. In conclusion, the PLFI is a valid measure of frailty. This frailty index, defined within a large, demographically-representative dataset, can facilitate epidemiological study of frailty.

### PREDICTIVE VALUE OF MULTIDIMENSIONAL FRAILTY INDICATORS FOR NEGATIVE OUTCOMES OF FRAILTY

B.H. Ament, M.E. de Vugt, G.I. Kempen, F. Verhey, Maastricht University, Maastricht, Netherlands

Background: Frailty is considered a predictor for negative outcomes such as disability, quality of life and hospitalization. Frailty measures have been developed that include different domains. These all assume a cumulative model of frailty i.e. create frailty scores by adding up different frailty items from different domains. We examined whether particular the physical domain of frailty was exacerbated by other domains in the prediction of negative outcomes of frailty. Methods: Frailty was measured at baseline by means of the Groningen Frailty Indicator (GFI, theoretical score range 0-15) which comprises a physical, cognitive, social and psychological domain. Disability, quality of life and hospitalization were measured at 12 months. Results: The sample (n=342) included 38.9% frail men and 61.1% frail women (mean age 77.9, range 70-92). Mean overall baseline score on the GFI was 6.8. Linear regression analyses showed that the overall GFI score was significantly related to disability at 12 months ( $p < .001$ ). Additional analysis showed that only the physical domain was even stronger related to disability ( $p < .001$ ). The physical domain was significantly related to quality of life at 12 months ( $p < .05$ ) but not stronger than the overall GFI score ( $p < .01$ ). With respect to hospitalization, no significant associations were found. Overall, no significant interactions were found. Conclusion: Depending on what outcome one would predict with the GFI, the focus should be more on either the different domains separately or on the overall GFI score. The effect of physical frailty was not exacerbated by other frailty domains.

### THE CHANGES OF FRAILTY RISK IN JAPANESE ELDERLY WOMEN AND ITS RELATED FACTORS

H. Uchida<sup>1</sup>, Y. Fujiwara<sup>2</sup>, S. Shinkai<sup>2</sup>, T. Nishigaki<sup>1</sup>, Y. Yamashita<sup>3</sup>, Y. Hori<sup>4</sup>, H. Toji<sup>2</sup>, Y. Hasegawa<sup>3</sup>, 1. University of Hyogo, Himeji, Japan, 2. Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, 3. Department of Long term care insurance, Himeji City Office, Himeji, Japan, 4. Himeji City Aboshi Health and Welfare Service Center, Himeji, Japan

This study was to determine the changes of frailty risk and to clarify its related factors among the community-dwelling Japanese elderly

women, based on the results of the follow-up surveys. The participants were 47 (aged 72.4±5.2) elderly women who lived in Himeji City, Hyogo, Japan. We distributed a questionnaire including age, family structure, self-rated health, short version of Geriatric Depression Scale (GDS), lifestyle behaviors (hobbies, gardening, walking, sports activities etc.), and frailty checklist (homeboundness, falls and poor nutrition), and also measured height, body weight, body mass index and physical fitness tests (grip strength, walking speed, standing on one leg with eyes open). We carried out the surveys in November and December in 2010 and 2011. Selected variables were compared after dividing the participants into “group with increasing frailty risk (IFR)” and “group with no risk (NR)”. The number of “IFR” was 11 (23.4%). IFR had significantly higher “body mass index” and “GDS score”, and lower frequency of “walking” and shorter time of “standing on one leg with eyes open” ( $P < 0.05$ , respectively) than those of NR. From the results of multiple logistic regression analysis using the step-wise method, there was a significant relationship between IFR and high score of GDS (Odds ratio: 1.590, 95%CI: 1.047-2.416), adjusted for age. This study found that mental health status was a predictive of increasing frailty risk in the community-dwelling elderly women and that this association was independent of related factor.

## SESSION 1250 (POSTER)

### GENDER ISSUES

#### **GENDER DIFFERENCES IN THE ASSOCIATION BETWEEN SOCIOECONOMIC STATUS AND HEALTH BEHAVIORS AFTER AGE 50: IMPLICATIONS FOR THE SOCIAL STRATIFICATION OF MORTALITY RISK IN THE SECOND HALF OF LIFE**

B.A. Shaw<sup>1</sup>, S. Fors<sup>2</sup>, N. Agahi<sup>2</sup>, 1. *University at Albany, School of Public Health, Rensselaer, New York*, 2. *Aging Research Center, Karolinska Institute/Stockholm University, Stockholm, Sweden*

**Introduction:** The purpose of this study was to examine the degree to which key health behaviors are socioeconomically stratified after the age of 50, and to determine whether these behaviors are stratified differently for men and women. In addition, we assessed gender differences in the role that individual health behaviors play in mediating socioeconomic disparities in mortality risk. **Methods:** Baseline data came from a sample of over 20,000 adults, ages 51 and older, who participated in the 1998 Health and Retirement Study (HRS). Each respondent's smoking status, alcohol use, physical activity, and body mass index (BMI) were measured at baseline, as was their education level. Mortality status and date of death were tracked until 2008. **Results:** Each health risk behavior, except for heavy drinking, was more prevalent among those with lower socioeconomic status. Socioeconomic stratification of the health behaviors was generally steeper among men than women, although obesity was more steeply stratified among women. Estimates from a series of multivariate Cox regression models indicate that these health behaviors accounted for about 60% of the socioeconomic differences in mortality risk among men, and about 30% among women. **Conclusions:** During later life, the association between socioeconomic status and health risk behaviors is particularly strong among men; consequently, individual health behaviors are a better explanation for socioeconomic disparities in health and survival among men compared to women. Further research is needed to determine whether these same patterns are evident across different cohorts and within other developed nations.

#### **HEALTH-RELATED BEHAVIORS IN THREE COHORTS OF OLDER ADULTS: ARE SOCIOECONOMIC AND GENDER DIFFERENCES NARROWING?**

N. Agahi<sup>1</sup>, S. Fors<sup>1</sup>, C. Lennartsson<sup>1</sup>, B.A. Shaw<sup>2</sup>, 1. *NVS, Karolinska Institutet, Aging Research Center, Stockholm, Sweden*, 2. *University at Albany, Albany, New York*

**Introduction:** Recent cohorts of older adults have higher levels of education, better health, and have generally experienced more favorable socioeconomic conditions throughout life compared to prior cohorts. Furthermore, opportunities, resources and health habits previously reserved for men, are increasingly shared by women. This study examines health-related behaviors in three cohorts of older adults, focusing particularly on differences between men and women, and different educational groups over time. **Methods:** Three nationally representative samples of older Swedish adults aged 77 and older (SWEOLD), collected in 1992 ( $n=537$ ), 2002 ( $n=621$ ) and 2010 ( $n=931$ ), were analyzed with regard to smoking, daily vegetable consumption, social participation (both formal and informal), and engagement in physical leisure activities. **Results:** In 1992, there were no gender differences in daily vegetable consumption and active social participation, however smoking was more prevalent among men and physical inactivity more prevalent among women. Health behaviors generally improved in subsequent cohorts. By 2010, gender differences in physical inactivity narrowed, partly due to increased activity levels among women, but also because more men were physically inactive. As for socioeconomic differences, persons with higher education were more likely to eat fresh vegetables on a daily basis and to be socially and physically active in 1992. These educational differences were also found in 2002 and 2010, despite later cohorts having higher education. **Conclusions:** Gender differences seem to have narrowed while educational differences have remained. More work is needed to examine if health behavior disparities during late life are a reflection of lifelong differences in health behaviors.

#### **AGING AND MEN'S BODY IMAGE**

T. Liechty, K. Sveinson, L. Dahlstrom, *University of Regina, Regina, Saskatchewan, Canada*

The majority of body image research has focused on women and girls, ignoring the experiences of men. Although recent literature has called for additional research into body image for men, most of this work has focused on younger men and boys. The purpose of this study was to explore older men's body image. We conducted individual interviews and follow up focus groups with 15 men aged 60 to 70. We analyzed transcripts using open and axial coding to identify over-arching themes. Findings highlighted the unique body image perspectives of men and the influence of the aging process. All participants believed that appearance is an important aspect of body image and some described appearance concerns (generally related to weight). Most participants, however, heavily prioritized health or physical ability. Furthermore, participants linked this priority to aging and most felt they had reasonable self-expectations based on their age. Most said their ideal body had changed as they matured from one that is slender, young, and muscular to one that is “reasonably healthy.” Some participants described body image concerns in youth such as wanting to be bigger, taller, or more muscular. These concerns were generally related to feedback from parents, siblings, coaches, and doctors. Those who had never experienced appearance concerns attributed this to their gender, generation, or upbringing. The most common bodily frustrations expressed were related to the reduced ability to accomplish tasks such as doing yard work or playing sports. The findings contribute to understanding men's perceptions of aging and body image.

#### **STIGMA TOWARD ALZHEIMER'S DISEASE IN EL SALVADOR: AN AGE BY GENDER EFFECT ON HELP SEEKING ATTITUDES**

E. Valdivieso, *Universidad Centroamericana, San Salvador, San Salvador, El Salvador*

The present study attempted to measure the effect of gender and age on stigma toward Alzheimer's disease in El Salvador. No previous



studies have examined stigma toward AD in a Central American country. Participants were Salvadoran citizens, with ages ranging from 20 to 80 years old. One hundred forty adults participated, who were divided in three age groups: (a) 20 – 35 years, (b) 40 – 55 years, and (c) 65 – 80 years. Sixty women and eighty men were interviewed. None of the participants were caregivers or had a friend or family member with AD. The survey measured stigma toward AD through indicators of social exclusion, help seeking attitudes and participation in patient's hygiene. In order to complete this survey, participants were asked to suppose they had a family member recently diagnosed with AD. An age by gender effect was found on help seeking attitudes ( $p < .01$ ). The differences between men and women were found in the middle age ( $p = .008$ ) and older adult ( $p = .007$ ) groups. Women reported to be more willing to seek for help than men, in particular, female older adults. No differences on gender were found in the young adult group. The gender effect was also found when participants were asked if they would escort their family member to a doctor's appointment ( $p = .04$ ), and care for the patient's hygiene ( $p < .05$ ) and feeding ( $p = .05$ ). Educational programs aimed at promoting gender equity and AD awareness among Salvadoran population, are clearly indicated.

### **BODY SATISFACTION AMONG DIVERSE OLDER WOMEN: THE IMPORTANCE OF BODY FUNCTION AND APPEARANCE**

N. Sabik, *psychology, University of Michigan, Ann Arbor, Michigan*

Recent research has indicated that older women are not free from body image concerns, and very little is known about what aspects of the body are most relevant for diverse older women. To address this new frontier in aging research, data were collected on 132 European American and 125 African American community based women. An exploratory factor analysis on body satisfaction items was performed to create 2 subscales measuring different dimensions of body image—satisfaction with body function and satisfaction with appearance. A confirmatory factor analysis revealed that the same factor structure was appropriate for both ethnic groups, but mean differences indicated that older women in different ethnic groups are not uniformly experiencing body satisfaction. Furthermore, regression analyses indicated that these subscales were differentially related to appearance comparison, subjective age, and feminine traits among women in the two groups. Body image and body function are important predictive variables that contribute significantly to quality of life among older women, and future research needs to explore the nuances of different dimensions of body image and functioning among diverse older women.

## **SESSION 1255 (POSTER)**

### **GEROTECHNOLOGY**

#### **FACILITATING AUTONOMY IN ASSISTED LIVING THROUGH TECHNOLOGY: IS IT AS EASY AS PI?**

M. Brazda<sup>2,1</sup>, C.R. Bennett<sup>2</sup>, M.C. Nemeč<sup>2</sup>, A. Frankowski<sup>2</sup>, *1. UMB, Baltimore, Maryland, 2. UMBC, Baltimore, Maryland*

Autonomy in assisted living (AL) is often expressed as the ability of residents to retain their independence through individualized decision-making; this relies in part on the options available to them in their AL. Three possible ways for residents to facilitate or enhance their autonomy are through the use of mobile health technology, the Internet, and low cost computer platforms. For this study we conducted a literature review of older adults' use of mobile health technologies and the Internet, and we explore the impact of low cost computer platforms, such as the Raspberry Pi Foundation of the United Kingdom's single board computer, brand named Raspberry Pi. Multiple databases were accessed for the review, including EBSCOhost, Ageline, and Google Scholar searching with appropriate keywords such as older adults, elderly, age and aging, socio-economic status, mobile health, computers, and Inter-

net use. Our analysis shows that (1) mobile health interventions could positively effect treatment of chronic disease in older adults, (2) the expansion of older adults' use of the Internet, including the communications capabilities of email and social networks, extend their feelings of autonomy in AL, and (3) there is a computer ownership disparity among older internet users that could be addressed by the availability of low cost computers, such as the Raspberry Pi.

### **IMPLEMENTATION OF EVERYDAY PERSONALIZED ASSISTIVE TECHNOLOGY TO SUPPORT SENIORS WITH DEMENTIA**

C. Kerssens, J.P. Zamer, *SimpleC, LLC, Atlanta, Georgia*

There is a need for well-designed technologies that facilitate aging in place for persons with dementia (PWD) and their caregivers. Given that independence is a major determinant of quality of life and well-being, technologies that support independence could be beneficial. We report on the observed and perceived change in resident status in a technology implementation study. Our technology offers psychosocial interventions through short personalized audiovisual programs that engage and cue, and that address specific yet common challenges in PWD (e.g., apathy, agitation). Shows play on a touch screen computer inside residents' rooms. For the pilot, 11 residents (7 female, mean age 87.7 years) in assisted living and memory care who needed help with behavior, mood, activity participation, sleep, or care events (ADL) were selected by three facility staff ('observers') to receive the technology intervention. Observers tallied the presence of 47 problems prior to (baseline), and 1 and 2 months into intervention. They also rated residents' status. Compared to baseline, the frequency of problems reduced during intervention between 47% and 81% across outcome domains, most notably the prevalence of sleep, ADL and behavior problems. Observers perceived residents' status predominantly as stable rather than better or worse. Observers agreed more on the absence of symptoms than on their presence. Our findings suggest that the intervention was associated with improvement of many care challenges, and that assistive technology can play an important role in an aging society where dementia is prevalent and human support finite.

### **TECHNOLOGY PERFORMANCE IN OLD AGE: A QUESTION OF VISUO-SPATIAL ABILITIES AND WORKING MEMORY OR SELF-EFFICACY AND TECHNOLOGY ATTITUDES?**

L.I. Schmidt<sup>1</sup>, H. Wahl<sup>2</sup>, *1. Network Aging Research, Heidelberg University, Heideberg, Germany, 2. Heidelberg University, Department of Psychological Ageing Research, Heidelberg, Germany*

In the context of demographic change and technological progression, there is an intensive discussion on potentials of technology serving older adults. However, research on technology use mostly excluded older participants, especially those with cognitive impairment. Therefore, this project aimed to better understand the role of cognitive factors as well as additional psychological constructs with potential relevance for technology use (e.g., self-efficacy) on performance in everyday technology tasks important for older adults. In particular, the use of a blood pressure meter, an age-friendly mobile phone and an e-book reader was assessed in cognitively healthy participants and in participants with mild cognitive impairment. Besides a state-of-the art cognitive assessment including visuo-spatial abilities and working memory, we considered self-efficacy, obsolescence, and technology attitudes. In a feasibility study participants (mean age: 62 years) were videotaped after cognitive assessment and questionnaire examination while handling the devices in order to establish a high quality rating of various performance related parameters. Based on two trained observers evaluating 33 video sequences in accordance with a respective coding scheme, we

found high interrater agreement (94.6%). Additionally, significant positive correlations between successful handling and both working memory and visuo-spatial abilities, but also with self-efficacy and attitude related dimensions were found across all devices - most pronounced in the mobile phone. These preliminary findings suggest that a combined cognitive aging, self-efficacy and technology attitude perspective is needed to understand variation in the use of technology in later life. Results are extended in the ongoing study with a total of 80 participants.

#### **USABILITY PROBLEMS OF OLDER ADULTS WHILE WEARING DIFFERENT MOBILE DEVICES FOR MEASURING ECG**

M. Haesner<sup>1</sup>, M. Gövercin<sup>1</sup>, E. Steinhagen-Thiessen<sup>1</sup>, I.B. Steinke<sup>2</sup>, *1. Geriatrics Research Group, Charité, Berlin, Germany, 2. Siemens AG, Berlin, Germany*

In the area of personal health systems, most products are developed for the mass-market not taken into account the special needs of an older target group. For devices which have to be worn permanently this is a crucial requirement. Most ECG devices however, are developed for hospital usage rather than for everyday life. Muhlsteff et al. 2004 characterise the design of most currently available ECG systems as quite clumsy and uncomfortable for long-term use with no reference to the end-user viewpoint. Here we present data of a prospectively-designed pilot study to evaluate the usability of four different ECG belts. The aim was to identify important aspects for acceptance and usability on the basis of subjective user ratings and structured interviews of twelve older participants. The intent was to incorporate these findings directly into the development process of a new modular health monitoring system. In the study each participant was allowed to select the system he or she was willing to wear for a minimum of three hours. After putting on the preferred belt the participant was required to perform a spectrum of different exercises in a standardized setting. The belts had no significant differences in design, although they did possess variability in thickness, texture and ventilation. This led to various comfort issues (even skin irritation) and usability problems regarding the physical manipulation of the belts for these devices – attachment to the chest, adjustment of tension and use of the locking mechanism. These findings are gathered in a requirements checklist for a user-friendly ECG belt for older adults.

#### **CONNECTED SENIORS: THE BENEFITS OF COMPUTER ENGAGEMENT IN A RETIREMENT COMMUNITY**

T. McCallum, J.I. Alva, *Psychological Sciences, Case Western Reserve University, Cleveland, Ohio*

Computer use, while on the rise among older adults, still lags behind all other age groups. Technology acceptance models suggest that beyond basic access to computers and the internet, older adults are more likely to use computers on a regular basis if they have the assistance and support. In this project, we examined the impact of a program designed to connect older adults to the internet. A group of 24 older adults received computer tablets and weekly instruction on navigating the internet for three months. Compared to baseline, participants reported higher levels of optimism and mastery after three months. No changes were found in social connectedness, social engagement, computer engagement, loneliness, or self esteem.

#### **CONNECTIONS FOR ELDERLY HOME CARE VIA MOBILE COMMUNICATION AND TECHNOLOGY**

C.E. Smith, U. Piamjariyakul, *School of Nursing, University of Kansas, Kansas City, Kansas*

Background: Advances in illness treatments, reliable technologies, cost containment, and family preferences for home-care have resulted in growing populations of individuals dependent on family members for home care. PEW (2011) reports, 45 million Americans report seeking health information from the internet because they are caregivers.

Mobile health information connections to internet are highly recommended and 78% of adults report daily mobile Internet use via their cell phones. Purpose: Our study long-term goals are to understand how mobile technologies empower families in communication with health professionals and reduce their home healthcare burden. Methods: This poster presents our intervention program that provides mobile wireless technology communication to remove barriers of distance and fulfill patient and caregiver desires for visual interaction with professionals and peers from home. Our intervention uses easy-to-use computer PC tablet; a smart phone with simultaneous mobile and visual connection to multiple professionals and peer groups in real time. Also there are smart phone prompts for an access to our Internet illustrations on home-care to engage family caregivers in healthy living activities. In our past internet studies the average age of caregivers is 63 years with one third of them in fair to poor health. Conclusion: National reports indicate that patients and caregivers are asking to have distant connections. It is likely in the next 5 years that small, portable, inexpensive video-tablets-mobile-phone-internet units will be sent home as part of hospital discharge equipment, plugged-in at home for immediate audio-visual contact and long term e-connected healthcare. Result to date will be discussed.

### **SESSION 1260 (POSTER)**

#### **GRANDPARENTING**

##### **THE IMPACT OF GRANDPARENT CAREGIVING ON SUPPORT EXCHANGE BETWEEN GRANDPARENTS AND GRANDCHILDREN: THE MEDIATING ROLE OF THE EMOTIONAL BOND BETWEEN GRANDPARENT AND ADULT CHILDREN**

L. Xu, I. Chi, *School of Social Work, USC, Monterey Park, California*

Background: Mutuality of support provision is a necessary precondition of family solidarity. However, the provision and receipt of care between grandparents and grandchildren has largely been neglected. In addition, few studies have examined the impact of grandparent caregiving on support exchange between grandparent and grandchildren and how the middle generation plays their roles in such grandparent-grandchild support exchange. Methods: Data were drawn from the 4th Wave of Anhui Study of China; the dataset contained 1,982 observations nested within 926 families. The dependent variable was the support exchanges between the grandparent and each grandchild, which includes providing/receiving instrumental support, monetary support and emotional support. Multiple logistic regressions and Structural Equation Models (SEM) were conducted respectively. Results: The results showed that grandparents generally received more support from their grandchildren than they provided to them (10.3% receiving vs. 4.3% providing on instrumental support, 42.9% vs. 10.2% on financial support and 85.5% vs. 36.5% on emotional support). The results of multiple logistic regressions indicated that caregiving to grandchild in the past were significantly associated with all these six dimensions of support exchange. Further SEM analysis showed that the emotional bond between grandparents and their adult children (the middle generation) partially mediated the association between grandparent caregiving and grandparent-grandchild support exchange ( $\beta$  (SD) = 0.063 (0.030),  $p < .05$ ). Discussion: This study not only confirms the intergenerational solidarity theory and social exchange theory. It also helps us to better understand the family dynamics of the three generations in such rapidly social change era in China.

## PILOT TESTING OF THE GP-PRAISEDD: PROMOTING WELLBEING IN SKIPPED GENERATION GRANDFAMILIES

R.D. Satyshur, B. Resnick, *University of Maryland, Baltimore, Maryland*

**Aims:** This purpose of this study was to utilize a socio-ecological model approach testing feasibility of a community based intervention with skipped generation caregiving grandparents. The GP component of the (GP-PRAISEDD) intervention to improve health for parenting grandparents consists of three classes addressing specific grandfamily challenges. Topics include: Stress Management, Positive Disciplining and Children's Emotional and Educational Needs. **Methods:** A single group pre and posttest design evaluated intervention feasibility. Pilot subjects consisted of 9 grandmothers (48 -65 years) who had full time parenting responsibility. Participants attended 1hour classes /discussion groups conducted by a registered nurse. Participants received an initial home visit prior to intervention for measure completion and then again 4 weeks post intervention. **Stress Measure:** Brief Symptom Inventory (BSI); **Social Support:** Family Support Scale (FSS). T-test for paired samples compared pre and post mean scores. **Results:** The GP-PRAISEDD resulted in decreased psychological distress scores and increased social support scores. Class discussions facilitated sharing information and resources related to challenges facing grandparent caregivers such as role confusion, loss of personal freedom, fighting with grandkids, not fitting in, delaying retirement or quitting and poorer health. Grandparents reported a need for support groups and the importance of respite care to minimize stress. **Conclusions:** Educational interventions may be a first step in changing behaviors to promote wellbeing. Ongoing work needs to address services and policies to provide for missing resources and reduce caregiving burden contributing to better health.

## I CAN'T FALL APART: SUPERWOMAN SCHEMA AMONG DIABETIC AFRICAN-AMERICAN CAREGIVING GRANDMOTHERS

D.L. Carthron<sup>1</sup>, T. Ward<sup>2</sup>, *1. School of Health Sciences, Winston-Salem State University, Winston-Salem, North Carolina, 2. Duke University School of Nursing, Durham, North Carolina*

**Background:** African-American older adult women have long been heralded as the epitome of strength, adapting to ever-changing societal and psychosocial changes including assuming the role caregiver for their grandchildren. Since African-American women disproportionately suffer from diabetes, these grandmothers may have difficulty self-managing their diabetes. **Purpose:** to explore and understand the coping and resilience mechanisms of African-American caregiving grandmothers with diabetes. **Methodology:** Six African-American caregiving grandmothers in North Carolina were interviewed 5 times over 12 months. During analysis, codes were developed and defined in a code book. Interviews were coded with data organized in a matrix to facilitate deep understanding of each case and facilitate cross-case analysis. **Results:** All participants exhibited behaviors of "Superwoman Schema" which is associated with delayed self-care, stress embodiment and alterations in physical and mental health. Some felt that they had to be strong for their families stating "I can't fall apart". Many participants delayed or dismissed diabetes self-care activities stating "if I think about it [diabetes], then I have to do something about it". Most stated that they dealt with stressful situations such as multicaregiving and financial constraints by "doing what you have to do". **Conclusion:** The results strongly suggest that the "Superwoman Schema" may normalize a distress inducing level of selflessness and powerlessness in this population. The delay or omission of diabetes self-care activities may ultimately lead to an increased vulnerability to diabetes-related complications. Future research should be directed toward the development of interventions to increase resilience while increasing the engagement in diabetes self-care activities.

## GRANDMOTHERS AND GRANDCHILDREN: HOW FAMILY STRUCTURE AND GRAND/PARENTAL MONITORING AFFECT CHILDREN'S DEPRESSIVE SYMPTOMS AND VIEWS OF FAMILY FUNCTIONING

C. Musil, J. Zauszniewski, C. Warner, M. Singer, *Case Western Reserve University, Cleveland, Ohio*

There has been much attention to grandmothers as caregivers to grandchildren, but less consideration to the grandchildren raised in this family structure. McCubbin's Model of Family Stress and Adaptation served as a framework to examine how resourcefulness, grand/parental monitoring, subjective and instrumental support, and family structure affect grandchildren's depressive symptoms and perceptions of family functioning. The sample included 156 Ohio grandchildren (age 8-19) whose grandmothers participated in a larger study of grandchild caregiving and health. After appropriate assent and consent were obtained, 71 grandchildren raised by grandparents, 27 grandchildren in multi-generational homes, and 58 grandchildren living with parents completed a survey packet. Measures of resourcefulness (Zauszniewski's Children's Resourcefulness Scale), subjective and instrumental support (Duke Social Support Index), parental/guardian monitoring (Singer's Parental Monitoring Scale), family functioning (McMaster Family Assessment Device), and depressive symptoms (CES-D) were included. Data were analyzed using hierarchical multiple regression analysis. Grandchildren with fewer depressive symptoms reported more subjective support and better resourcefulness; family structure and grand/parental monitoring were not significant predictors of depressive symptoms (Adj. R<sup>2</sup>=.25). Grandchildren who perceived that their families functioned better reported more grand/parental monitoring and subjective and instrumental support, and tended to be more resourceful; children who were older or raised by grandmothers perceived more problems in family functioning (Adj. R<sup>2</sup>=.40). The importance of grand/parental monitoring to grandchildren's perceptions of family functioning and of resourcefulness to grandchildren's mental health are considered within the context of family structure and overall family dynamics, and suggest points of intervention with families, especially grandmother-headed and multi-generational homes.

## IS GRANDPARENTING DIFFERENT FOR CHILDREN WITH AND WITHOUT EDUCATIONAL NEEDS?

G. Kypriotakis<sup>1,3</sup>, M. Kypriotaki<sup>2</sup>, E. Kornilaki<sup>2</sup>, *1. Case Western Reserve University, Cleveland, Ohio, 2. University of Crete, Rethimno, Greece, 3. Geriatric Research Education and Clinical Center (GRECC), Loius Stokes VAMC, Cleveland, Ohio*

There is a growing body of research evidence on the role of grandparents (GPs) on their grandchildren's upbringing. Grandparents play a crucial role in their grandchildren's life and their involvement has beneficial outcomes for them. However, less research evidence is available on GPs' involvement with their special needs grandchildren. The aim of this study is to explore and compare GPs' involvement in families: a) with a typical developing grandchild (TDC), and b) with a grandchild with special educational needs (SNC). The participants were: a) 104 GPs of TDC and, b) 53 GPs of SNC. GPs were administered a structured questionnaire. The results revealed that GPs are an important source of support both for their TDC and SNC. Care was their prime responsibility, followed by indoor and outdoor activities. GPs followed the family traditions alike for their TDC and SNC, but they narrate events from the past more frequently with their TDC. Similarly, GPs offer their advice alike to their TDC and SNC, but it was mainly the TDC that trusted their problems to them. Almost all GPs described the relationship with their grandchild in a positive light, but GPs of TDC enjoyed a higher quality of relation and felt emotionally closer to them compared to SNC. Maternal followed by the paternal grandmothers were more actively involved than grandfathers in the child's life. The age of

the GPs was in inverse relation with their involvement. Geographic distance was important only for TDC, while GPs health affected their involvement with their SNC.

## FAMILY COMMUNICATION AND FAMILY STRUCTURE

C. Musil, *Case Western Reserve University, Cleveland, Ohio*

Clear and direct communication within families and across the generations is a principal indicator of effective family functioning, but one that can be difficult to achieve. Problems within the family, family support and family structure, as well as one's depressive symptoms might influence perceptions of family communication, while coping strategies such as resourcefulness may improve both perceptions and actual communication effectiveness. Therefore, this study examined factors affecting perceptions of family communication: family structure, intra-family strain, instrumental and subjective support, resourcefulness, and depressive symptoms. This sample included 485 community-dwelling women who participated a study on caregiving to grandchildren. Family structure was determined by whether grandmothers were raising grandchildren ( $n=183$ ), living in multigenerational homes ( $n=135$ ), or did not live with nearby grandchildren ( $n=163$ ). Using mailed questionnaires, participants completed the FAD Communication Subscale, the Family Inventory of Life Events, the Resourcefulness Scale, the CES-D Depression Scale, and Duke Social Support Index. Data were analyzed using hierarchical regression analysis for the entire sample and by family structure. Between 23-31% of family communication was explained by the model, with somewhat different factors contributing to family communication by structure. While subjective support contributed to perceptions of support across all family structures, depressive symptoms and family strain detracted from family communication for primary caregivers; less instrumental support and more family strain ( $p<.06$ ) influenced perceptions of family communication problems among non-caregivers. For the full sample, resourcefulness and living in a multigenerational home enhanced family communication. Findings underscore the relevance of family support to perceptions of family communication.

## SESSION 1265 (POSTER)

### HEALTH IN DIVERSE POPULATIONS

#### AGE-RELATED DIFFERENCES IN BREAST CANCER SCREENING AMONG KOREAN AMERICAN WOMEN

E. Lee<sup>1</sup>, K. Nandy<sup>1</sup>, U. Menon<sup>2</sup>, L. Szalacha<sup>2</sup>, 1. *Univ. of California, Los Angeles (UCLA), Los Angeles, California*, 2. *The Ohio State University, Columbus, Ohio*

Korean American (KA) women continue to have one of the lowest rates of mammography screening adherence compared to non-Hispanic white women. We compared 15-month screening outcomes between non-adherent younger (40–49 years of age,  $n=218$ ) and older (50 and older,  $n=210$ ) groups of KA women who participated in a culture-specific intervention: Korean Immigrants & Mammography—Culture-Specific Health Intervention (KIM-CHI). At baseline, older women were less educated, had a usual source of care, and were more likely to have had a mammogram in their lifetime than their younger counterparts. No group differences were found in health beliefs other than perceived barriers, in which the older women reported significantly lower barriers than women in the younger group. Older women had 1.6 times the odds of reporting a mammogram than did younger women at 15 months post-baseline (95% CI: 1.05, 2.37). In addition to the intervention effect, for younger women, having a usual source of care was a predictor of mammography completion (OR = 4.55, 2.21–9.36). For older women, having a usual source of care (OR = 3.30, 1.59–6.82) and history of mammography (recent vs never: OR=4.52, 1.2-16.99; more than 2 years

ago vs never: OR=2.10, 0.57-7.72) were predictors of mammography completion. In summary, the KIM-CHI program was effective in improving mammography uptake among non-adherent KA women in both age groups.

## COMPARISON OF DIFFERENT CULTURE RATERS OF MOOD AND COGNITION IN OLDER ADULTS FROM TWO ETHNIC GROUPS

C.L. Williams, R.M. Tappen, M. Rosselli, *Christine E. Lynn College of Nursing, Florida Atlantic University, Boca Raton, Florida*

Accurate assessment of mental health and cognition in older individuals from different ethnic groups may be complicated by cultural norms and attitudes of the observer. The purpose of this study was to identify the potential influence of raters' cultural background on assessment of cognitive status, mood, affect and depression. Fifteen trained raters who were either Afro-Caribbean (AC), European American (EA) or Hispanic American, scored videotaped interviews of 30 European American (EA) and 34 Afro-Caribbean (AC) adults age 55 or older resulting in 418 observations. There were significant differences in mood ratings using Dementia Mood Assessment Scale ( $F=54.5$ ,  $p<.01$ ) and affect using the Observed Emotion Rating Scale ( $F=10.37$ ,  $p<.01$ ) but not depression (Cornell Scale for Depression in Dementia). There were differences in global ratings on the Clinical Dementia Rating Scale ( $F=5.5$ ,  $p<.01$ ) but not the Mini Mental State Examination or the FULD Object Memory Evaluation. The raters' background did influence subjective ratings of dementia, emotions and mood but not objective cognitive tests. Scores for negative emotion on the Observed Emotion Rating Scale were low ( $M=1.26$ ,  $SD 1.49$ ) and scores on the Cornell Scale for Depression in Dementia were below the cutoff for depression ( $M=1.25$ ,  $SD 1.8$ ). Detection of differences in depressive symptoms and negative emotions was a challenge in this healthy community-dwelling population. Future research should include populations at risk or in treatment for depression.

## THE LINKS BETWEEN PHYSICAL PERFORMANCE, SELF-RATED HEALTH AND MORTALITY AMONG OLDER ADULTS IN THE US AND ENGLAND

M. Ofstedal, J. Bound, M. Kim, *University of Michigan, Ann Arbor, Michigan*

The integration of physical measures and biomarkers in population-based surveys has become increasingly common in recent years. These measures are considered to be an important complement to self-reported health measures that are typically collected in large surveys. Yet the value of these measures has not yet been fully demonstrated. This paper assesses the value of three physical performance measures (grip strength, lung function and walking speed) as predictors of self-rated health and of mortality among older adults. Data come from the 2006-2010 waves of the Health and Retirement Study, a national panel study of men and women over age 50 in the United States, and the 2004-2008 waves of the English Longitudinal Study of Ageing, the British counterpart to the HRS. We use an ordered probit model to predict self-rated health and logistic regression to predict mortality over a 4-year period among men and women age 65 or over. The base model for each outcome includes the physical performance measures and basic sociodemographic factors. The full model adds measures of self-reported disease and functional status. Preliminary results suggest that the performance measures are strongly associated with both self-rated health and mortality in both countries. In general, these associations are slightly to moderately attenuated when self-reported disease and functional status are controlled, but they remain significant predictors of self-rated health and mortality. This suggests that the performance measures cap-

ture a unique component of health that is not explained by the self-reported measures.

### **CULTURAL CONSIDERATIONS IN ASSESSING FUNCTIONING IN HISPANICS WITH AND WITHOUT SCHIZOPHRENIA**

D. Tiznado<sup>1</sup>, P. Helu-Fernandez<sup>2</sup>, E. Roman<sup>3</sup>, J. Ho<sup>2</sup>, B. Mausbach<sup>2</sup>, T.L. Patterson<sup>2</sup>, D. Jeste<sup>2</sup>, V. Cardenas<sup>2</sup>, 1. *Psychology, University of Missouri-Kansas City, Kansas City, Missouri*, 2. *University of California- San Diego, San Diego, California*, 3. *San Diego State University, San Diego, California*

Schizophrenia has been associated with substantial functional deficits, although methods of quantifying these deficits have been elusive. Research suggests the UCSD Performance-based Skills Assessment (UPSA) is a valid and reliable method for assessing functional capacity. However, Hispanics with and without schizophrenia may underperform on this test, prompting the need to establish appropriate methods for accurately interpreting test results. We present preliminary results on the role of diagnostic, educational, and acculturative effects on UPSA scores for Hispanics. Participants were 83 Hispanics ages 32-80; 55 had a DSM-IV diagnosis of schizophrenia or schizoaffective disorder, and 28 were healthy controls. Functional capacity was measured using the UPSA. Acculturation was measured using the Acculturation Rating Scale for Mexican Americans (ARSMA). Multiple regression was used with age, gender, years of education, mean ARSMA item response (range = 1-5), and diagnostic group as predictors of UPSA scores. Participants with a diagnosis of schizophrenia had significantly lower UPSA total scores ( $t(81)=5.91, p<.001$ ). Education ( $t(81)=2.82, p=.006$ ) and acculturation ( $t(81)=2.81, p=.006$ ) were also related to UPSA scores. UPSA scores increased 2 points for each year of education and 8 points for every point increase on the ARSMA. Hispanic healthy controls and patients with schizophrenia score significantly lower on the UPSA than their non-Hispanic counterparts. However, when adjusting for education and acculturation, ethnic differences in UPSA scores are eliminated. Therefore, individuals administering the UPSA should take into account these variables when assessing Hispanic individuals.

### **DOES INTER- AND INTRA-RACIAL DISCRIMINATION RAISE THE RISK OF HYPERTENSION?**

K.N. Taylor-Watson, L.R. Wilkinson, K.F. Ferraro, *Sociology, Purdue University, Lafayette, Indiana*

**Objective:** This study examines the impact of perceived racial discrimination on hypertension among African Americans. We formulate three research questions. First, does perceived racial discrimination raise the risk of hypertension? Second, does the combined effect of inter- and intra-discrimination convey greater risks of hypertension among African American adults? If so, do these risks differ by age? **Methods:** This study uses data from the National Survey of American Life (NSAL), which was designed to examine racial and ethnic disparities in the United States among persons 18-94 years of age ( $N=4,932$ ). The measurement of discrimination distinguishes whether individuals reported being treated unfairly by Blacks, Whites, both, or not at all. Logistic regression analyses with robust standard errors estimate the effect of frequency of both inter- and intra-racial discrimination on hypertension. **Results:** Results reveal that compared to respondents reporting no racial discrimination, those reporting discrimination by a single racial/ethnic group were 44 percent more likely to report hypertension ( $p<0.01$ ) and 91 percent among those reporting discrimination by both Black and White people ( $p<0.01$ ). This finding was observed among both middle-aged and older adults, but the effect was stronger for middle-age adults. **Discussion:** This research is innovative by identifying how both inter- and intra-racial discrimination influence the risk of hypertension in middle and later life. The

findings reveal that perceived discrimination among African American adults is associated with earlier onset of hypertension, consistent with the weathering hypothesis. Additionally, compared to older participants, younger adults are more vulnerable to the effects of racial discrimination.

### **GROUP MEMBERSHIP AND MORTALITY RISK AMONG THE JAPANESE ELDERLY: NEW EVIDENCE FROM A NATIONAL SAMPLE**

Y. Minagawa<sup>1,2</sup>, Y. Saito<sup>2</sup>, 1. *Sociology, University of Texas at Austin, Austin, Texas*, 2. *Nihon University, Tokyo, Japan*

There is a well-established literature on the health benefits of social integration; more socially integrated individuals are, the research suggests, at lower risk of suffering from physical and mental health problems. Using three waves of data from the Nihon University Japanese Longitudinal Study of Aging (NUJLSOA: 1999, 2001, and 2003), we examine the effects of social integration on the risk of mortality among Japanese adults aged 65 and over during the four-year study period. The analyses lead to several important conclusions. First, integration into society, defined by group membership, is inversely associated with mortality risk among older men and women. Those who belong to at least one social group display lower odds of dying compared to those who do not belong to anything during the follow-up period ( $p<.001$ ). Second, the protective effects of group affiliation remain strong, even when sociodemographic characteristics, functional health, and family relationships are accounted for ( $p<.001$ ). Third, we further find that group membership offers protection against death, regardless of the kinds of activities that individuals pursue ( $p<.05$ ). Both self-development activities (e.g., educational and hobby circles) and community participation (e.g., neighborhood associations) are related to lower risk of death, net of all controls. The present findings provide strong evidence to suggest the beneficial effects of social integration on health in the Japanese context. Overall, this research highlights the importance of "active aging" in achieving "successful aging" in Japan.

### **ELDERLY TURKISH MIGRANTS IN DENMARK AND THEIR ACCESS TO PUBLIC HEALTH CARE SERVICES**

S. Yazici<sup>1</sup>, A. Blaakilde<sup>2</sup>, S. Petersen<sup>2</sup>, 1. *Gerontology, Akdeniz University, Antalya, Turkey*, 2. *University of Copenhagen, Center for Healthy Ageing, Copenhagen, Denmark*

**Background/purpose** Countries like Denmark are challenged regarding retired migrants. Many of the migrants obtained low-paid, physically demanding jobs, and did not learn the language of the host country. As they age, this situation can eventually cause problems such as social isolation, poor financial situation, reliance on children or relatives for translation purposes, and, not the least, a suffering from multiple, interacting health problems. Health practices of Turkish elderly people living in Denmark are studied in order to gain phenomenological knowledge about their health status, what kinds of specific problems they are facing, and how their needs can be met. **Methods** Twenty semi-structured interviews with Turkish migrants, aged 42 -80, fieldwork in health settings and local, public centers. User-driven innovation methodology was employed while arranging a local theme-day about health practices, inviting elderly Turkish people to attend and discuss. **Findings/results** The interviewees feel old, ill, and worn-out at a chronological age much below ethnic Danes. Many of them do not understand the Danish language properly, and hence, do not have satisfactory knowledge about the possibilities of health promotion initiatives and healthcare services in Denmark, where public health and health care services are systematized and rather effective. There is a need to find and support this minority group in other ways than what is already

practiced concerning the ethnic Danish population. Conclusion The health situation of retired Turkish migrants calls for more attention in order to meet their needs. The presentation will provide suggestions about what to do to obtain this goal.

#### **'A FAMILY OF OUR OWN' INTIMATE RELATIONS OF ELDER LESBIAN, BISEXUAL AND TRANSGENDERED WOMEN**

J. Bromseth, *Centre for gender studies, Stockholm university, Stockholms universitet, Sweden*

The position of LGBT-people's rights and possibilities as citizens has changed radically over the last 30 years in the Western world, along with larger structural changes of the organizing and meaning of family, intimacy and close relations. LGBT-persons life conditions and strategies to create viable lives are historically and culturally situated, and so is the meaning and content of intimate relations (Weeks et al 2001). In this presentation I will look into how intimate relations are filled with meaning by elder lesbian, bisexual and transgendered women in Sweden and how they negotiate, reproduce and resist the hegemonic hetero-relational norms. It builds upon interviews with lesbian, bisexual and transgendered women 60+ and participant observation in the lesbian community where elder women take part in a large city in Sweden. Many refer to their families as 'chosen', including different variants of important close relations, including friends, partners, ex-lovers, LGBT-community, pets, children as well as biological relatives (Weston 1989). The chosen families represent a positive notion of a supportive and accepting social relation, filling many of the functions traditionally associated with biological families. The most important social relations seem to consist of friends and partners, where biological relatives are considered less important in emotional or practical support (Heaphy, Yip and Thompson 2004, Fredriksen-Goldsen et al 2011). What characterizes the complex social web of intimate relations, and is it even fruitful to build on the concept of 'family' in describing them?

#### **IS THERE COMPRESSION OF MORBIDITY IN SPAIN? RECENT TRENDS IN MORTALITY AND MORBIDITY**

A. Solé -Auró, *University of Barcelona, Barcelona, Spain*

Evidence on trends in prevalence of disease and disability can clarify whether countries are experiencing a compression or expansion of morbidity. The prevalence of most chronic diseases (arthritis, heart problems, diabetes, hypertension and obesity) appears to have been increasing in both Europe as in other developed countries indicating an expansion of morbidity as indicated by disease prevalence. It is likely that better treatment, preventive measures (such as cancer screening and treatment of cardiovascular risk factors) and increases in education levels have contributed to the declines in mortality and increases in life expectancy. It should be noted that, the increase in presence of disease appears to be less associated with disability. This paper examines whether there has been an expansion or compression of morbidity in Spain. Using trends in mortality and morbidity from major causes of death and linking these together to provide estimates of life expectancy with and without diseases and loss of functioning, using a repeated cross-sectional Spanish health survey in 1997 and 2006. Because mortality is not recorded on the Spanish National Health Survey, mortality information came from the National Statistics Institute database. Increasing survival among people with diseases can lead to a higher prevalence of diseases and functioning loss in the older population. Higher prevalence of health problems can lead to a higher pressure on the health care system and growing burden of disease for individuals.

## **SESSION 1270 (POSTER)**

### **INNOVATIONS IN ASSESSMENT AND MEASUREMENT**

#### **RELIABILITY AND VALIDITY OF THE NEWLY DEVELOPED COMPUTERIZED UCSD PERFORMANCE-BASED SKILLS ASSESSMENT**

R.C. Moore<sup>1</sup>, T.L. Patterson<sup>1</sup>, A. Harmell<sup>1,2</sup>, J. Ho<sup>1,2</sup>, V. Cardenas<sup>1</sup>, B. Palmer<sup>1</sup>, D. Jeste<sup>1,3</sup>, B. Mausbach<sup>1</sup>, *1. Psychiatry, University of California, San Diego, La Jolla, California, 2. San Diego State University/University of California, San Diego, Joint Doctoral Program in Clinical Psychology, San Diego, California, 3. The Sam and Rose Stein Institute for Research on Aging, University of California San Diego, La Jolla, California*

This study investigates reliability and validity of a newly developed scale for assessment of everyday functioning, Computerized UCSD Performance-Based Skills Assessment (C-UPSA), in a sample of 21 patients with schizophrenia (Sz; mean age =54.52+/-4.09 years) and 20 healthy comparison subjects (HCs; mean age =58.75+/-12.10). C-UPSA retained four of the five subtests from the original UPSA (Patterson et al., 2001) with test items and instructions remaining the same. The C-UPSA total score was significantly correlated with UPSA total scores ( $r = 0.73, p < 0.001$ ), which is comparable to the test-retest reliability of the original UPSA ( $r = 0.63-0.80$ ; Leifker et al., 2010). The C-UPSA was also significantly correlated with UPSA-Brief scores ( $r = 0.71, p < 0.001$ ), and neuropsychological status ( $r = 0.77, p < 0.001$ ) in Sz. Furthermore, the Sz group scored significantly lower than the HCs on the C-UPSA ( $t = 5.06, p < 0.001$ ). ROC curves were generated to determine the optimal C-UPSA value for discriminating between performance of Sz and HC, with a resulting cutoff score of 75 (sensitivity =0.70, specificity =0.95, AUC =0.882, 0.779-0.985 95% CI,  $p < 0.001$ ). Thus, the C-UPSA appears to be highly related to the original UPSA, and was able to accurately identify if a person had a diagnosis of schizophrenia 95% of the time. The C-UPSA has several advantages over the standard version, including increased portability, decreased administration time, and minimization of examiner impact on the participant. Future research would benefit from establishing this test as a clinical and research tool to effectively assess functional capacity.

#### **INTEGRATIVE ASSESSMENT OF HEALTH CARE NEEDS USING THE INTERMED FOR THE ELDERLY (IM-E) INTERVIEW**

B. Wild<sup>1</sup>, I. Maatouk<sup>1</sup>, S. Lechner<sup>1</sup>, D. Niehoff<sup>1</sup>, H. Müller<sup>2</sup>, H. Brenner<sup>2</sup>, W. Söller<sup>3</sup>, W. Herzog<sup>1</sup>, *1. Department of General Internal Medicine and Psychosomatics, University Hospital Heidelberg, Heidelberg, Germany, 2. Division of Clinical Epidemiology and Ageing Research, German Cancer Research Center, Heidelberg, Germany, 3. Department of Psychosomatics and Psychotherapy, General Hospital Nürnberg, Nürnberg, Germany*

Background: The INTERMED interview is an integrative assessment method to identify patients with complex (bio-psycho-social) health care needs. The INTERMED for the Elderly (IM-E) was developed to assess health care needs specifically in the elderly population. The IM-E was applied in the frame of the third follow-up of the ESTHER study – a large German epidemiological cohort study that investigates chronic diseases in the elderly population. Methods: A subsample of  $n = 3124$  ESTHER participants ages 55 to 80 was visited at home. With these participants, a comprehensive geriatric assessment was carried out. At the end of the home visit, the IM-E was conducted to assess the health care needs of the participants. Results: An IM-E sum score could be calculated for 3121 participants (=99%); 8.2 % ( $n = 256$ ) had an IM-E sum score  $\geq 21$ . These persons – classified as patients with complex health care needs – showed a significantly reduced health related quality of life (HRQOL) and significantly increased depression severity scores com-

pared to participants with an IM-E sum score < 21. 88% of patients with complex health care needs were multimorbid; they showed significantly reduced HRQOL and increased depression severity compared to multimorbid patients without complex health care needs. Conclusion: According to our data 8.2% of the elderly population living at home is in need of additional integrated care. Most of these patients are multimorbid. Multimorbid patients with complex health care needs are significantly impaired regarding HRQOL and depression severity compared to multimorbid patients without complex health care needs.

### **VALIDITY OF THE HRS COGNITIVE TEST IN THE DETECTION OF COGNITIVE IMPAIRMENT AND DEMENTIA: DOES RACE MATTER?**

Z. Zhang, *Michigan State University, East Lansing, Michigan*

Prior research showed that although standardized screens for dementia had substantial sensitivity in detecting dementia for Blacks and Whites, the specificity of these screens was poorer for Blacks than for whites. This means that cognitively normal Blacks are more likely to be misdiagnosed as impaired compared to Whites. In the proposed study, we will evaluate the performance of the cognitive test (i.e., the modified version of TICS with a 35-point scale) among Blacks and Whites in the Health and Retirement Study (HRS) using the Aging, Demographics, and Memory Study (ADAMS), the first population-based dementia study in the United States. The ADAMS selected a random and stratified subsample of 1,770 HRS respondents aged 70 or older from the 2000 and 2002 waves of HRS. Among this group, clinical and neuropsychological assessments were completed for 856 respondents to determine a diagnosis of normal, cognitive impaired, not demented (CIND), or dementia. We will use receiver operating characteristics (ROC) analysis to examine the accuracy of the HRS cognitive test in identifying 1) demented from the nondemented elderly, 2) cognitive impaired (i.e., CIND or dementia) from cognitively normal elderly among Whites and Blacks respectively. The analytic sample included 119 Blacks and 464 Whites who took the HRS cognitive test. Preliminary results showed that the cognitive test in HRS had good diagnostic validity for both Whites and Blacks. However, the optimal cutoff points for detecting cognitive impairment and dementia differed for Blacks and Whites.

### **MODERN METHODS FOR MODELING OF INTRAINDIVIDUAL DATA: EXTRACTING MORE INFORMATION FROM THE SAME DATA**

P.R. Deboeck<sup>1</sup>, M. Montpetit<sup>2</sup>, C.S. Bergeman<sup>3</sup>, 1. *Univeristy of Kansas, Lawrence, Kansas*, 2. *Illinois Wesleyan University, Bloomington, Illinois*, 3. *University of Notre Dame, Notre Dame, Indiana*

Much of developmental psychology has focused on macro-temporal change, change that occurs over the course of months or years, while less focus has been placed on understanding how change occurring at the daily level contributes to development. Modeling of intraindividual time series, such as those collected through daily diaries or experience sampling, have the potential to shed light on these processes. Many methods, such as cross-lagged panel models, only provide a single estimate to describe the magnitude of the relationship between changing variables. While it is often useful to first gauge the magnitude of a relationship, modern analysis methods offer the potential for extracting differing pieces of information from such relationships. This presentation examines how a series of specific questions can be asked about the relationship between daily negative affect and stress: 1) How long does it take for the effect of stress on negative affect to reach its maximum? 2) What is the maximal relationship of stress on negative affect? and 3) How long does the effect of stress on negative affect persist? Using data from the Notre Dame Study of Health and Well-being, we demonstrate how a method for continuous time modeling of intraindividual time series can be used to ask specific questions as to how people differ in

their stress and negative affect relationship, and how these differences relate to interindividual traits.

### **'BELOW THE SURFACE': AN EXPLORATION OF THE CHALLENGES OF COLLABORATIVE RESEARCH IN SOCIAL GERONTOLOGY**

R. Means<sup>1</sup>, J. Eales<sup>2</sup>, N. Keating<sup>2</sup>, 1. *Faculty of Health & Life Sciences, University of the West of England, Bristol, United Kingdom*, 2. *University of Alberta, Edmonton, Alberta, Canada*

The emphasis upon interdisciplinary research in gerontology by major funders permeates the current research milieu despite literature on the challenges of collaboration in practice and the more limited literature on research collaboration itself. Informed by empirical data drawn from the collective past experiences of UK and Canadian social science researchers, this paper looks below the surface at the 'messy' realities of collaborative research. Participants spoke of ambiguities inherent in the research process. Three tensions stood out as critical: personal connections, governance structures and research outcomes. Findings underline the challenges faced if the potential of interdisciplinary research is to be realised.

### **DESIGNING A MEASUREMENT INSTRUMENT TO EVALUATE POST-TRAUMATIC GROWTH IN MIDDLE-AGED MALE SURVIVORS OF CIVIL WAR IN BOSNIA AND HERZEGOVINA (1992-1995)**

M. Vracevic, *University of Connecticut, Storrs, Connecticut*

Purpose: The study describes development of a measurement instrument of posttraumatic growth (PTG), the Post-Traumatic Growth Scale (PTGS). This instrument was designed specifically for evaluation of post-traumatic growth in soldiers-survivors of the Civil War in Bosnia and Herzegovina 1992 - 1995. A goal of the study was to create a measurement instrument that allows for comparison between husbands and wives on their perceptions of posttraumatic growth in husbands, overall and across domains. Post-Traumatic Growth Scale (PTGS) is an adaptation of existing post-traumatic growth inventories. It is a 7-point likert-scale instrument that examines change since the traumatic experience in domains of daily activities, plans/goals for the future, views of self, views of the world, and relationships with others. Methods: The sample consists of two hundred (N=200) husbands and wives, former residents of Bosnia and Herzegovina who have lived through the war, who are middle-aged (age 45+), come from low and middle SES, have obtained high school and/or college education, and speak English, Bosnian, Croatian, and Serbian languages. The participants were recruited in person, through purposeful and snowball sampling procedures. A demographic questionnaire and qualification screener were used to collect basic information about the participants and the Post-Traumatic Growth Scale (PTGS) was administered. A scale development procedures, content validity process, factor extraction and factor analysis, as well as internal consistency and reliability of the Post-Traumatic Growth Scale (PTGS) are presented. Results: Conclusions and limitations of the Post-Traumatic Growth Scale (PTGS) are discussed.

### **DEVELOPMENT AND VALIDATION OF CRITERION-REFERENCED, CLINICALLY RELEVANT FITNESS STANDARDS FOR MAINTAINING PHYSICAL INDEPENDENCE IN LATER YEARS**

J. Jones, R. Rikli, *Cal State University, Fullerton, Fullerton, California*

Purpose. To develop and validate criterion-referenced fitness standards for older adults that predicts the level of physical capacity needed for maintaining physical independence into later life. The proposed standards, based on findings from both cross-sectional and longitudinal research, were developed to accompany a previously validated fitness test battery for older adults that is being widely used throughout the United States and in many other countries—the Senior Fitness Test.

Methods. Following established measurement protocols, a criterion measure of physical independence was identified for use in establishing fitness standards that could predict physical independence in later years. Next, data from a large cross-sectional study of 7,183 older adults ages 60-94, together with findings from longitudinal research on physical capacity and aging, were used as the basis for proposing fitness standards (cut off scores) that are associated with having the ability to function independently. The final step in the process involved conducting a follow-up study on a sub sample of older adults (N = 82) to test the standards for their accuracy (validity) and consistency (reliability) as a predictor of physical independence. Results. Performance standards were developed for men and women ages 60-94 indicating the level of fitness needed to remain physically independent until late in life. Reliability and validity indicators for the standards were acceptable, with coefficients ranging between .79 and .97. Implications. The proposed standards provide health professionals with easy-to-use reference points for evaluating physical capacity in older adults relative to that needed for physical independence, and for planning interventions.

## SESSION 1275 (POSTER)

### INTERVENTIONS

#### EVALUATING NURSING HOME PRESCRIBERS' ANTIBIOTIC DECISION-MAKING PROCESSES

R.M. Bertrand<sup>1</sup>, L. Olsho<sup>1</sup>, L. Goodman<sup>1</sup>, D.T. Hurd<sup>1</sup>, J. DeAngelis<sup>1</sup>, C. Mitchell<sup>2</sup>, P.D. Sloane<sup>2</sup>, S. Zimmerman<sup>2</sup>, *1. Health Policy, Abt Associates Inc, Cambridge, Massachusetts, 2. University of North Carolina, Chapel Hill, North Carolina*

Antibiotics are among the most commonly prescribed pharmaceuticals in nursing homes (NHs), yet reports indicate a high proportion are inappropriate. The adverse consequences of inappropriate prescribing include drug reactions/interactions, secondary complications, and emergence of multi-drug resistant organisms. In an effort to reduce antibiotic overprescribing, a quality improvement program was implemented in six North Carolina NHs, with comparison data collected in six control NHs. In addition to primary outcomes based on prescribing data, we examined secondary outcomes to better understand the decision-making processes of prescribers. Secondary data were collected via web-based surveys administered to prescribers at the twelve sites. Nearly all reported ordering an antibiotic for urinary tract (UTI; 93%), skin/soft tissue (SST; 86%), and respiratory (RI; 100%) infections during the last 60 days. Only seven percent reported ordering an antibiotic for fever of unknown origin. Prescribers used a five-point scale (0-5) to rate the importance they place on nine sources of information they might use to make an antibiotic decision. Resident-reported symptoms (2.85) and resident history (2.85) were most highly rated for UTI, and clinical examination was most highly rated for SST (4.00) and RI (3.42). Family request was rated as having very little or no overriding importance for UTI (.38), SST (.00), and RI (.23). Prescribers also rated their clinical experience as very low when making antibiotic decisions for RI (.15). Findings provide insight regarding the decision making process, and will be presented relative to the change over time in the primary outcome of the rate of antibiotic prescribing.

#### SURVIVAL ANALYSIS OF PLACEMENT INTO NURSING FACILITIES AFTER TERMINATION OF HCBS PROGRAM

D.A. Chiriboga<sup>1</sup>, S. Rhew<sup>1</sup>, L.M. Brown<sup>1</sup>, S. Wang<sup>1</sup>, K. Kwag<sup>2</sup>, Y. Jang<sup>1</sup>, *1. Aging and Mental Health Disparities, University of South Florida, Tampa, Florida, 2. St. Louis University, St. Louis, Missouri*

Examined was risk of nursing home placement for 244 individuals with Alzheimer's disease, after termination of the family-focused home and community based service (HCBS) Alzheimers Program (MAP) in which they were enrolled. A Medicaid waiver program, MAP offered 10 different services; approximately half were more directed at either

the caregiver or recipient needs, and a case manager monitored status and changing needs through monthly contacts. Our previous research had found that while monthly costs for MAP were significantly higher than three out of four comparison HCBS programs, the risk of nursing home placement (NHP) was significantly reduced. Reported here is whether or not the risk of NHP continued to be lower after re-assignment to a variety of other Medicaid programs. The sample consisted of both the former MAP participants and Medicaid recipients enrolled in one of the four original HCBS comparison groups: the Aged and Disabled Waiver Program (ADW). The majority of both groups were women and over age 80. All ADW participants had been enrolled in that program prior to MAPs closure, and both groups were followed for a period of 14 months after MAP closure (May 1, 2010 through June 30, 2011). Survival analyses indicated that former MAP participants no longer were lower in risk of NHP. One conclusion is that the dual focus on needs of caregiver and recipient made a difference. However, evaluation of tailored intervention programs like MAP remains more of a "black box" design, due both to the multiple options and individualized care plans.

#### ENHANCING PHYSICAL CAPABILITIES THROUGH SUPPORTIVE RELATIONSHIPS IN THE GROUP INTERVENTION PROGRAM

M. Ogawa, R. Hirayama, C. Ura, F. Miyamae, E. Nomoto, R. Takahashi, *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

In this study, we explored (a) the development of supportive relationships among Japanese older participants in a group intervention program to form exercise habit and (b) whether and how such relationships are associated with changes in participants' subjective health status over the course of the program. Research on social relationships has indicated that perceived supportiveness of social partners motivates individuals to engage in health-promoting behavior including regular exercise, which then helps these individuals maintain and improve their health status. Aligned with this research, we aimed to clarify the process through which the relationships among participants influence their health status in exercise-oriented intervention programs. Participants were 62 community-dwelling older adults in Tokyo who participated in a 12-week intervention program (M age = 71.9). The program was designed for participants to acquire the habit of walking exercise through group activities. Throughout the program, every two to three weeks, participants evaluated (a) supportiveness of their group members and (b) their physical capabilities. Using data from the third week, when participants first evaluated their physical capabilities, we estimated a latent growth model, whereby changes in supportiveness, changes in physical capabilities, and the association between the two were analyzed. Results suggest that the development of supportive relationships with group members enhances participants' physical capabilities. The initial level of supportiveness was positively correlated with that of physical capabilities, and the growth of supportiveness had a significant positive effect on that of physical capabilities.

#### ACTIVE ENGAGEMENT THROUGH IPAD: EFFECTS OF TECHNOLOGY ADAPTATION AS AN INTERVENTION ON COGNITIVE AGING

M.Y. Chan, S. Haber, L.M. Drew, D. Park, *University of Texas At Dallas, Richardson, Texas*

Evidence shows that lifestyle variables, such as staying actively engaged, may alter the trajectory of cognitive aging and help maintain cognitive performance (Hultsch et al., 1999). This pilot study investigated whether learning and using a new technological device (i.e. iPad) can serve as a means of sustained active engagement that will influence the development and maintenance of cognitive ability (Schooler et al., 1999). Healthy older adults aged 65+ were recruited from the community for the experimental (iPad) group (N=19), and the control group was an age and education-matched sample drawn from the con-



trol group a larger lifestyle engagement study (N=19). The iPad group completed an 8-week training in using the iPad for various activities (e.g. games, planning vacation, diary homework). The Placebo group completed a structured set of activities (e.g. crossword puzzles, watching documentaries, etc.) that did not involve learning a new skill. Cognitive ability was measured at pre- and post-training in 9 different cognitive domains. Data was analyzed using a repeated-measure ANOVA on standardized scores, with adherence hours to the program as a covariate. Overall, there was significant improvement in the iPad group for processing speed and both immediate and delayed recall memory, when compared to the Placebo group ( $p < .05$ ). However, the Placebo group showed greater improvements in mental control, when compared to the iPad group. Although the iPad group showed significant improvements in three cognitive domains, more investigation is necessary before a definitive conclusion can be made about the impacts of technological device learning on cognitive performance.

### **DEVELOPING SUPPORTIVE RELATIONSHIPS IN THE GROUP INTERVENTION PROGRAM TO FORM EXERCISE HABIT**

R. Hirayama, M. Ogawa, C. Ura, F. Miyamae, E. Nomoto, R. Takahashi, *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

Evidence shows that group-based intervention programs are effective in helping Japanese older adults incorporate physical activities into their daily lives. The effect of such intervention programs, however, depends on whether participants can form a supportive relationship with their group members, thereby encouraging each other to engage in physical activities regularly. From a structural perspective of social relationships, our aim in this study is to explore whether and how participants develop the relationship with their group members differently by gender, age, and education level. Our data were from 62 community-dwelling older adults in Tokyo who participated in a 20-week group intervention program to form walking exercise habit (mean age = 71.9). Divided into 10 groups, participants evaluated how supportive their group members were every two to three weeks over the course of the program. Using two-level latent growth modeling, we analyzed (a) the trajectory of changes in perceived supportiveness of group members and (b) whether and how the trajectory might vary by individual characteristics (i.e., gender, age, and education level) and by group composition (i.e., gender ratio and variability among members in age and education level). Results suggest that participants' gender and education level matter for the development of supportive relationships with group members, with little influence of group composition. Whereas men were higher than women in the initial level of supportiveness, women reported a greater increase in supportiveness than men. Participants' level of education was positively associated with both initial level of and growth in perceived supportiveness of group members.

### **REMINISCENCE IN INTERGENERATIONAL CONVERSATIONS**

O. Gould<sup>1</sup>, S. MacNeil Gautreau<sup>1</sup>, J.D. Webster<sup>2</sup>, *1. Psychology, Mount Allison University, Sackville, New Brunswick, Canada, 2. Langara College, Vancouver, British Columbia, Canada*

Although reminiscences occur frequently in conversation, little research has addressed whether their production accommodates the needs of the intergenerational conversation partner. Here, 29 intergenerational dyads (Mage = 19.00 (1.36) and 73.37 (5.33) years) engaged in three guided conversations. Participants reported privately on conversation satisfaction, reminiscence frequency (a simplified version of the Reminiscence Functions Scale) and estimated the reminiscence behavior of the other generation. Older adults were significantly more satisfied with the conversations than their younger partners across four indicators of satisfaction (i.e., enjoyment ( $\eta^2 = .04$ ), awkwardness ( $\eta^2 = .18$ ), length ( $\eta^2 = .21$ ), and relaxed ( $\eta^2 = .07$ ). Younger adults significantly overestimated the older adults' frequency of reminiscing ( $\eta^2$

= .31), particularly for the reminiscence function of boredom reduction, and older adults significantly underestimated younger adults' reminiscence frequency ( $\eta^2 = .36$ ), particularly for the reminiscence functions of boredom reduction and bitterness revival. Finally, we used difference scores to assess how accurately each judged the other generations' frequency of reminiscing (a possible indicator of age stereotypes). The relationship between accuracy and the partner's conversation satisfaction was significantly different for the two age groups ( $p < .05$ ). Specifically, the less accurate older adults were in estimating young people's reminiscing frequency, the less the young partners' reported conversation satisfaction. In contrast, the less accurate younger adults were in estimating older people's reminiscing frequency, the more conversation satisfaction was reported by the older partners. The discussion will focus on the role of reminiscence as a predictor of intergenerational conversation satisfaction.

### **ENGAGING AFRICAN-AMERICAN ELDERS IN LATE-LIFE ANXIETY TREATMENT RESEARCH**

S. Shrestha<sup>2,1</sup>, M. Armento<sup>2,1</sup>, D. Zeno<sup>2</sup>, M. Stanley<sup>2,1,3</sup>, N.L. Wilson<sup>1</sup>, *1. Psychiatry and Behavioral Medicine, Baylor College of Medicine, Houston, Texas, 2. Michael E DeBakey Veterans Affairs Medical Center, Houston, Texas, 3. South Central Mental Illness Research Education and Clinical Care, Houston, Texas*

Risk for inadequate recognition of mental health symptoms and care is particularly high for ethnic-minority elders in low-income, underserved communities and research in this area is limited. Commonly identified barriers to successful engagement of older African-Americans in treatment research are stigma, mistrust, racism, and beliefs about symptoms and treatment. Lessons from late-life depression treatment studies underscore the importance of using culturally appropriate language, culturally tailored treatment and creative outreach activities to overcome these barriers. However, minorities are under-represented in anxiety trials and there is some indication that older adults are less able to identify symptoms of anxiety than those of depression. This poster will describe strategies used to engage African-American older adults in Calmer Life, a culturally tailored, participant-centered intervention for older adults. Through active participation of churches and social service agencies and consultation with the Calmer Life Community Advisory Council, we deployed multiple approaches to reach 49 and ultimately consent 29 African-American elders in a pilot study including: 1) interactive presentations using alternative language to increase awareness of signs and symptoms of anxiety and increase understanding about the benefits of treatment. 2) use of print materials with positive graphics and consumer language 3) sign-up methods to solicit consumer interest while maintaining confidentiality. 4) involvement of trusted community leaders in outreach efforts. A consumer-focused video featuring reports of study participants who successfully completed the intervention and comments from community partners was an outgrowth of this pilot work; and will support future studies of community-based anxiety treatment.

## **SESSION 1280 (POSTER)**

### **LIFE SPAN AND DEVELOPMENTAL CHANGE**

#### **GENDER DIFFERENCES ON THE RELATIONSHIP BETWEEN CHILDHOOD SES AND COGNITIVE FUNCTIONING IN LATER LIFE: MODERATING EFFECT OF RACE/ETHNICITY AND EDUCATION**

J. Lyu, *UMass Boston, Boston, Massachusetts*

The purpose of this study was to investigate the gender differences on relationship between childhood SES and cognition among older adults. In addition, moderating effects of race/ethnicity and respondent's education on above association were also examined. Using data from

the 2008 Health and Retirement Study (HRS), the sample was subdivided into female and male groups, which consisted of 5,131 and 3,749 subjects, respectively. Cognition was measured by self-reported cognition survey items, which added up to 35 points. Childhood SES was measured by three indicators: parents' education, father's job, and family SES at childhood. Adjusted for confounding variables, a multivariate analysis showed that childhood SES is negatively associated with cognition for both subsamples but no significant gender difference was found. However, the effect of childhood SES on cognition was significantly moderated by race/ethnicity for both subsamples. In addition, respondent's education showed significant moderating effect only among female subsample. These findings suggest that although the association between childhood SES and cognition is not different by gender, the moderation effects of race/ethnicity and respondent's education may be different by gender.

### THE TRAJECTORY OF DISENGAGEMENT AMONG JAPANESE ELDERLY PEOPLE: USING GROUP-BASED TRAJECTORY MODELS

T. Nakata, *Hokusei Gakuen University, Sapporo, Japan*

The aim of this study is to examine the differences in the disengagement trajectories and its factors among elderly Japanese people. The word 'disengagement' is used to mean withdrawing from society like 'disengagement theory'. Though every people in their later life are said to disengage, actual figure of the disengagement and its factor have not known yet. In this study, it will be revealed applying latent class growth models using panel data. This study employed the National Survey of the Japanese Elderly, from wave I (1987) to wave IV (1996), which was conducted by Michigan University and Tokyo Metropolitan Institute of Gerontology. A number of friends, which is operational definition of the disengagement, was used as a dependent variables and age was independent variables. Education and gender were used as time-stable covariates and occupational and marital status and self-rated health were used as time-dependent covariates. The results of this analysis are as follow; 1) Dividing into four groups was adequate. 2) Those groups showed quite different trajectories. The first group showed almost no friend consistently, the second one decreased step by step, the third one increased with age in dribs, and the fourth one showed a trajectory with sharp decrease. 3) the second group was consisted of female and the second and fourth group were consisted of the highly educated. This results clear up that the processes separate interpopulationally, but the characteristics of the respondents except occupational status do not demonstrate the type of the process.

### HOURLASS HALF-FULL OR HALF-EMPTY? PREDICTING FOCUS ON OPPORTUNITIES OR LIMITATIONS ACROSS ADULTHOOD

P. Lemaster<sup>1</sup>, J. Strough<sup>1</sup>, A. Parker<sup>2</sup>, W. Bruine de Bruin<sup>3</sup>, N. Pichayayothin<sup>1</sup>, T. Karns<sup>1</sup>, 1. *West Virginia University, Morgantown, West Virginia*, 2. *RAND Corporation, Pittsburgh, Pennsylvania*, 3. *Carnegie Mellon University, Pittsburgh, Pennsylvania*

Future time perspective (FTP), the subjective sense of time ahead, is a core component of Carstensen's (2006) socioemotional selectivity theory. Research based on college students and middle-aged women rejected a one-factor model of FTP for a two-factor model: focus on opportunities and focus on limitations (Cate & John, 2007). Our objectives were to replicate these findings in a nationally representative, cross-sectional sample from the American Life Panel (N=3469; M age = 49.51, range=18-93) and to identify individual differences that predicted a focus on opportunities versus limitations. Confirmatory factor analyses indicated the two-factor model better fit the data than a one-factor model ( $\Delta\chi^2=3093.70$ ,  $p<.01$ ; CFI=.891). With age, focus on opportunities declined, while focus on limitations increased. In a subsample (N=1075), greater perceived health ( $\beta=.16$ ,  $p<.001$ ), better perceived decision-making ability over time ( $\beta=.15$ ,  $p<.001$ ), and greater action orientation

relative to preoccupation ( $\beta=.16$ ,  $p<.001$ ) predicted a focus on opportunities, over and above age ( $\beta=-.47$ ,  $p<.001$ ). Lower perceived health ( $\beta=-.18$ ,  $p<.001$ ), being male ( $\beta=-.11$ ,  $p=.002$ ), and lower action orientation relative to preoccupation ( $\beta=-.13$ ,  $p=.001$ ) predicted focus on limitations, over and above age ( $\beta=-.36$ ,  $p<.001$ ). Income, marital status, work status (retired or not), the presence of children in the home, anxiety and avoidance in close relationships, greater action orientation relative to hesitation, and social comparisons of decision-making ability were unrelated to focus on opportunities or limitations. Results illustrate the utility of conceptualizing FTP as comprised of two dimensions and the need for further research on individual differences associated with a focus on opportunities and limitations.

### FUTURE TIME PERSPECTIVE AFFECTS HOW THE PAST IS RECALLED IN YOUNG ADULTHOOD AND MIDLIFE

B. Demiray Batur<sup>1</sup>, S. Bluck<sup>2</sup>, 1. *University of Zurich, Zurich, Switzerland*, 2. *University of Florida, Gainesville, Florida*

Midlife is described in classic developmental theory as a period of shifting time horizons in time lived and time left to live. To examine relations between views of the future and the past at different points in the lifespan, the study assessed relations of adults' chronological age (i.e., time lived) and future time perspective (i.e., perceived time left to live) to qualitative characteristics of their autobiographical memories. Young and late middle-aged adults recalled a distant past, and a recent past autobiographical memory. Each memory was rated for a variety of experiential characteristics: emotional positivity, negativity, vividness, importance, and centrality to self-concept. Participants also indicated how open and optimistically they view their future (i.e., Future Time Perspective). Regression analyses examined the unique and combined power of future time perspective and chronological age group in predicting how individuals experience the remembered past. Regardless of age, individuals with a more open, optimistic future perspective rated their memories as more positive, less negative and more important. Additional effects of future time perspective were moderated by age group: Only younger adults showed a relation between increased future time perspective and reporting of more vivid memories that are more central to the current self-concept. In sum, the findings suggest that how individuals look to the future is related to how they recall both the recent and the distant past differentially in young adulthood and midlife. Discussion focuses on the remembered past and anticipated future as part of an 'extended self' across adulthood.

### SHOPPING IN LATER LIFE: IMPLICATIONS FOR PHYSICAL AND COGNITIVE HEALTH

E. Evans, *Psychology, University of Liverpool, Liverpool, United Kingdom*

In an ageing population, risks for cognitive decline affect the independence and quality of life of older adults and present challenges to the national economy and the health care system. The National Institutes of Health have identified a need for research into four key areas that have promise for improving cognitive ageing: cognitive activity; physical activity; social engagement; and nutrition (Hendrie et al., 2006), all of which can be studied through shopping activities. The current study utilises in-depth semi-structured interviews to identify the cognitive activity, social interaction and physical activity associated with shopping behaviours in an older cohort. Twenty community-dwelling participants (mean age 80) were interviewed with a focus on shopping frequency, motivation, transport used and social interaction while shopping. The current study suggests that shopping behaviours are multidimensional and encompass a combination of mental, social and physical activity. In terms of physical activity, there is considerable individual variation dependent upon both how mobile each participant is and on their keenness to shop. In the current sample there is evidence of cognitive processes in the planning of shopping trips and decision-making while shopping. Furthermore, shopping provides an opportunity for

social stimulation. The findings presented here show that shopping activity is a valuable area in which to study both physical and cognitive health in later life.

### AGE DIFFERENCES IN WISDOM AMONG KOREAN IMMIGRANTS

S. Kim, B.G. Knight, *Gerontology, University of Southern California, Los Angeles, California*

Pioneering studies of wisdom have focused on conceptual and definitional issues. Several studies have shown that in Western cultures there are age differences in the emphasis assigned to the sub-factors of wisdom. To begin to expand these findings to Eastern cultures, we examined age differences in wisdom by comparing a modified Three Dimensional Wisdom Scale (3D-WS) between two age groups of Korean immigrants. To make the measure more relevant to Eastern cultures, a potential additional wisdom factor, Modesty and Unobtrusiveness, based on Eastern implicit theories of wisdom, was added to the existing 3D-WS dimensions (Cognitive, Reflective, and Affective). Self-Transcendence, Emotion Regulation, Openness to experience, Life Satisfaction, and Social desirability bias measure were administered to test validity of the scale. A MANOVA was performed on preliminary data from older adults ( $n=35$ ) and younger adults ( $n=50$ ) to test age differences in the wisdom factors. The multivariate result was significant for age,  $F=7.931$ ,  $df=(4,79)$ ,  $p<.001$ , indicating a difference in the wisdom construct between older and younger adults. The univariate  $F$  tests showed older adults scored higher than younger adults on the Affective factor,  $F=4.426$ ,  $df=(1,82)$ ,  $p=.038$ , and the Modesty and Unobtrusiveness factor of wisdom,  $F=18.34$ ,  $df=(1,82)$ ,  $p<.001$ . The modified 3D-WS was positively correlated with Adult Self-Transcendence Inventory, Life Satisfaction Scale, and Emotional Regulation. Our findings suggest that Korean immigrant older adults consider the affective dimension as more central to wisdom, and have a more Eastern approach to wisdom than younger adults.

### AGE AND TIME PERCEPTIONS: A TALE OF MULTIPLE MECHANISMS

J.L. Rutt, C.E. Loeckenhoff, *Cornell University, Ithaca, New York*

Research suggests that individuals differ in temporal construals and that this may influence life goals and future planning. While there is growing evidence for age differences in perceived time left in life, age patterns in other aspects of temporal construal are not yet well-established. The present study examined age effects across five different aspects of time perception. Eighty-seven participants (aged 21-89,  $M=49.7$ ,  $SD=18.6$ ) completed measures of subjective position in the life span, perceived time left in life (Carstensen & Lang, 1996), future self-continuity (Ersner-Hershfield et al., 2009), subjective compression of time (Zauberman et al., 2009), and general future-orientation (Zimbardo & Boyd, 1999). For each measure, we examined correlations with age and associations with other measures of time perceptions. With the exception of a significant correlation between perceived time left in life and subjective position in the life span ( $r=-.60$ ,  $p<.001$ ), associations among the measures were negligible, suggesting that they capture unique aspects of temporal construal. Age effects were strongest for subjective position in the life span ( $r=.85$ ,  $p<.001$ ) and perceived time left in life ( $r=-.50$ ,  $p<.001$ ). Moderate age effects were found for subjective compression of future time ( $r=-.32$ ,  $p=.003$ ) and future self-continuity ( $r=.24$ ,  $p=.03$ ). There were no age differences in general future-orientation ( $r=-.06$ , *n.s.*). Findings suggest that older adults are aware of limitations in future time and the approaching end of their lifespan. They are also more likely to subjectively compress future time, but this does not appear to affect perceived connectedness to future selves and active future planning.

## SESSION 1285 (POSTER)

### LONG TERM CARE

#### TRAUMATIC STRESSORS, COPING RESOURCES, AND WELL-BEING AMONG OLDER ADULTS IN PRISON: FORGING A GERONTOLOGICAL RESPONSE

T.M. Maschi, *Graduate School of Social Service, Fordham University, New York, New Jersey*

**PURPOSE:** The purpose of this study was to examine the mediating effects of coping resources on the relationship between lifetime traumatic stressors and well-being (physical and mental). To date, these relationships have not been examined among older adult offenders, particularly prisoners. **METHODS:** The study used a cross-sectional correlational design with 569 NJ state older prisoners (aged 50+). Using the Dillman et al. (2004) four step mail methods and the Life Events Stressors Checklist-Revised, Coping Resources Inventory, Brief Symptom Inventory, Post Traumatic Stress Checklist, and the CDC Health-Related Quality-of-Life Inventory. **FINDINGS:** Controlling for race and age, structural equation models (SEM) were estimated to examine the relationship between lifetime traumatic stressors, individual (cognitive, emotional, spiritual, physical) and social coping (social support) and well-being (physical and mental health). The SEM results ( $X^2=89.04$ ,  $df=43$ ;  $CFI=.943$ ;  $RMSEA=.043$ ) suggested that experiencing lifetime trauma was significantly and inversely related to participants' use of individual level cognitive, emotional, spiritual, and physical coping ( $B=-.15$ ,  $p<.05$ ) and social coping ( $B=-.09$ ,  $p<.05$ ) resources. Lifetime traumatic stressors also exerted a significant direct effect on negative well-being ( $B=.42$ ,  $p<.001$ ) in the form of poor physical, global mental health, and post-traumatic stress symptoms. Furthermore, support was shown for the mediating role of individual coping resources and social support on the relationship between lifetime trauma stressors and negative well-being as significant ( $p<.05$ ) indirect effects were also observed. **IMPLICATIONS:** These results provide empirical information that can guide improved interdisciplinary-gerontological practice, particularly in the form of trauma-informed assessment and intervention strategies for older prisoners. Policy implications included sentencing reform efforts, improved service provision and alternatives are advanced.

#### OLDER ADULTS IN PRISON: INTERNATIONAL PROMISING PRACTICES FOR COST SAVINGS PRISON AND COMMUNITY REINTEGRATION PROGRAMMING

T.M. Maschi<sup>1</sup>, M.E. Morrissey<sup>1</sup>, D. Viola<sup>2</sup>, F. Sun<sup>3</sup>, 1. *Graduate School of Social Service, Fordham University, New York, New Jersey*, 2. *New York Medical College, New York, New York*, 3. *Arizona State University, Phoenix, Arizona*

According to the World Health Organization (2010), there are over 10 million people living in penal institutions of which 10% are aged 50 and older. The aging prison population has steadily increased since the 1990s, especially in the U.S, China, Japan, Canada, and England. Aging prisoner studies reveal their high levels of physical and mental health problems, fear of dying in prison, and stress related to prison release (Maschi et al., 2011). Most international correctional systems are ill-prepared to address the complex healthcare needs and specialized long-term care and reentry programming. The aging prisoner issue is of special importance to the U.S. and China in light of the high costs of incarcerating older adults and recent national policy and legal reforms, such as the 2010 Criminal Law of China, which bans the death penalty for people age 75 or older, except for extreme homicide cases (Guo, 2011). This paper describes the global aging prisoner population with emphasis on international cost savings program innovations that target older adults in prison and upon prison release. The central arguments for a specialized system for older adults are presented, which include older offenders low dangerousness levels and recidivism rates, their

deteriorating health due to prolonged incarceration and international policy recommendations, such as compassionate release, victim-offender reconciliation, and non-prison sentencing (Chui, 2010). The paper concludes with common elements of prison and community services, which include the use of case coordination, interdisciplinary collaboration, and prisoner volunteers in the provision of medical, mental health, and social services

#### **DEVELOPMENT AND EVALUATION OF AN E-LEARNING PROGRAM FOR NURSING ASSISTANTS: MANAGING CHALLENGING RELATIONSHIPS IN NURSING HOME CARE ENVIRONMENTS**

E. Marziali<sup>1</sup>, C.S. Mackenzie<sup>2</sup>, I. Tchernikov<sup>1</sup>, 1. *Baycrest, Toronto, Ontario, Canada*, 2. *University of Manitoba, Winnipeg, Manitoba, Canada*

**Objectives:** An e-learning program for nursing assistants (NAs) with a focus on management of stress arising from relationship conflicts with residents, families and co-workers was evaluated in a national survey of participant responses to the content, e-format, and applicability of the program to care practices. **Methods:** NAs and their nursing supervisors were recruited from 17 long term care institutions across Canada (N=117). The e-learning program in DVD format could be viewed on computers or TVs at times convenient for NAs. Modules focused on NAs' management of work-related relationship conflict and self-care, nursing supervisor's support of NAs' management of work-related stress, and animations of NAs management of conflict situations. At each institution an educator recruited participants, arranged time and equipment for viewing DVDs, and arranged conference call follow up focus groups that were audio recorded and analyzed qualitatively. **Results:** Overall the NAs viewed the e-learning content and format as useful and relevant to their work situations. NAs reported greater confidence in managing conflicts with residents and less comfort dealing with families, co-workers and supervisors. Many NAs felt that their input to care planning was ignored and/or rarely solicited. Due to resident care demands, team meetings did not exist in many institutions and were infrequent in most others. **Conclusions:** This readily accessible e-learning program is useful as an initiation tool for new hires and a refresher course for more experienced NAs. The program will be revised to reflect gaps in institutional support of NAs management of work-related stress.

#### **REDUCTION OF NOSOCOMIAL WHEELCHAIR USE IN NURSING HOMES: MEETING THE TRIPLE AIM**

J. Rabig, *MHS Institute, Masonic Health System, Leeds, Massachusetts*

Nosocomial wheelchair use has been defined by the author as the use of wheelchairs by nursing home residents for reasons that are not related to the resident's physical condition or needs. The drivers of nosocomial wheelchair use in the nursing home population include: long walking distances that are not navigable without rest stops, a lack of resting stations in long corridors; the facilitation of staff efficiency, and the reliance on wheelchair use as a falls prevention and risk management strategy. The risks of wheelchair use include those associated with disuse. Nursing home wheelchair users experience high levels of skin breakdown, urinary tract infections, pneumonia, depression and social isolation. The paper will discuss a the Center for Medicare and Medicaid Innovation Advisor Project which targeted a reduction in the complications of wheelchair use in a 120 bed skilled nursing home. The project implemented a robust admission screening process for new residents, a program of exercise and progressively decreasing hours of wheelchair use in eligible residents and increasing the number hand or foot self-propelling residents. The targeted aims were devised using the Institute for Healthcare Improvement "Triple Aim" framework: improve the health of the population, enhance the patient experience of care and reduce, or control, the per capita cost of care.

#### **THE IMPORTANCE OF THE HOME FOR ELDERLY: CONTRIBUTION OF THE HOME CARE SERVICE**

E. Castro<sup>1</sup>, S. Magalhães<sup>2</sup>, 1. *University Fernando Pessoa Health Sciences School, Porto, Porto, Portugal*, 2. *Portuguese Catholic University Faculty of Social Sciences, Braga, Braga, Portugal*

Today, modern societies are faced with the significant growth of population aging, resulting in even large changes, particularly on social, economic and cultural levels, which may be determinants in population health. These changes raise relevant questions regarding to issues concerning social protection and sustainability of it. There is, thus, a new challenge for society: How to provide better quality of life for the elderly, since old age brings a growing loss of skill acquisition. In this conceptual framework and social policies, the Home Care Service operates on gerontological perspective to intervene, and have a fundamental role in the biopsychosocial process of aging. The purpose of this study was to evaluate how important is the home for elderly, as well as verifying its perception about the contribution of HCS for stay at home. The study involved 50 Portuguese participants, 30 women and 20 men, aged between 65 to 97 years, and with no appreciable cognitive deficits. In support of our research, according to the literature review carried out carefully, and prepared questions, it was made a pilot sample study to test the appropriateness of the constructed instrument. The results obtained show the validity of the chosen questions. From these response, 11 items were identified. Using this questionnaire and data obtained, the results indicate the importance of the home for elderly and that the H.C.S. represents an instrument for the promotion of wellness, and physical, psychological and emotional balance, and quality of life improvement for the elderly in multidimensional indicators.

#### **ASSESSING WELL-BEING ALONG THE EDEN ALTERNATIVE JOURNEY: A NEW TOOL**

F.E. Wilby<sup>1</sup>, C.R. DuMond<sup>2</sup>, S. Ransom<sup>3</sup>, D. Hyde<sup>4</sup>, 1. *College of Social Work, University of Utah, Salt lake City, Utah*, 2. *St. John's, Rochester, New York*, 3. *Pinon Management, Lakewood, Colorado*, 4. *CIMRO of Nebraska, Omaha, Nebraska*

The Eden Alternative movement is at the core of the culture change movement in nursing home care in the United States and internationally with resident, staff, and family well-being it's center feature. Until now, the Eden Alternative did not have a valid and reliable tool to measure well-being. This study was designed to test the validity and reliability of the Eden Well-Being assessment. 430 employees, 237 residents, and 60 families completed the Eden Well-Being assessment tool. Participants came from 3 different geographical regions of the U.S. Factor analysis was conducted to examine the underlying concepts for each cluster of questions or factors using the Statistical Package for the Social Sciences Version 15 (SPSS 15). Seven underlying concepts were identified: identity, growth, autonomy, security, meaning, connectedness and joy. Additionally, reliability statistics were completed using SPSS 15 showing strong reliability for the instrument. The Eden Well-Being assessment tool is now ready for dissemination to a wider audience interested in measuring well-being in long-term care settings.

#### **ENVIRONMENTAL FACTORS AND FALLS WITHIN LONG-TERM CARE**

R. Woolrych, A. Sixsmith, *Simon Fraser University, Vancouver, British Columbia, Canada*

Falls are a common cause of death and serious injury in older people, demonstrating a significant cost burden (Dellinger and Stevens, 2006) and having deleterious impacts on individual quality of life (Ozcan et al, 2005). Despite this, there is little understanding of the circumstances of falls within long-term care, a major impediment to the development of intervention strategies. This paper presents ongoing work from a sub-project of a CIHR-funded grant entitled Technology for Injury Prevention in Seniors (TIPS) aimed at understanding environmental factors and falls within long-term care. The methodology for the

sub-project will be presented, utilising a ‘systems approach’ (Zecevic et al, 2007), drawing upon primary and secondary data to establish case studies of fall incidents that occur within a long-term care facility in Vancouver, Canada. This involves interviews and focus groups with older residents, visitors and care staff, observations of real time surveillance video captured within the facility and the use of fall incident reports and medical notes to establish a nuanced understanding of the circumstances leading to the fall. Early findings from the research suggest that a systems approach to investigating falls within LTC can yield substantial benefits, enabling a deeper understanding of the physical, behavioural and socio-environmental aspects of falls, providing evidence to design interventions which are context-specific. The paper highlights substantial challenges in adopting a systems approach to understandings falls, specifically the difficulties in compiling information-rich case studies, reconciling conflicting accounts of the fall incident and the generalisability of findings across long-term care facilities.

#### **CERTIFIED NURSE ASSISTANT CLINICAL LADDER**

A. Ashcraft, *SON, Texas Tech University Health Sciences Center, Lubbock, Texas*

This presentation will examine implementation of a career ladder for nurse aides. The ladder consists of three levels that may be delivered over 8 or 16 weeks: Level 1: Personal Growth and Development and Normal Changes of Aging, Level 2: Health Care issues of the Older Adult, and Level 3: The CNA role in Dementia, Palliative Care, and the Survey Process. Surveys were given prior to CNAs beginning Level 1 and after completion of Level 3 to evaluate job perception. The following tools were utilized. 1. Laschinger’s Conditions for Work Effectiveness Questionnaire—means revealed “some” opportunity and access to support in present job as well as “some” innovation, flexibility, and visibility of work-related activities. Paired t test revealed significance ( $p = .01$ ) for the chance to gain new skills and knowledge on the job. 2. Roller’s Perception of Empowerment Instrument—means revealed participants were neutral about their freedom to make decisions and involvement with changes concerning their job but disagreed with determining organizational goals and changes. 3. Yeatts and Cready Dimension of Empowerment Measure—means revealed participants felt they had the skills and knowledge to do a good job but participants did not feel administration was open to their ideas and solutions and did not listen to their suggestions. Paired t test revealed significance ( $p = .03$ ) for CNAs being allowed to make their own decisions. The CNA Career Ladder is an opportunity to foster professional behavior and improve job satisfaction for CNAs. Survey results reveal the importance of including this subset of caregivers when considering changes in the workplace.

#### **A COMPARATIVE STUDY OF PHYSICAL ENVIRONMENT OF TWO ADULT DAY SERVICES (ADS) CENTERS IN TAIWAN**

C. Liou, S.E. Jarrott, *Virginia Tech, Blacksburg, Virginia*

Studies have shown that the physical environment is an important determinant of psychosocial and health outcomes for elders, particularly those with dementia. Because adult day services (ADS) centers are increasingly serving persons with dementia, it becomes important to assess the physical environment of those care settings. Reviewing current literature on measuring physical environment within long-term care settings, some features are highlighted to support a good quality of care environment, such as privacy, safety, stimulation, space, familiarity, and orientation. Because studies of the physical environment have been conducted primarily in nursing home facilities in Western society, little is known about physical features in ADS settings in Asia. In this study, we selected two ADS centers (medical model vs. social model) in Taiwan to describe their environments and consider their role in influencing interactions between clients and staff. Data were collected with an ethnographic method involving field observation and client and staff

interviews. The physical features of the medical model center, such as a nurses’ station, hospital beds, and institutional furniture reflected a hospital-like environment, which created a patient-nurse relationship between clients and staff. The physical features of the social model center included a unique community-like setting with reminiscent features indicating purpose of different areas. Here, clients and staff treated each other as friends or family members, sometimes to the clients’ detriment. Different physical features of these two centers influenced clients’ perceived quality of life and staff’s care delivery. Findings can be used to guide the design of ADS centers in Taiwan.

#### **VOICES FROM DOWN HOME: THE RELATIONSHIP BETWEEN EXPERIENCE AND MEANING FOR LONG TERM CARE RESIDENTS IN NOVA SCOTIA, CANADA**

E. Roberts, *Human Environmental Sciences, University of Missouri-Columbia, Columbia, Missouri*

Much has been written about autonomy in long term care (LTC), but ethical significance of actual autonomy is not to celebrate being old or frail from afar, but rather to close the gaps with elders in LTC. Agich (2003) writes that the significant point about stories is that what people tell about their lives comprise one of the most important modes of access to what is important to them. Stories drawn from life can indicate the things that people value the most; they tell us who the person is and with what they most identify. In order to answer the question of what features of everyday experience structure the expression or manifestation of autonomy in action in LTC, in early 2012, case studies were conducted in two LTC communities in the province of Nova Scotia, Canada. Observations took place for 8 weeks and interviews were conducted with residents, family members and staff, with nine resident interviews conducted in each of the communities. Rubenstein (2002) writes that the qualitative interview is noteworthy in its role as an entry point to the subjectivity of individuals and these research results indicate that the inherent differences in biographical context of a resident’s life experiences will often be a determinant of autonomy, and acceptance of an individual’s current living situation.

#### **POSITIVE PERSPECTIVES AND VIBRANT CAREGIVERS: A TALE OF OLDER HOME HEALTH AIDES**

D. McCaughey, G. McGhan, E. Walsh, *HPA, Penn State University, State College, Pennsylvania*

Purpose: Fueled by an aging population coupled with increasing pressure to move institutionalized care into the community, the need for home health aides (HHAs) is growing exponentially. Repetitive injury, high job demands, poor benefits, and low pay foster the ongoing shortage of qualified HHAs. Anecdotal evidence suggests that older workers are more prone to workplace injuries and can be more costly to employee than younger workers. Methods: Using data from the 2007 National Home Health Aide Survey (US DHHS), we examined: 1) relationships between injuries and HHA outcomes; and 2) frequency of HHA injuries and sick days. Post hoc analyses were conducted to identify differences among the HHAs by age groups ( $n = 3377$ ). Results: OLS and multinomial logistic regression identified injured employees have lower job satisfaction ( $\beta = -.119$ ,  $p\text{-value} < .001$ ), higher turnover intentions ( $\beta = .069$ ,  $p\text{-value} < .001$ ), and are less likely to recommend their agency for care ( $\beta = -.099$ ,  $p\text{-value} < .001$ ) than non-injured employees. Older workers (over 55 years and 23.7% of sample) were found to have significantly higher job satisfaction ( $F = 5.35$ ,  $p < .001$ ) and lower turnover intention ( $F = 8.15$ ,  $p < .001$ ) but no significant differences in injury rate or sick days taken. Conclusions: Study results identify older workers have better outcomes and offers evidence that older workers in this sample were neither injured or sick more often than their younger counterparts. With an aging workforce and the need to fill existing vacancies, older workers offer a viable and accessible employee pool to help long-term-care organizations meet the growing demand for HHAs.

## MENTAL ILLNESS AND BEHAVIORAL PROBLEMS IN THE NATIONAL STUDY OF RESIDENTIAL CARE FACILITIES (NSRCF)

C. Poon, *Psychology Department, The Nebraska Medical Center, Omaha, Nebraska*

**Purpose:** As psychiatric hospitals continue to shrink in size and life expectancy continues to rise, more long-term care residents may carry a mental health diagnosis. This study examined the estimated prevalence of mental illness and behavioral problems in residential care facilities other than nursing homes, and the use of pharmacological interventions to manage behavioral problems in these facilities. **Design and Methods:** The NSRCF included 8094 residents sampled from 2268 facilities in the United States in 2010. Logistic regression was performed on the resident Public-Use File using the Mplus 6.1 software. **Results:** 89% of all residents were aged 65 and above. 64% had at least one mental health diagnosis. Excluding individuals with dementia, 22% still carried a diagnosis such as depression or schizophrenia. 38% of all residents exhibited behavioral problems such as aggression or refusal of care in the past 30 days. 22% of all residents received medications to manage behavioral problems or reduce agitation. Residents with a mental health diagnosis were more likely to have exhibit behavioral problems in the past 30 days (odds ratio = 4.75; 95% confidence interval: 4.23-5.35,  $p < .001$ ). These residents were also more likely to have been prescribed medications to manage their behavioral problems or agitation (odds ratio = 4.64; 95% confidence interval: 3.66-5.90,  $p < .001$ ). **Implications:** Integrating mental health services and staff training in residential care facilities other than nursing homes is crucial in improving behavior management in this growing long-term care setting.

## SYSTEMATIC REVIEW OF INTERVENTION ELEMENTS OF ACUTE GERIATRIC UNIT CARE

M. Fox<sup>1</sup>, M. Persaud<sup>1</sup>, I.K. Maimets<sup>1</sup>, S. Sidani<sup>3</sup>, D. Tregunno<sup>1</sup>, K. O'Brien<sup>2</sup>, D. Brooks<sup>2</sup>, *1. Nursing, Fac of Health, York Univ, Toronto, Ontario, Canada, 2. University of Toronto, Toronto, Ontario, Canada, 3. Ryerson University, Toronto, Ontario, Canada*

In response to an increasingly older hospital population, there have been calls to adopt the Acute Care for Elders (ACE) model on all hospital units where older adults are admitted. However, acute geriatric unit care is poorly understood. We conducted a systematic review of papers describing intervention elements of 12 trials included in a meta-analysis reporting significant benefits of acute geriatric unit care in reducing falls, delirium, functional decline, cost of care, and improving discharge outcomes for acutely ill or injured older adults. Twenty-seven papers describing 12 trials were included in this review. Information describing intervention elements of the 12 trials was transcribed verbatim and analyzed using categorical content analysis. The categories were defined by the intervention elements of the Acute Care for Elders (ACE) model. Acute geriatric unit care was most often characterized by: assessment of patients' physical, cognitive, and psychosocial functioning; strategies to prevent functional decline; and frequent review of drugs known to adversely affect older adults' functioning; followed by early rehabilitation and discharge planning. Acute geriatric unit care was provided by interdisciplinary teams who met regularly to plan older adults' care. Pre-trial team education, consisting of geriatric, rehabilitation, and/or interdisciplinary team working principles was also characteristic of acute geriatric care units. Patient-centered care, frequent medical review, early rehabilitation, and early discharge planning may represent the optimal combination of clinical interventions required for outcome achievement. Interdisciplinary team work and enhanced geriatric education may be important for service providers to consider when designing and implementing acute geriatric unit care.

## DISCHARGE PLANNING DECISION SUPPORT: TARGETING THE RIGHT PATIENTS

D.E. Holland<sup>1</sup>, K.H. Bowles<sup>2</sup>, S. Potashnik<sup>2</sup>, A.L. Hanlon<sup>2</sup>, M. Topaz<sup>2</sup>, *1. Mayo Clinic, Rochester, Minnesota, 2. University of Pennsylvania School of Nursing, Philadelphia, Pennsylvania*

**Background:** Improved methods to efficiently and accurately identify hospitalized older adults in need of comprehensive discharge planning (DP) and post-acute care services are critical based on limited time and resources available to discharge planners. Two evidenced-based decision support tools - The Early Screen for Discharge Planning (ESDP) and the Discharge Decision Support System (D2S2) were tested to determine if the tools helped clinicians identify high risk patients. **Methods:** Prospective quasi-experiment; 344 usual care and 390 intervention medical patients at an academic medical center enrolled in two phases: Phase 1, both tools were administered but not shared with clinicians (usual care); Phase 2, high/low risk scores were shared (intervention). Outcomes (self-reported problems and unmet needs [PADQ-E] and quality of life (QOL) [EQ-5D] were obtained within 6 weeks after discharge. **Results:** High scores on both tools were associated with more problems and worse QOL in both phases ( $p < .001$ ). Although patients with high scores had more unmet needs than patients with low scores, the differences were not statistically significant and sharing the tool advice did not change their frequency. **Conclusions:** The tools clearly identified patients likely to have more problems and quality of life issues after discharge; however, sharing the tool scores alone did not influence the frequency of problems, unmet needs, or QOL issues. Next steps are to further analyze the data to understand which questions predict particular post discharge outcomes and then, using these results, share information with the clinicians so that they can better match services with patient needs.

## EFFECTIVENESS OF ACUTE GERIATRIC UNIT CARE: SYSTEMATIC REVIEW AND META-ANALYSIS

M. Fox<sup>1</sup>, M. Persaud<sup>1</sup>, I.K. Maimets<sup>1</sup>, K. O'Brien<sup>2</sup>, D. Brooks<sup>2</sup>, D. Tregunno<sup>1</sup>, E.G. Schraa<sup>1</sup>, *1. Nursing, Fac of Health, York Univ, Toronto, Ontario, Canada, 2. University of Toronto, Toronto, Ontario, Canada*

**OBJECTIVE.** To determine the effectiveness of acute geriatric unit care compared to usual care. **DESIGN.** Systematic review and random effects meta-analysis of 12 randomized control and quasi-experimental trials with parallel comparison groups retrieved from multiple databases and journals. **SETTING.** Acute care geriatric and non-geriatric hospital units. **PARTICIPANTS.** 5209 acutely ill or injured adults with an average age of 81 years. **INTERVENTIONS.** Acute geriatric unit care included patient-centered care, frequent medical review, early rehabilitation, early discharge planning, and/or prepared environment. **MEASUREMENTS.** Falls, pressure ulcers, delirium, functional decline in 2 week pre-hospital and hospital admission statuses, length of hospital stay, discharge destination (home and nursing home), mortality, cost, and hospital readmission. **RESULTS.** Acute geriatric unit care was associated with significant benefits in falls [risk ratio (RR) = 0.51, 95% CI 0.29, 0.88], delirium (RR = 0.71, 95% CI 0.59, 0.86), functional decline in 2 week pre-hospital admission status (RR = 0.84, 95% CI 0.76, 0.93), discharge home (RR = 1.08, 95% CI 1.03, 1.13) and nursing home (RR = 0.82, 95% CI 0.68, 0.99), and lower cost (weighted mean difference = -235.93, 95% CI -442.07, -29.79). A trend toward fewer pressure ulcers was observed. No significant differences were found in mortality or hospital readmission. Because of heterogeneity, results were inconclusive for functional decline in hospital admission status and length of hospital stay. **CONCLUSIONS.** Acute geriatric unit care reduces falls, delirium, functional decline in 2 week pre-hospital admission status, cost, and improves discharge destination outcomes in octogenarians with acute illnesses or injuries.

## THE IMPACT OF SOCIAL WORK CONSULTATION ON THE QUALITY OF DEMENTIA CARE

W.C. Canio<sup>1,2</sup>, K.I. Connor<sup>2</sup>, S.D. Vassar<sup>1,2</sup>, M.L. Lee<sup>1,2</sup>, B.G. Vickrey<sup>1,2,3</sup>, J. Chodosh<sup>1,2,3</sup>, 1. UCLA, Los Angeles, California, 2. VA Greater Los Angeles Healthcare System, Los Angeles, California, 3. RAND Health, Santa Monica, California

**Background:** The prevalence of Alzheimer's disease and other dementias is expected to triple by 2050. Social work consultation for primary care practice may improve dementia care quality, specifically, caregiver mediated treatment, education, psychosocial support and safety. **Objective:** To evaluate the association between social work consultation and dementia care quality within a Medicare Advantage Plan using evidence-based dementia quality of care indicators. **Methods:** Using a cross-sectional survey, we asked informal caregivers of people with dementia about dementia care processes, to measure treatment, education/support, and safety quality indicators. We compared proportions of indicators met for those with and without social work consultation (SWC). We compared met indicator proportions of the SWC group with quality benchmarks from a dementia care management program, ACCESS, which utilized care managers supported by evidenced-based protocols and procedures. **Results:** Among 93 caregiver respondents (response rate: 53%) over 90% were spouses, children or child in-laws of the care recipient. All caregivers attended medical visits with the care recipient; 78% always attended. Sixty-four percent (64%) of caregivers had social work consultation. The proportions of met quality indicators more than doubled for 6 of 13 indicators ( $p < 0.05$ ) for dyads with SWC compared to those without. Quality was, however, even greater for 9/13 indicators within the ACCESS care management program (additional proportional improvement range: 7.1% - 35.9%,  $p \leq 0.02$ ). **Conclusion:** Social work consultation and higher dementia care quality are strongly associated. Nonetheless, there is greater quality when this consultation is supported by detailed decision support protocols and procedures in dementia care management.

## SESSION 1290 (POSTER)

### MENTAL HEALTH FUNCTIONING

#### A MEASURE OF EXECUTIVE FUNCTIONING DISTINGUISHES AMONG NURSING HOME RESIDENTS WITH DEMENTIA, PSYCHOTIC DISORDERS, AND MOOD DISORDERS

L.A. Gerolimatos<sup>1,2</sup>, B. Edelstein<sup>1,2</sup>, 1. Department of Psychology, West Virginia University, Morgantown, West Virginia, 2. Hopemont State Hospital, Terra Alta, West Virginia

Individuals with psychiatric disorders often display impairments in executive functioning (Egger et al., 2007; Joshua et al., 2009), but which components of executive functioning are associated with specific disorders is unclear. We examined the extent to which executive functioning distinguishes among individuals with dementia ( $n = 36$ ), psychotic disorders ( $n = 40$ ), and mood disorders ( $n = 17$ ). Residents ages 37 to 96 ( $M = 68.37$ ,  $SD = 11.72$ ) at a state-operated nursing home completed the Executive Interview (EXIT; Royall et al., 1992). A discriminant functions analysis predicting diagnosis from EXIT scales revealed two functions, X2 ( $14$ ,  $N = 93$ ) =  $24.26$ ,  $p < .05$ , which adequately distinguished among disorders. Function 1 and Function 2 accounted for 68.2% and 31.8% of between-groups variance, respectively. Perseveration ( $r = .81$ ), frontal release signs ( $r = .54$ ), intrusions ( $r = .46$ ) and utilization behaviors ( $r = .52$ ) loaded on Function 1. Intrusions ( $r = .41$ ) and lack of spontaneity ( $r = .63$ ) loaded onto Function 2. Function 1 distinguished dementia from the other groups, and Function 2 distinguished between mood and psychotic disorders. The jackknifed classification procedure correctly classified 60.2% of residents. Follow-up ANCOVAs revealed that the psychotic disorders group exhibited higher perseveration and frontal release signs compared to the other groups.

The mood disorders groups showed lower perseveration, frontal release signs, utilization behaviors, and lack of spontaneity than the other groups. The groups did not differ on intrusions. Implications for understanding executive functioning and managing associated problem behaviors across psychiatric disorders are discussed.

### FUNCTIONAL IMPAIRMENT ASSOCIATED WITH GERIATRIC HOARDING DISORDER

C. Ayers<sup>1,2</sup>, K.L. Strickland<sup>1</sup>, J. Wetherell<sup>1,2</sup>, 1. VA San Diego Healthcare System, San Diego, California, 2. UC San Diego, San Diego, California

Hoarding Disorder (HD) is a severe psychiatric condition that causes significant impairment across multiple life and functional domains in older adulthood. The purpose of the presentation is to highlight specific areas of functional impairment (e.g., moving around inside the house, eating at a table, sleeping in bed) that are impacted by clutter. Results revealed that geriatric hoarders ( $N=28$ ) are significantly more impaired on a measure of activities of daily living than non-psychiatric geriatric controls ( $N=25$ ). HD participants reported moderate to severe difficulty finding important things (86%), moving inside the house (61%), eating at the table (57%), using the kitchen sink (40%), using the stove (28%), and using the refrigerator (28%). Of concern, almost 18% of HD participants reported that they could not exit their home quickly and 11% could not use their toilet because of the clutter. Finally, hoarding severity has a significant positive relationship with functional impairment. Clinicians should ensure that they are measuring functional impairment in order to identifying appropriate behavioral interventions when working with geriatric hoarding cases. After attending this session, participants will be able to describe specific activities of daily living impairment experienced by older adults with hoarding. Further, participants will be able to define how to appropriately assess functional impairment in hoarding cases.

### THE DEVELOPMENTAL TIMING OF TRAUMA EXPOSURE: A LIFE COURSE PERSPECTIVE

C.M. Ogle<sup>1</sup>, D.C. Rubin<sup>1,3</sup>, I.C. Siegler<sup>1,2</sup>, 1. Duke University, Durham, North Carolina, 2. Duke University School of Medicine, Durham, North Carolina, 3. Center for Autobiographical Memory Research, Aarhus, Denmark

The deleterious effects of traumatic experiences can persist for decades. The research supporting this claim is, however, primarily limited to events that occurred in childhood or young adulthood and to special populations of older adults, chiefly veterans and Holocaust survivors. Less is known about the long-term impact of traumas encountered at other stages of the life course among non-clinical older adults. The present study addressed this issue by examining whether the negative consequences of trauma exposure are greater for traumas experienced during childhood, adolescence, young adulthood, midlife, or older adulthood in a large sample of community-dwelling older adults with a broad range of trauma histories ( $n = 1,995$ ). Each of these developmental periods is characterized by age-related changes in cognitive and social processes that may influence psychological adjustment following a traumatic event. After adjusting for socio-demographic factors, results indicated that older adults who experienced their worst trauma during childhood exhibited greater PTSD symptom severity, lower happiness, an impaired ability to cope with stress, and less social support compared to older adults who experienced their worst trauma later in life. Differences in cumulative trauma exposure, as well as objective and subjective event characteristics, added little explanatory value to the results. Findings underscore the importance of examining the developmental context of trauma exposure when seeking to understand the long-term consequences of such events during older adulthood. The policy implications of our results for older adults with histories of childhood compared to adulthood trauma will be discussed.

## DAILY OBSERVED WALKING SPEED AND SELF-REPORTED LOW MOOD IN COMMUNITY-DWELLING OLDER ADULTS

S.M. Thielke<sup>1,2</sup>, J. Kaye<sup>3,4</sup>, T. Hayes<sup>3</sup>, N.C. Mattek<sup>3</sup>, A.R. Quinones<sup>3</sup>, *1. University of Washington, Seattle, Washington, 2. Puget Sound VA Medical Center, Seattle, Washington, 3. Oregon Health & Science Univ, Portland, Oregon, 4. Portland VA Medical Center, Seattle, Washington*

**Background:** Changes in activity level are considered a hallmark symptom of depression. Little is known about the objective activity patterns of community-dwelling older adults during periods of low mood. **Setting:** 122 participants in the Intellect Systems for Assessing Aging Changes (ISAAC) study. **Design:** Sociodemographic and health-related characteristics were established at baseline. Mood was assessed by self-report each week. Mean and standard deviation of walking speed were estimated using unobtrusive in-home motion sensors. We ascertained the association between global or weekly low mood and mean or standard deviation of walking speed. **Results:** 8037 weekly mood observations on 122 participants were analyzed; on average there were 119 weekly observations per participant. 1.7% of observations involved low mood. After controlling for covariates, global mean walking speed was not associated with more frequent report of low mood. Weekly mean walking speed was not associated with weekly report of low mood. Weekly standard deviation in walking speed was highly associated with weekly report of low mood. **Conclusions:** Low mood involved walking in “fits and starts” rather than faster or slower. Research about behavioral consequences of mood states should account for variability of parameters, not just their mean values. Additional research can refine use of objective activity measures for surveillance, clinical care, and intervention design.

## SELF-CONCORDANCE AND WELL-BEING IN LATER LIFE: THE ROLE OF COMMUNAL AND AGENTIC GOALS

X. Zhang<sup>2,1</sup>, A.M. Au<sup>1</sup>, T. Tsien<sup>1</sup>, H. Fung<sup>3</sup>, *1. Hong Kong Polytechnic University, Hong Kong, China, 2. Peking University, Beijing, Beijing, China, 3. Chinese University of Hong Kong, Hong Kong, China*

252 mid-age and older adults (54 – 96 years old) residing in Hong Kong were recruited to test the self-concordance model (Sheldon & Elliot, 1999). We further differentiated and tested the model using communal and agentic goals. It was hypothesized that with an emphasis on communal goals as people age and in a culture where communion was highly valued, only the communal goals but not agentic goals should be more influential for participants' well-being. The results from Structural Equation Modeling (SEM) confirmed our hypothesis, such that although both communal and agentic goal striving were positively linked to psychological well-being through the mediation of goal attainment, only communal goal striving could directly predict psychological well-being. Moreover, a significant communal goal striving x goal attainment interaction was also found, suggesting that for individuals who considered communal goals important, the more they succeeded in attaining communal goals, the happier they will be, however this association was not true for those who considered communal goal less important, and the agentic goal striving x goal attainment interaction was not significant, indicating that the self-concordance model was only true for communal goals in Hong Kong participants. Findings from the present study highlighted the importance of considering the context of culture norm and age for a comprehensive understanding of the relationship between goal striving and well-being.

## PHYSICAL HEALTH RISKS, SOCIAL RESOURCES, AND DEPRESSIVE SYMPTOMS AMONG OLDER ADULTS: FINDINGS FROM THE SURVEY OF OLDER FLORIDIANS (SOF)

N. Park, Y. Jang, B. Lee, J. Ko, D.A. Chiriboga, *University of South Florida, Tampa, Florida*

**Purpose:** The objective of this study was to: (1) identify risk profiles of older adults based on physical health indicators (chronic con-

ditions, physical disability, and self-rated health); and (2) examine the moderating effect of social resources in the relationship between physical health risks and depressive symptoms. **Methods:** The data source was the Survey of Older Floridians, a statewide sample of 1,432 older adults aged 65 and older from four racial/ethnic groups: Whites (n=503), African Americans (n=360), Cubans (n=328), and non-Cuban Hispanics (n=241). Using latent profile analyses, we developed typologies of physical health risks and examined the association between physical health risk profiles and other variables (background characteristics, social resources—social support and religious service attendance—, and depressive symptoms). We performed hierarchical multiple regression analyses to explore direct and interactive effects of physical health risks and social resources on depressive symptoms. **Results:** Latent profile analyses identified a three-group model of physical health risks: low-risk (n=1,154), moderate-risk (n=203) and high-risk (n=75). In multivariate analyses, moderate- and high-risk groups had significantly higher levels of depressive symptoms. Social support reduced depressive symptoms for moderate- and high-risk groups, with the reduction being most pronounced for the moderate-risk group. **Conclusions:** Using a person-centered approach, the present study contributes to identifying subgroups of older adults who are most in need of services and who would benefit from social-support-based interventions.

## PERCEPTIONS AND EMOTIONS AFFECT BEHAVIOR TOWARD MENTALLY ILL OLDER ADULTS

A. Webb<sup>1</sup>, J.M. Jacobs-Lawson<sup>2</sup>, *1. Martin Methodist College, Pulaski, Tennessee, 2. University of Kentucky, Lexington, Kentucky*

Previous studies have shown that perceptions and emotions affect behavior toward mentally ill individuals. The vast majority of these studies have focused on younger adults; thus, little is known about how mentally ill older adults are perceived. The purpose of this study was to determine the combined effect that perceptions and emotions have on behavior toward mentally ill older adults. Participants (N = 276, aged 19-88 years) were presented with four vignettes depicting an older adult with a mental illnesses. For each vignette, participants indicated (a) the extent they perceived the older adult to be responsible for his/her condition, dangerous, or dependent on others; (b) degree of anger, pity, or fear they felt toward the person, and (c) willingness to help and their desired social distance from the older adult. The results revealed that perceptions and emotions significantly influenced behavioral reactions to the mentally ill older adults. Higher levels of fear, anger, dangerousness, and perceived responsibility predicted a lower desire to help, while perceptions of higher levels of dependency and feelings of pity increased desire to help. Higher levels of fear, anger, dangerousness, perceived responsibility, and dependency also increased desired social distance, whereas higher pity reduced it. Further analysis revealed that illness type moderated the impact of emotions and perceptions on behavioral reactions to mentally ill older adults. These results suggest that to effectively reduce stigma experienced by mentally ill older adults, we must first alter false perceptions of mental illness.

## PREDICTORS OF GENERAL LIFE SATISFACTION AND MENTAL WELLBEING IN MIDDLE-AGED TO OLDER PERSONS WITH SCHIZOPHRENIA

J.S. Ho<sup>1,2</sup>, R.C. Moore<sup>2</sup>, T. Davine<sup>3</sup>, S. Abel<sup>2</sup>, V. Cardenas<sup>2</sup>, T.L. Patterson<sup>2</sup>, B. Mautsach<sup>2</sup>, *1. San Diego State University/University of California, San Diego Joint Doctoral Program in Clinical Psychology, San Diego, California, 2. University of California San Diego Department of Psychiatry, La Jolla, California, 3. San Diego State University, San Diego, California*

Previous work has illustrated the protective effects of positive psychosocial factors in the face of psychiatric disorders. A diagnosis of schizophrenia, which is characterized by classic symptoms of psychopathology, as well as interpersonal, cognitive, and affective problems, has a pervasive negative impact on quality of life. The current



study investigated the predictors of general life satisfaction and mental wellbeing in 162 middle-aged to older persons with schizophrenia (ages 39-72). General life satisfaction was assessed with a single item on the Lehman Quality of Life Interview (QOLI), whereas mental wellbeing was measured using the Short Form 12 (SF-12) Health Survey's Mental Health Composite Score (MCS). The SF-12 has demonstrated both reliability and validity in persons with severe mental illness. A multiple regression model was used to predict general life satisfaction using age, goal-orientation (Recovery Assessment Scale; RAS), financial adequacy, social contact, and social self-efficacy (QOLI), symptom severity (Positive And Negative Syndrome Scale; PANSS), and depression (Calgary Depression Scale; CDS). A similar multiple regression model was used to predict mental wellbeing. Results indicated that depression ( $B = -.136, p < .001$ ;  $B = -1.047, p < .001$ ), and social self-efficacy ( $B = .038, p < .001$ ;  $B = .152, p = .021$ ) were significant predictors of both life satisfaction and mental wellbeing, respectively. Thus, interventions for persons with schizophrenia may benefit from focusing on depression and social self-efficacy to improve general life satisfaction and subjective mental wellbeing.

### THE ROLE OF OLDER AGE IN RECEIPT OF EVIDENCE BASED TREATMENT FOR MAJOR DEPRESSIVE DISORDER (MDD)

M.A. Becker, T. Boaz, R. Andel, *University of South Florida, Tampa, Florida*

Research indicates that 80% to 90% of persons with major depressive disorder (MDD) can be successfully treated, yet depression often goes unrecognized or improperly treated. The American Psychiatric Association and other national organizations have developed evidenced-based practice (EBP) guidelines to achieve greater consistency and quality in clinical care. The purpose of this study was to examine the role of age in receipt of evidence based treatment for MDD among Florida's Medicaid enrolled adults. This study used two and a half years of Medicaid claims data. Regression analyses were used to determine the importance of age and other predictive factors for adherence to the APA guidelines and the relationship of predictive variables to mental health service use. In all, 15,950 persons met inclusion criteria. Findings show MDD increased with age. Over three fourths (75.6 %) of the sample were female. Approximately 37.2% were identified as White, 9% as Black, 42.3% as Hispanic, and 11.5 as "Other". Only 33% of participants received treatment that conformed with APA guidelines. Hispanics were most likely to receive medication treatment that adhered to guidelines, while Whites were least likely. Fewer older adults received treatment that adhered to the EBP guidelines. Multiple logistic regression analysis produced the following results: Age 18-44 vs 65+: OR = 1.31 (95% CI: 1.16-1.47); Age 45-64 vs 65+: OR = 1.43 (95% CI: 1.30-1.59). Non-adherence to APA guidelines was the norm rather than the exception. Both age and race disparities were found. Findings provide a basis for future research and clinical training.

### CONTRIBUTING FACTORS TO IMPROVED QUALITY OF LIFE AMONG ELDERLY IMMIGRANT CANCER SURVIVORS: FINDINGS FROM TWO U.S. REGIONS

H.Y. Lee<sup>1</sup>, S.E. Lee<sup>2</sup>, S. Jin<sup>1</sup>, 1. *School of Social Work, University of Minnesota, Twin Cities, St. Paul, Minnesota*, 2. *San Jose State University, San Jose, California*

Studies have consistently shown cancer diagnosis, treatment, and follow-up care to be associated with decreased quality of life. However, research that directly examines the quality of life of elderly immigrant cancer survivors is sparse. Addressing that gap, this study examines contributing variables to improved quality of life among elderly Korean immigrant cancer survivors. To investigate the contributors, our qualitative study utilized face-to-face, in-depth interviews with Korean immigrant elders: 10 individuals from New York (NY) and 10 from Minnesota (MN). Each interview was digitally audio-recorded and

transcribed verbatim in Korean. Grounded theory was employed to analyze the data, using Atlas ti 5.0. Analysis of the MN and NY interviews revealed four primary contributors to improved quality of life seen in common between locales: (1) reliance on religion and faith through prayer and religious activities, (2) socialization with friends, (3) governmental financial and medical support, and (4) a positive outlook and mindset. In terms of differences in contributors between regions, participants from MN emphasized social support from the Korean American community, whereas those in NY reported the importance of socialization at Korean ethnic churches. These findings suggest that intervention programs aimed at improving quality of life should consider mobilizing elderly immigrant cancer survivors' religious and social networks. Moreover, specialized programs or practices for improving quality of life among cancer survivors should further consider regional features.

### DOES RACE AFFECT THE RELATIONSHIP BETWEEN SOCIAL SUPPORT AND PSYCHOLOGICAL DISTRESS?

A.V. Hyams<sup>1,2</sup>, C. Huang<sup>1,2</sup>, L.D. Vinson<sup>1,2</sup>, M.R. Crowther<sup>1,2</sup>, F. Scogin<sup>1,2</sup>, 1. *Psychology, The University of Alabama, Tuscaloosa, Alabama*, 2. *The Center for Mental Health and Aging, Tuscaloosa, Alabama*

*Objectives:* Researchers have demonstrated a negative relationship between social support and psychological distress (PD) in Caucasians and African-Americans. Few studies have examined racial differences in social support and its impact on PD. This study explored whether social support has greater impact on PD in older African-Americans than older Caucasians. *Methods:* Data was drawn from the Project to Enhance Aged Rural Living (PEARL), an efficacy study of home-delivered cognitive-behavioral therapy (CBT). Subjects aged 65+ (N=162) completed the SCL-90, a 24-item social support measure, and a self-reported health item before randomization into CBT or control groups. Three months post-intervention, they were re-assessed. A 2 (African-Americans vs. Caucasians) x 2 (high social support vs. low social support) analysis of covariance (ANCOVA) was conducted to examine the impact of social support on PD. *Results:* At baseline, self-rated health predicted PD for each racial group ( $p \leq .01, \eta_p^2 = .04$ ). Among both races, social support negatively predicted PD ( $p \leq .05, \eta_p^2 = .03$ ). After the CBT intervention, self-rated health was still a significant predictor of distress. Although all subjects' PD decreased, African-Americans with more social support had even lower distress, while Caucasians exhibited similar distress with high or low social support. *Conclusion:* Older adults' self-rated health predicted PD across time. Perhaps due to the therapeutic relationship between CBT therapist and subject, social support did not significantly predict distress after three months, but its importance varied by race. African-Americans demonstrated a preference for social support while Caucasians appeared indifferent to social support.

### THE EFFECTS OF SOCIAL SUPPORT ON CBT-ENHANCED QUALITY OF LIFE IN OLDER ADULTS: AN EXPLORATORY STUDY

M.A. LaRocca, R. Zamora, F. Scogin, *Clinical Psychology, University of Alabama, Tuscaloosa, Alabama*

Empirical studies of the psychological wellbeing of rural older adults are lacking, and the role of social support in quality of life in this population warrants investigation. The current study extended the findings of Scogin et al. (2007) by exploring the role of social support in changes in quality of life resulting from home-delivered cognitive behavioral therapy (CBT). One hundred thirty-four predominantly African American participants, characterized primarily as rural, low resource, and physically frail, were randomly assigned to either CBT or a minimal support control condition. Replicating the findings of Scogin et al., a 2 (treatment group) x 2 (time) mixed between-within subjects ANOVA revealed that CBT participants evidenced significantly greater improvements in quality of life. After controlling for baseline social support,

these improvements were slightly diminished, although still significant. Findings were similar when controlling for race. Among overall women, however, controlling for social support rendered quality of life improvement as no longer significant. Moreover, correlations between social support and quality of life change scores showed a stronger link for women. These findings suggest that among older adults, women with a greater level of social support are more likely to benefit from home-delivered CBT.

### **HAPPINESS IN OLD AGE: A STUDY OF PSYCHOLOGICAL WELL-BEING OF OLDER ADULTS LIVING IN THE COMMUNITY**

R.K. Akashi<sup>1</sup>, A. Mui<sup>2</sup>, *1. Meijigakuin University, Tokyo, Japan, 2. Columbia University, New York, New York*

An aspect of aging is that gains decrease and losses increase (Freund & Ebner, 2005). Nevertheless, the bulk of older adults subjectively express positive feelings despite what others define as objectively negative status (Lawton, 1983). This evidence suggests that individual perception is an important element in understanding older adults' psychological well-being. This study examined how three aging groups (those aged 50-64,  $n=219$ ; those aged 65-74,  $n=271$ ; and those aged 75 and over,  $n=256$ ) subjectively define happiness and differ in their definitions. Based on critical theory premising that knowledge should entail the subjective perceptions of study objects, happiness was measured by subjective indicators of the number of the past seven days that the respondent "felt happy" and/or "enjoyed life" preceding the survey. The data was derived from the Aging, Status, and Sense of Control study (2001) of a national U.S. sample. One-way ANOVA statistics revealed that older adults in all three age groups mostly felt happy and mostly enjoyed life. Multiple regression analysis found that marital status, previous happiness in 1995, previous depressive status in 1995, external locus of control, and perceived social support were significantly associated with happiness among those aged 50-64. Significant happiness predictors for those aged 65-74 were previous happiness in 1995, perceived health, functional limitations, and financial difficulties. For those aged 75 and over, previous happiness in 1995, functional limitations, perceived social support, and voluntary activity predicted happiness. These study findings endorse positive subjective aging although the determinants of happiness differ across age groups.

### **STRESSORS AND DEPRESSIVE SYMPTOMS IN OLDER ADULTS WITH DIABETES: WHAT IS THE RELATIONSHIP?**

L.C. Jones<sup>1</sup>, O.J. Clay<sup>1</sup>, F. Ovalle<sup>2</sup>, M. Crowe<sup>1</sup>, *1. University of Alabama at Birmingham - Department of Psychology, Birmingham, Alabama, 2. University of Alabama at Birmingham - Division of Endocrinology, Diabetes, & Metabolism, Birmingham, Alabama*

Background: Depressive symptoms in older adults are widely under-recognized and undertreated in medical settings. When these symptoms are the result of stressors including health, cognitive, and social issues, diagnosis and treatment becomes difficult. This study seeks to better understand the relationship between various stressors and depressive symptoms in older adults with diabetes. Method: Individuals from the University of Alabama at Birmingham (UAB) Center for Translational Research on Aging and Mobility Recruitment database who self-reported a diabetes diagnosis and individuals who received treatment for diabetes at the UAB Diabetes & Endocrine Clinic were recruited to participate in the Diabetes and Aging Study of Health (DASH). Data from the baseline DASH telephone interview were utilized. A multiple regression analysis that included demographics, health conditions, cognition, and diabetes distress was utilized to examine the relationships between these measures and depressive symptoms. Results: The sample consisted of 234 older adults with diabetes (mean age = 73.46) with 46% being male, 50% Caucasian, 45% African American, and 5% from other racial backgrounds. Results revealed that individuals who experienced

neuropathy ( $\beta = .13$ ,  $p = .0102$ ), stroke ( $\beta = .20$ ,  $p = <.0001$ ), respiratory issues ( $\beta = .10$ ,  $p = .0378$ ), and higher levels of diabetes distress ( $\beta = .49$ ,  $p = <.0001$ ) reported more depressive symptoms than those who had not experienced these issues. Conclusion: Results suggest that various adverse health issues and diabetes distress have an impact on depressive symptoms in older individuals with diabetes. Future research should explore possible explanatory paths for these relationships.

### **NEIGHBORHOOD SAFETY AND PSYCHOLOGICAL DISTRESS AMONG RACIALLY/ETHNICALLY DIVERSE OLDER ADULTS**

P.K. Ghimire Risal, Y. Jang, *School of Aging Studies, University of South Florida, Tampa, Florida*

The study examined the association between perceived neighborhood safety and psychological distress in diverse older adults (Whites, African Americans, Hispanics and Asians). We used the 2009 California Health Interview Survey (CHIS) dataset. The sample included 19,817 respondents residing in California age 60 years and older: Whites ( $n = 16,412$ ), African Americans ( $n = 803$ ), Hispanics ( $n = 1,514$ ), and Asians ( $n = 1,088$ ). A series of hierarchical regression model of psychological distress (measured by Kessler's K6 score) were examined in each racial/ethnic group with an entry order of (1) demographic characteristics (age, sex, marital status, education, language proficiency, and income), (2) health-related variables (chronic health condition, self-rated health), and (3) neighborhood safety (measured with a single item with 1-4 Likert Scale). Compared to racial/ethnic minority groups, Whites were more likely to have positive ratings on neighborhood safety. However, the impact of neighborhood safety on psychological distress was found to be significant across all groups, even with control for demographic and health-related confounding variables. Findings highlight the significant role of neighborhood safety in the mental health of older adults regardless of their race or ethnicity. In efforts to promote mental health of older adults, environmental factors should be taken into consideration.

### **TESTING THE FEASIBILITY OF A DAILY ALCOHOL CONSUMPTION DIARY WITH OLDER ADULTS: A PILOT STUDY**

P. Sacco<sup>1</sup>, B. Resnick<sup>2</sup>, D. Svoboda<sup>1</sup>, C. Smith<sup>3</sup>, *1. Social Work, University of Maryland, Baltimore, Baltimore, Maryland, 2. University of Maryland School of Nursing, Baltimore, Maryland, 3. University of Maryland, Gerontology, Baltimore, Maryland*

Many older adults consume alcohol, and do so without experiencing negative health effects. Understanding alcohol use patterns is a critical factor in understanding motivations for drinking such as stress relief or socialization. However, most research in this area has relied on retrospective measurement, which is limited in describing patterns of drinking (e.g. daily drinking variation) and may contain recall bias. This pilot study assessed the feasibility of data collection using a modified daily data collection with older adults. This study surveyed older adults ( $n=25$ ) residing in a CCRC. We conducted an initial assessment including sociodemographics, the SF-12, the Geriatric Depression Scale, and the Alcohol Use Disorders Identification Test (AUDIT). Participants were then called daily for 7 days and asked about alcohol consumption (number and type of drinks, setting of drinking), daily activities, sleep, loneliness, and mood. After the final phone call, each participant was interviewed, in person, about the acceptability of this approach. A comparison between these methods found that daily reports of alcohol use were concordant with retrospective screening for drinking frequency ( $r_{\text{spearman}}=.77$ ;  $p<.001$ ) and amount ( $r_{\text{spearman}}=1.00$ ;  $p<.001$ ). Mean drinks per day was 0.99, but 40% averaged 2 drinks and 8% averaged 3 drinks. Hazardous drinking (4%) and probable depression (12%) were rare in the sample. Only stress was associated with consumption on drinking days ( $b=-.17$ ;  $p<.05$ ). Based on find-

ings, this daily diary method is not burdensome to CCRC residents, is consistent with validated screening instruments, and better describes variation in drinking among older adults over time.

### **MENTAL HEALTH LITERACY: A RESEARCH-BASED MODULE FOR OLDER ADULTS**

K. Woodson, A.A. Geraci, *National University, San Diego, California*

Literacy is the foundation for reading, writing, and comprehension. Mental health literacy comes from the term “health literacy,” and has a powerful role in how people retrieve and utilize health information. Mental health literacy is having the facility to identify and comprehend mental illness, understand how to find help, and to be informed about prevention and early intervention (Goldney, Fisher, Wilson & Cheok, 2002). Literacy impacts mental health knowledge, mental health status, and access to mental health services. Those with low literacy are impacted because they may hide their problem out of shame (Parker, 2002). Furthermore, depression later in life produces a broad range of cognitive and physical impairments, social isolation, and suicide (Walker, et al., 2010). Given these risks it was important to develop a module for older persons who may have limited literacy skills, have experienced some physical and cognitive changes, and have or know persons with serious mental illness. The literacy module developed on depression was reviewed by six literacy and mental health experts in San Diego County and is intended to provide older adults with the knowledge to combat depression. Upon completion of this mental health literacy module, learners will be able to identify symptoms of depression, differentiate emotions of depression, and understand treatments for moderating depression. Finally, by sharing this module with the community it is expected to contribute to existing mental health literacy research, raise awareness of mental health issues to prevent, and reduce mental health stigma in the County of San Diego.

### **HOW OLDER INMATES COPE WITH THE PSYCHOLOGICAL STRESS OF INCARCERATION**

E. Collins<sup>1</sup>, A. Begovic-Juhant<sup>2</sup>, K. Kopera-Frye<sup>3</sup>, J. Hughes<sup>4</sup>, 1. *Social Work, Case Western Reserve University, Cleveland, Ohio, 2. Cleveland State University, Cleveland, Ohio, 3. University of Louisiana at Monroe, Monroe, Louisiana, 4. Walton County Schools, Monroe, Georgia*

Abstract The challenges of incarceration are numerous for the older inmate. Problems such as ill health, loss of external social support, and dying while incarcerated may create considerable psychological stress. This research explored if religiosity/spirituality and social support were pertinent as coping mechanisms to older inmates' mental health as measured by depressive symptomatology. Sixty-five inmates participated (34 males and 31 females), ranging in age from 50 to 81 years, incarcerated five years or more. Participants were recruited from four different Ohio correctional facilities. Inmates completed a semi-structured questionnaire consisting of demographics and established measures of depression, along with open-ended questions related to health, family, religiosity/spirituality, and social support. Correlation analysis was conducted to examine if religiosity/spirituality and social support played a significant role in reduction of depressive symptomatology. Results revealed that both inmates' religiosity/spirituality and social support from fellow inmates were significantly and negatively related to depression ( $r = -.36, p = .01$ ;  $r = -.31, p = .01$  respectively). In addition, age was negatively related to depression ( $r = -.28, p = .02$ ), suggesting that the older the inmate, the less likely that inmate will exhibit depressive symptomatology. This is plausible because according to Socioemotional Theory, the older the individual is the more likely that individual will seek supportive, meaningful, and sustaining relationships. In summation, supporting inmates' religiosity/spirituality while encouraging development of relationship building skills may result in an increased quality of mental health for the aging inmate. Keyword: Older inmates, depression, religiosity/spirituality, social support.

### **LONELINESS, SOCIAL ENGAGEMENT AND DEPRESSIVE SYMPTOMS IN OLDER KOREAN AMERICANS: GENDER DIFFERENCES**

N. Park, Y. Jang, B. Lee, W.E. Haley, D.A. Chiriboga, *University of South Florida, Tampa, Florida*

Purpose: The present study conceptualized loneliness as a mediator in the relation between social engagement and depressive symptoms and explored gender differences in the mediation model among older Korean immigrants. Various indices of social engagement were considered including living arrangement, social network, and activity participation. Methods: Using data from 674 community-dwelling Korean American older adults, we first examined the mediation effect of loneliness in the relation between each of three indices of social engagement (not living alone, social network, and activity participation) and depressive symptoms. Subsequently, gender differences in the mediation model were examined. Results: As hypothesized, loneliness was found to mediate the relation between each of the indices of social engagement and depressive symptoms. We also observed gender differences in the strength of mediating effects; the harmful effect of living alone was greater among men, whereas women were more likely to be benefitted from larger networks with others and more participation in social activities. Implications: Our findings suggest that loneliness may explain the mechanism by which deficits in social engagement affect depressive symptoms. Gender differences should be considered in interventions for social engagement and mental health promotion.

### **MEMORY FUNCTIONING IN GERIATRIC HOARDING PATIENTS**

K.L. Strickland<sup>1</sup>, C. Ayers<sup>1,2</sup>, Y. Iqbal<sup>1</sup>, 1. *Va San Diego Healthcare System, San Diego, California, 2. University of California, San Diego, San Diego, California*

Hoarding Disorder (HD) is a severe psychiatric condition that is associated with various neurocognitive deficits. The purpose of this presentation is to highlight short-term and long-term memory functioning of geriatric hoarders (N = 41) in comparison to healthy, age-matched controls (N = 25). Results revealed that there are no differences between geriatric hoarders and healthy, age-matched controls on any aspect of memory functioning, as measured by the California Verbal Learning Test (CVLT-II). These results are interesting as memory impairment has been found in mid-life adults with hoarding. Further, older adults with HD often report memory problems as a reason for needing to keep items. Our findings may help challenge these beliefs about reasons for saving in geriatric HD patients. These promising findings impact clinician intervention in that memory functioning may not be an obstacle in providing treatment to geriatric hoarders.

## **SESSION 1295 (POSTER)**

### **MENTAL HEALTH IN LATER LIFE**

#### **SELF-RATED HEALTH AS A MODERATOR OF THE RELATION BETWEEN STRESS AND DEPRESSIVE SYMPTOMS IN MIDDLE AND LATER LIFE**

J. Park, *Retirement Research Center, Samsung Life Insurance, Seoul, Republic of Korea*

This study aims to examine the role of self-rated health between stress and depression in middle and later life. Based on Lazarus and Folkman's (1984) stress and coping theory, it was hypothesized that self-rated health would be inversely related with depressive symptoms and alleviate the negative impact of stress on depressive symptoms in middle and later years. Self-rated health was measured by five-point Likert scale. Stress was measured by three dimensions: finance, work, and family. Depressive symptoms were measured by ten items of four-point Likert scale that showed a good reliability ( $\alpha = .79$ ). A total of 327 respondents aged 55 to 89 (Mean=65.8, SD=7.973) were selected

from the 2009 Korean General Social Survey (KGSS), an annual national survey funded by Korea Research Foundation. This study employed a cross-sectional design and used hierarchical multiple regression model with SPSS version 19.0. The moderating role of self-rated health to the relationship between stress and depressive symptoms was examined by interaction effect. Results indicated that stress was positively and self-rated health was inversely associated with depressive symptoms in the present sample. Self-rated health presented an interaction effect with stress at a significant level ( $Beta = -.146, p = .009$ ), counteracting the negative impact of stress on depressive symptoms. Healthy respondents were less likely to experience depressive symptoms even when they were feeling stressful. These findings imply that health state and health care efforts may be a viable coping mechanism to reduce the level of depressive symptoms and improve the quality of life among middle-aged and older Korean adults.

### **INTO THE WILD: THE DMH EXPERIENCE**

C. Keenmon, *Geriatric Psychiatry, UCLA, Los Angeles, California*

**Objective:** As the Population of the United States Ages, More Older Adults are Living with Chronic Medical and Psychiatric Conditions. For Those Elderly Adults Who are Homebound or Have Difficulty Accessing Health Services, Home Visit Programs may Overcome Barriers such as Stigma, Immobility and Lack of Adequate Transportation. From an Educational Perspective, Home Visit Rotations are Considered Core Training Experiences for Geriatric Psychiatry Fellows. Home Visit Experiences Allow Trainees to Develop the Clinical Skills Needed to Adequately Treat Elderly Adults with Serious Mental Illness, to Lead Multidisciplinary Treatment Teams, and to Educate Other Healthcare Providers. Outlined is a New Geriatric Psychiatry Fellowship Home Visit Rotation Developed Jointly between an Academic Institution and a County Mental Health Program. **Methods:** The Author Describes in Detail a New Rotation in which a University of California Los Angeles Geriatric Psychiatry Fellow Completed Home Visits with Treatment Teams at the Los Angeles County Department of Mental Health. **Results:** In Addition to Providing Psychiatric Consultation in the Home Setting, the Geriatric Psychiatry Fellow Attended a Didactic Series, Participated in Multidisciplinary Team Rounds, and Provided Teaching to the Los Angeles County Department of Mental Health Staff. **Conclusion:** Collaborative Relationships between Academic Institutions and Community Health Programs Create Opportunities for Geriatric Psychiatry Fellows to Manage Older Adults with Serious Mental Illness, Develop Leadership Skills, and Provide Education to Providers from Other Disciplines.

### **SELF-ESTEEM OF ELDERLY MEN AND ELDERLY WOMEN IN KOREA: DOES FAMILY MATTER?**

C. Kim<sup>1</sup>, Y. Ko<sup>2</sup>, 1. *Department of Sociology, Dongguk University, Seoul, Republic of Korea*, 2. *Graduate School of Public Health Seoul Nat'l University, Seoul, Republic of Korea*

The present study addresses the issue of subjective aspect of quality of life in old age. It examines whether and how the self-esteem of the elderly persons in Korea would differ. In particular, the study pays much attention to the salience of family as well as gender differentials in it. Using a nationwide survey on Elder abuse conducted by Korea Institute for Health and Social Affairs in 2009, the study ran regression analysis for elderly men and elderly women. The preliminary result shows that for both men and women, the self esteem is positively related to economic resources and health. However, the presence of spouse and son and the extent of family cohesion are significant for women but not for men. Self esteem is higher for married women, than for unmarried women; for women with a son than for women with daughters only. And women with higher score of family cohesion reveal higher self-esteem. However, such effects are not found for elderly men. These results are consistent with the argument that elderly women are more family centered than their counterparts.

### **GENUINE EMPATHIC ACCEPTANCE: EMBODYING THE CORE CONCEPTS OF CLASSICAL ROGERIAN PERSON-CENTERED PSYCHOTHERAPY IN THERAPEUTIC AND CARING RELATIONSHIPS WITH OLDER ADULTS**

A. Washburn<sup>1</sup>, S. von Humboldt<sup>2</sup>, M. O'Hara<sup>1</sup>, 1. *National University, San Diego, California*, 2. *ISPA, Lisbon, Portugal*

The three intertwined conditions—empathy, unconditional positive regard, and congruence—and praxis traditions of classical, i.e., Rogerian, person-centered psychotherapy are particularly suited to work with older adults, whose personhood is sometimes unacknowledged by others but whose losses are often balanced by gains and growth. This presentation examines what it means to embody authentic, empathic acceptance in a therapeutic or caring relationship with older clients, including those with mild cognitive impairment and dementia. The American Psychological Association has defined the foundational competencies for clinical practice with older adults, including skills related to ethical and legal issues, cultural diversity, and self-reflection. Whereas these skills, and an understanding of the social/psychological dynamics of the aging process, are important, critical for the person-centered therapist are the attitudes he or she brings to the encounter with the older adult. For example, by clearly and warmly communicating acceptance of each aspect of the older person's experience, the person-centered therapist is facilitating what is perhaps a naturally unfolding process for many older adults—the development of his or her unconditional positive self-regard. And for the empathic therapist or caregiver who is intensely attending to expressed and intuited feelings of the older person comes an opportunity, with the client, for deep learning about human life near the end of life. The presentation concludes by contrasting the core concepts of classical person-centered psychotherapy and counseling with those evident in some current models of person-centered treatment and care.

### **DEPRESSION AND FINANCIAL WELLNESS IN LATER LIFE**

Y.G. Lee, E.B. Fauth, *Family, Consumer, and Human Development, Utah State University, Logan, Utah*

Using data from the 2008 Rand Health and Retirement Study (HRS), this study examined the connection between the level of depressive symptoms and financial wellness among Americans aged 65 or older ( $N = 6,127$ ). To understand the level of depressive symptoms among older Americans, this study utilized eight of the Center for Epidemiologic Studies-Depressed (CES-D) scores. The sum of the eight depressive items: e.g., depressed, effort, sleepless, loneliness, not get going, unhappiness, and not-enjoying life was included in the analyses to measure depressive symptoms of older Americans. The higher the scores were, the higher the respondents' depressive feelings were. The descriptive statistics indicated that the average level of depressive symptom of the sample were 1.45 (minimum 0, maximum 8), and about 56 percent of the sample experienced some levels of depressive symptoms. This study found that older Americans with higher levels of depressive symptoms reported lower levels of financial assets, non-financial assets, and net worth. The OLS results indicated that all else being equal, the levels of depressive symptoms negatively influenced the levels of household wealth among Americans in later life. Based on the findings of this study, it is important for social workers, health care practitioners, or physicians to understand the correlates of depressive symptoms and financial wellness among Americans in later life. Thus, those professionals will be able to more effectively help older individuals with higher levels of depressive symptom and those with lower levels of financial resources.

### **THE EFFECTS OF HEALTH ON DEPRESSIVE SYMPTOMS: LONGITUDINAL FINDINGS FROM THE GRANDMOTHER STUDY**

C. Musil<sup>1</sup>, A. Jeanblanc<sup>2</sup>, J. Zauszniewski<sup>1</sup>, C. Warner<sup>1</sup>, 1. *Case Western Reserve University, Cleveland, Ohio*, 2. *Jeanblanc and Rosser, Richmond Hts., Ohio*

Theoretical and empirical evidence suggest that poor health contributes to depressive symptoms, but do changes in health over the past

year reflect or contribute to current ratings of health and depressive symptoms, and do depressive symptoms affect future health? These questions were examined with three waves of data collected two years apart from 243 Ohio grandmothers who participated in a longitudinal study of grandmothers' caregiving to grandchildren. Grandmothers were classified by caregiving status as primary caregiver grandmothers raising grandchildren, multigenerational home grandmothers living with adult children and grandchildren, or non-caregivers to grandchildren; all maintained stable caregiving status across waves. We used AMOS 19 to build a three-wave, cross-lagged auto-regressive model examining the relationships between self-rated health, CES-D rated depressive symptoms, and health compared to prior year's health, with control variables of age, race, and grandchild caregiving. Final model fit statistics were Chi Square=122.45, DF=53,  $p < .001$ ; CFI=.94; TL=.91 and RMSEA=.06. All auto-regressive paths were statistically significant. At each wave, the contemporaneous causal paths from self-rated health to health comparisons and depressive symptoms were supported, as were the paths from health comparisons to current depressive symptoms. Cross-lagged paths from depressive symptoms to subsequent wave self-rated health were significant. Younger grandmothers reported more depressive symptoms and primary caregivers had worse health. The effects of poor and declining health persist and show lingering effects on depressive symptoms, but the converse is also true: improvements in health can have important mental health effects, and are a starting point for discussion.

## SESSION 1300 (POSTER)

### MINORITY HEALTH AND AGING

#### SATISFACTION WITH MAIL-ORDER PHARMACY SERVICES AMONG AGED UNDERSERVED AFRICAN AMERICANS

M. Bazargan<sup>1</sup>, H. Yazdanshenas<sup>1</sup>, D. Wisner<sup>2</sup>, K.T. Watson<sup>2</sup>, J. Smith<sup>1</sup>, G. Orum-Alexander<sup>1</sup>, 1. *College of Medicine, Charles R. Drew University of Medicine and Science, Los Angeles, California*, 2. *Master of Public Health Program, Charles R. Drew University of Medicine and Science, Los Angeles, California*

**Purpose:** This study examines the level of satisfaction with pharmacy services among a community-based sample of underserved aged African Americans to compare the level of satisfaction between mail-order pharmacy and traditional pharmacy patrons. In addition, this study investigates adherence, duplication, use of expired medication, or misuse of any Rx or OTC medication. **Methods:** This study recruited 400 elderly African Americans from 16 churches located in South Los Angeles. We conducted a comprehensive data collection of participant's medication use. Using the Satisfaction with Pharmacy Services Questionnaire the level of satisfaction with pharmacy services between mail-order pharmacy and traditional pharmacy users was examined. **Results:** Fifty percent of the participants take 8 or more medications. Only 15% of participants were using mail-order pharmacy services. Almost 75% of participants illustrated various challenges associated with medication use (poor adherence, duplicate medication, expired medications, mislabeled medications, or poor general knowledge). Ten percent of participants' Rx containers were mislabeled. Nine percent of participants used expired medication. Mail-order pharmacy patrons were more satisfied than traditional pharmacy patrons with their pharmacy services. **Conclusion:** This study documented a higher level of satisfaction with mail-order pharmacy services among underserved elderly African Americans. Regardless of level of satisfaction with pharmacy services, this study demonstrates that there is urgent need for an interventional study to promote adherence to prescribed Rx regimens, to increase awareness of use and misuse of Rx and OTC medications, and to promote communication with primary care providers regarding use of Rx and OTC medications among aged underserved African Americans.

#### RACIAL DIFFERENCES IN CORRELATES OF SYSTOLIC BLOOD PRESSURE IN COMMUNITY-DWELLING OLDER ADULTS

C.D. Ford<sup>1</sup>, P. Sawyer<sup>2</sup>, P.A. Parmelee<sup>3</sup>, M.R. Crowther<sup>4</sup>, R.M. Allman<sup>5</sup>, 1. *College of Nursing, The University of Alabama, Tuscaloosa, Alabama*, 2. *University of Alabama at Birmingham, Birmingham, Alabama*, 3. *The University of Alabama, Tuscaloosa, Alabama*, 4. *The University of Alabama, Tuscaloosa, Alabama*, 5. *Birmingham/Atlanta GRECC and University of Alabama at Birmingham, Birmingham, Alabama*

**Objectives:** To describe the correlates of measured systolic blood pressures among older African Americans and Whites. We hypothesized that psychosocial factors would be independent correlates of elevated blood pressure. **Methods:** A random sample of community-dwelling Medicare beneficiaries aged 65+, stratified by gender, race, and residence, completed in-home assessments including sitting systolic blood pressure (SBP), socio-demographics, measures of physical and mental health, and health care utilization. Factors significantly correlated with SBP were tested using multivariable models to examine the independence of relevant associations among African American and White participants. **Results:** 958 participants [mean age= 75.3 (SD = 6.8); 49% African American; 49% female; 52% rural]. Mean (SD) SBP was 138(SD=19.5); SBP in African Americans was 2.7 mmHg higher than Whites ( $p=.03$ ). African Americans were more often diagnosed with hypertension, and were being prescribed greater numbers of anti-hypertensives (79.7% vs 62.3%,  $p < .001$ ; and 1.3 vs 0.9;  $p < .001$ , respectively). In multivariable models, BMI was significantly and independently associated with SBP among both African Americans and Whites ( $p < .05$ ); lower income was associated with higher SBP in Whites ( $p < .01$ ) but not for African Americans and feeling relaxed and free of tension was significant for African Americans ( $p < .05$ ) only. **Conclusion:** Despite being more likely to be prescribed anti-hypertensives, older African Americans' SBP remained higher than Whites. Reports of being relaxed and free of tension were associated with higher SBP among older African Americans. Additional research is needed to understand these associations.

#### COMPREHENSIVE REVIEW OF MEDICATION DUPLICATIONS BASED ON PHARMACEUTICAL AND THERAPEUTIC CLASSES AMONG UNDERSERVED AGED AFRICAN AMERICANS

H. Yazdanshenas<sup>1</sup>, M. Bazargan<sup>1</sup>, G. Orum-Alexander<sup>1</sup>, K.T. Watson<sup>2</sup>, D. Wisner<sup>2</sup>, 1. *College of Medicine, Charles R. Drew University of Medicine and Science, Los Angeles, California*, 2. *Master of Public Health Program, Charles R. Drew University of Medicine and Science, Los Angeles, California*

**Purpose:** We aimed to describe pattern of medication duplication and medication class duplication (Therapeutic and Pharmaceutical) in prescription and over the counter data in a community-based sample of underserved aged African Americans. **Methods:** This study recruited 400 elderly African Americans (over 65 years old, taking at least two medications) from 16 churches located in South Los Angeles. Interviewer administer questionnaire was used to collect medication use data. **Results:** A) In analyzing for the 400 patients we determined a total of 3063 medications were used. B) Across all pharmaceutical classes: 1) There were a total of 796 medication duplications. 2) Duplication of medication frequency occurred 299 times across all patients. 3) The highest frequency of medication duplication based on the number of medications (in each classes) occurred in the following order: a) Vitamins, Hematinic & Electrolytes (82%), b) Non-Insulin Hypoglycemic Agents (53%), and c) Anti-parkinsonism Agents (50%). C) Across all Therapeutic classes: 1) There were a total of 2366 medication duplications. 2) Duplication of medication frequency occurs 761 times across all patients. 3) The highest frequency of medication duplication based on the number of medications (in each classes) occurs in the following

order: 1. Cardiovascular, Hypertension & Lipids (96%), 2. Supplement (82. %), 3) Autonomic & CNS, Neurology & Psych (79 %). Conclusion: Results suggest there is a need for an interventional study to promote awareness of use and misuse of medications, especially medication duplications and it is critical that health care providers continue developing technology and resources to address duplication related issues among the elderly.

### EATING BEHAVIORS OF OLDER AFRICAN AMERICANS: AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR

C.W. O'Neal<sup>1</sup>, K.K. Wickrama<sup>1</sup>, P.A. Ralston<sup>2</sup>, J. Ilich-Ernst<sup>2</sup>, C.M. Harris<sup>2</sup>, C. Coccia<sup>3</sup>, I. Young-Clark<sup>2</sup>, J. Lemacks<sup>2</sup>, 1. *Child and Family Development, University of Georgia, Athens, Georgia*, 2. *Florida State University, Tallahassee, Florida*, 3. *Texas A&M University at Kingston, Kingsville, Texas*

Data show that African Americans (AA) engage in more health-risk behaviors, including poor nutrient consumption (Fulgoni., 2007). From the theory of planned behavior (TPB), behavior performance should be strongly based on behavioral intention, which is the result of the individual's attitude towards the behavior, perceived behavioral norms, and their behavioral control (Ajzen, 1991). The TPB also hypothesizes that perceived behavioral control moderates the intention-behavior relationship. However, little research has tested this theory for older AAs. Thus, the current study applies the TPB to explain the fruit and vegetable (F/V) eating behavior of older AAs (n = 207). Because research indicates that social support is particularly important for AAs' participation in health behaviors (Thrasher, 2004), we also incorporate F/V social support. METHODS AND RESULTS. Older AAs with more positive F/V attitudes (5-item scale on beliefs about F/V), F/V perceived norms (6-item scale on reflective appraisal), and F/V behavioral control (6-item scale on behavioral confidence) reported behavioral intentions to consume more F/Vs (5-item scale on planning/reminding) ( $\beta$ s = .37\*, .15\*, and .32\* respectively; \* =  $p < .01$ ). In turn, behavioral intentions ( $\beta = .53^*$ ) influenced F/V behavior latent construct defined by F/V preparing, eating, and self-monitoring (factor loadings from .47-.62). Subjective norms had a direct effect on F/V behavior ( $\beta = .35^*$ ,  $R^2 = .79$ ). Inconsistent with the TPB, the influence of behavioral intentions on behavior was not moderated by perceived behavioral control. Social support was unrelated to F/V behavior in the presence of TPB predictors. Model fit was reasonable ( $\chi^2/df = 2.81$ , CFI=.96, RMSEA=.09).

### ETHNOCULTURAL MINORITY OLDER ADULTS IN CANADA: THE MISSING EVIDENCE

S.D. Koehn<sup>1,2</sup>, S. Neysmith<sup>3</sup>, K. Kobayashi<sup>4</sup>, H. Khamisa<sup>2</sup>, 1. *Simon Fraser University, Vancouver, British Columbia, Canada*, 2. *Centre for Healthy Aging, Providence Health Care, Vancouver, British Columbia, Canada*, 3. *University of Toronto, Toronto, Ontario, Canada*, 4. *University of Victoria, Victoria, British Columbia, Canada*

This paper uses an intersectionality theoretical lens to explore assumptions regarding health and health determinants among ethnocultural older adults in Canada. These include older adults who do not identify with the Anglo-/Franco-Canadian majority and are typically 1st-3rd generation immigrants. A systematic scoping review of the grey and published literature was conducted to map existing research knowledge and identify gaps. The findings were discussed in four critical community feedback sessions. Approximately 3000 source documents were reviewed covering the period 1980-2010; 816 met the eligibility criteria; 183 were Canadian. Canada's two largest immigrant groups (since 1991)—the Chinese and South Asians—had the highest representation in Canadian literature, but considerable gaps exist. Very few studies evaluate specific health interventions or explore the impact of sponsorship status on health and health care access. There were a negligible number of studies including Chinese or South Asian older adults on any

of the three leading causes of death and hospitalization for older Canadians. Furthermore, and equally stressed in the community consultations, is the complete lack of information on diversity within ethnocultural groups. In sum, the current body of evidence on this population does not adequately represent the diversity found among them. Moreover, much of the qualitative literature essentializes culture at the expense of other determinants and barriers, whereas the quantitative literature suffers from oversimplification of variables and their effects often due to the absence of proportionally representative data that captures the complexity of experience in minority groups.

### STROKES AND REHABILITATION OUTCOMES IN RURAL NORTH CAROLINA

S.W. Williams<sup>1</sup>, A.C. Felix<sup>2</sup>, K.R. Faurot<sup>3</sup>, 1. *Allied Health; Speech & Hearing Division, UNC-CH, Chapel Hill, North Carolina*, 2. *UNC Department of Neurology, Chapel Hill, North Carolina*, 3. *UNC Department of Physical Medicine and Rehabilitation, Chapel Hill, North Carolina*

The risk of strokes, a leading cause of death and disability, increases with age. For those who survive the stroke, early and intensive rehabilitation maximizes recovery of function. However, similar to other stroke outcomes, disparities also exist in use of rehabilitation services after an acute stroke. This paper examines the relationship between predictors, including stroke severity and length of stay, of rehabilitation discharge after acute stroke. The sample of 62 patients was tri-racial and was recruited from a rural community hospital to participate in the Stroke Telemedicine Access Recovery (STAR) Project. The STAR Project was designed to maximize access to stroke recovery services in a rural community in the stroke belt. We used a biopsychosocial model to conceptualize predictors and descriptive statistics and linear regression to describe the sample and examine relationships between variables. Most of the sample were female (65%); 77% were 55 years of age or older; 45% were white, 31% African American, and 23% American Indian. The average length of stay was 6 days and the rehabilitation discharge destination was inpatient rehabilitation for 29.5% of the sample with the other 70% discharged to an outpatient setting. Multivariate findings show that length of stay and rehabilitation disposition were not statistically related, however length of stay did increase with greater stroke disability. Given, the importance of early intensive rehabilitation after hospital discharge, more studies are needed to better understand predictors of rehabilitation discharge after acute stroke.

## SESSION 1305 (POSTER)

### QUANTITATIVE METHODS

#### CHASING THE MONEY, PLAYING THE ODDS: GAMBLING TRAJECTORIES AND COVARIATES

S.B. Maitland<sup>1</sup>, A. Davey<sup>3</sup>, J. Wiebe<sup>4</sup>, D. Hodgins<sup>2</sup>, B. Gottlieb<sup>1</sup>, 1. *University of Guelph, Guelph, Ontario, Canada*, 2. *University of Calgary, Calgary, Alberta, Canada*, 3. *Temple University, Philadelphia, Pennsylvania*, 4. *Responsible Gambling Council of Ontario, Toronto, Ontario, Canada*

Gambling behavior lies on a dynamic continuum. Some individuals choose not to gamble, others gamble socially or recreationally and some may experience problems with their gambling in varying degrees both in terms of volume and longevity. Little is known about trajectories of gambling behaviors and the factors associated with changes in these trajectories. Research suggests that problem gambling rarely occurs in isolation from other mental health struggles, including substance abuse (Petry & Weinstock, 2007). The current study examined adults scoring as low-risk, moderate-risk and problem gambling on the Problem Gambling Severity Index (PGSI) from the 2006 Manitoba general population gambling prevalence study. The sample (N=565, 58% female) included 36% (18-35 years of age), 30% (36-50 years old), and 33%

(51-83 years). Five occasions (i.e., baseline, 12-, 24-, 36-, and 48-week) were collected and latent growth curve models assessed changes in problem gambling. Higher initial levels of depressive symptoms were more likely to start the study with a greater severity of problem gambling, but less likely to persist at this higher level over the longer term. Regarding substance abuse, gambling and alcohol dependency are associated behaviors, whereas gambling and illicit drug use are incompatible over longer periods of time; greater participation in one activity necessitates decreasing participation in the other. Whereas factors such as depression, illicit drug abuse, interpretive control/bias, and perceived inability to stop gambling predicted higher levels of problem gambling at baseline, they were also associated with a faster rate of reductions in problem gambling over the longer term.

#### **BURST VS. DAILY MEASUREMENT: ISSUES IN CAPTURING INTRAINDIVIDUAL VARIABILITY**

K. Hooker<sup>1</sup>, S. Mejia<sup>1</sup>, T. Pham<sup>1</sup>, R. Metoyer<sup>1</sup>, N. Ram<sup>2</sup>, 1. Oregon State University, Corvallis, Oregon, 2. Pennsylvania State University, State College, Pennsylvania

Optimizing measurement for developmental research is increasingly important for understanding variability as a dynamic characteristic or process contributing to lifespan changes. Frequent repeated assessments are necessary for capturing intraindividual variability; but how many observations are needed depends on theory of process and heuristic considerations about what can reasonably be demanded from human participants. The question addressed is: Can shorter “bursts” of daily measurement reliably capture the same variability as longer streams of daily measurement over the same time period? We examined constructs known to display state-like fluctuation (positive affect [PA] and negative affect [NA]) as well as others (e.g., goal progress) in which daily fluctuations may be less extreme. 105 older adults in the Personal Understanding of Life and Social Experiences (PULSE) project were randomly assigned to a full study group that completed internet surveys on 100 consecutive days, or a “burst” group that completed only four 7-day epochs (total days = 28) spread over the same time period. Groups didn’t differ on intraindividual variability (iSD) of PA, NA, or goal progress. Analysis of post-hoc created and planned measurement bursts indicated that iMean and iSD reliabilities were high across measures (e.g., .99 and .90 for PA; .90 and .85 for NA; and .78 for within-person PA-NA correlations). These results are critical because they are the first to demonstrate empirically that researchers may not need to collect time-intensive daily measures over long time periods, but can be confident that well-planned measurement bursts will reliably capture some specific aspects of intraindividual dynamics.

#### **ALCOHOL CONSUMPTION AMONG THE OLDEST OLD IN SWEDEN – TRENDS OVER TIME AND METHODOLOGICAL CHALLENGES**

S. Kelfve<sup>1</sup>, K. Ahacic<sup>2</sup>, 1. Aging Research center - Karolinska Institutet & Stockholm University, Stockholm, Sweden, 2. Department of Public health - Karolinska Institutet, Stockholm, Sweden

The overall aim of this study is to describe trends in the frequency of alcohol consumption among the oldest old population in Sweden over the last 20 years. In addition, the methodological challenges involved will be analyzed and discussed. Data from a nationally representative survey of the oldest old population in Sweden (SWEOLD) from 1992, 2002 and 2010/2011 will be used. SWEOLD provides a unique longitudinal database that represents a very high proportion of the population aged 77+ in Sweden. By including institutionalized persons, using proxy interviews and achieving a high response rate, individuals are represented regardless of their health, possible cognitive impairments or place of residence. The prevalence patterns show significant increases in alcohol consumption in all age groups, both in men and women, even when controlling for health status. More individuals are consumers and those who consume drink more often. Less frequent alcohol con-

sumption was associated with high age, women, institutionalized individuals, proxy interviewed persons and those requiring extra effort to recruit. By excluding persons living in institutions or requiring a proxy interview – groups sometimes not represented in surveys – or accepting a lower response rate, the total prevalence of alcohol consumers is likely to be overestimated. A higher percentage of upcoming elderly cohorts in Sweden consume alcohol than previous cohorts. This has been associated with increasing health and financial problems. This emphasizes the importance of including elderly people in research on alcohol consumption and of finding solutions to the methodological challenges posed in surveying the oldest old.

#### **MEASUREMENT INVARIANCE OF THE GERIATRIC DEPRESSION SCALE ACROSS LATIN AMERICA AND THE CARIBBEAN**

O.S. Rostant, University of Michigan, Ann Arbor, Michigan

Purpose: To use multiple group confirmatory factor analysis to assess the stability of the factor structure of the Geriatric Depression Scale Short Form (GDS-15) across five Spanish speaking countries in Latin America and the Caribbean, as well as across gender and age. Sample: Data from the SABE study were analyzed. The sample consisted of 7573 cognitively intact community-dwelling older adults. Procedure: Multiple group confirmatory factor analytical models were used to test within country measurement invariance by gender and age. Results: Metric, scalar and strict invariance was obtained within the countries of Chile and Cuba by gender. Across Argentina, Mexico and Uruguay full measurement invariance did not hold by gender, however full metric invariance was obtained within each country. Full metric invariance across all countries suggests that the relationship between items and their latent factor (s) were equivalent between men and women. Partial scalar and strict invariance was obtained for the countries of Argentina, Mexico and Uruguay. Invariance analyses by age (young old versus old old) revealed that full metric invariance held across all countries. While partial scalar and strict invariance was obtained across all countries. Conclusion: In conclusion, the results of the invariance analysis of the GDS-15 indicate that comparisons may be made across gender in Chile and Cuba, while caution should be exerted in Argentina, Mexico and Uruguay when making gender comparisons. Additionally, caution must be used when comparing age groups across all countries.

#### **A VA GERIATRIC RESEARCH, EDUCATION, AND CLINICAL CENTER’S METHODOLOGY CENTER FOR RESEARCH SUPPORT**

C.J. Burant<sup>2,1</sup>, D.H. Canaday<sup>1,2</sup>, D.M. Kresevic<sup>1</sup>, B. Heath<sup>1</sup>, J.E. Denton<sup>1</sup>, G. Kypriotakis<sup>2,1</sup>, 1. Cleveland VAMC, Cleveland, Ohio, 2. Case Western Reserve University, Cleveland, Ohio

Geriatric Research, Education, and Clinical Centers (GRECCs) have been established in the VA system to improve the care of older veterans. A key component of the GRECCs mission is to conduct research; however designing and evaluating outcomes of these programs requires unique clinical and statistical skills. The Cleveland VA GRECC has responded to this need by developing an innovative Methodology Center. This center uses a three tiered approach: one-to-one consultation, interactive webinars on specific methodological and statistical content, and courses to support researchers in writing grants and publications. Consulting services and resources are available to enable researchers to formulate sound research projects and utilize the staff’s statistical computing skills for the analysis of data. Over the last year, the center has provided more than 130 consults. The center offers a series of classes and webinars on study design, research methods, and statistical analyses for the VA and its affiliated academic associates. From October 2010 to March of 2012, the center has given 15 webinars on research methods to over 190 participants. A series of satisfaction questions were provided after each webinar. Response rates of 100% agreement in satisfaction were found on 29 of the 40 (72.5%) questions evaluating the

webinars. The center has been quite successful in providing consultation for the submission of several grant proposals and publications. This presentation will discuss the development, structure and efficiency of this center, resources, curriculum and detailed analysis of the respondent's comments and evaluations.

#### **UTILIZATION OF SOCIAL MEDIA TO RECRUIT ADULTS OVER 40 FOR SENSITIVE RESEARCH TOPICS**

P.P. Brown, H. Ewen, *Sociology and Gerontology, Miami University, Oxford, Ohio*

Internet-based survey research and recruitment via social media is a relatively new phenomenon. Crooks and Bauer (2008) state that internet-based surveys not only save money but can reduce social desirability responses. Additionally, participants are more likely to disclose information that they may not divulge through traditional survey methods, thus internet-based survey research for sensitive topics such as sexuality should be expanded and explored. While the utilization of social media is unconventional, we as researchers must begin to explore more updated sources of communication as a recruitment and contact tool. Telephone and direct dialing surveys are becoming passé as more and more American households have cellular service only. As Smart phones emerge into the marketplace, the technology of immediate accessibility to the internet will further complicate the matter. Additionally, with universities, non-profits, and businesses looking for ways to conduct research and save money, especially during the current recession, more may turn to Facebook, LinkedIn, or other alternative social media outlets. With over 61% of Facebook users over the age of 35, the researcher concludes that gerontologists need to look at new ways of approaching their target populations. This presentation focuses on the use of social media (Facebook in particular) in obtaining a snowball sample of middle-aged and older women (over 40) for participation in a survey on sexuality. The presentation also presents the challenges of obtaining Institutional Review Board approval, the challenge of recruitment strategies with a comparison of traditional and non-traditional methods, and lessons learned through the process.

### **SESSION 1310 (POSTER)**

#### **RETIREMENT**

##### **QUALITY OF LIFE OF RETIREES: CONTRIBUTIONS OF PERSONALITY TRAITS, ACTIVITIES, AND HEALTH-RELATED BEHAVIORS**

W. Chan, N.A. Turiano, D. Mroczek, *Purdue University, West Lafayette, Indiana*

There are many factors that could explain why some older adults effectively adjust to the retirement process while others experience declines in health and satisfaction. However, recent emerging evidence suggests that individual differences in personality traits may be an important factor to determine the quality of life after retirement. The purpose of the current study is to explore if conscientiousness and neuroticism predict satisfaction levels and self-rated health in a subsample of retired older adults from the 2010 wave of the Health and Retirement Study (n = 763). Moreover, we investigated whether social/physical activities or health-damaging behaviors also predict satisfaction and health after retirement, net of personality factors. Hierarchical multiple regression analyses showed that lower levels of neuroticism but higher levels of conscientiousness predicted more positive levels of retirement satisfaction and self-rated health. Net of personality effects, frequent social activities predicted a greater retirement satisfaction and self-rated health, while frequent exercises were positively related to self-rated health. In addition, smoking predicted a reduced retirement satisfaction and self-rated health. Surprisingly, more days of having any drinking per week predicted both higher retirement satisfaction and self-rated health. These findings build on prior studies that indicate not only does personality

predict well-being after retirement, but activity levels and health damaging behaviors have an independent contribution to the quality of life of retirees. The current study provides additional support to the notion that social/physical activities may be beneficial while moderate drinking may not necessarily be harmful in old age.

#### **ANTICIPATORY SOCIALIZATION FOR RETIREMENT: A MULTILEVEL DYADIC MODEL**

J.G. Ingram<sup>1</sup>, A.L. Curl<sup>2</sup>, *1. Social and Behavioral Sciences, University of Arkansas at Pine Bluff, Pine Bluff, Arkansas, 2. University of Missouri, Columbia, Missouri*

Role theory, widely used to examine human behavior, has often been used to describe the transition from work to retirement. Anticipatory socialization, a role theory concept, describes the process that occurs prior to role transitions and assists in that transition by helping individuals learn the norms for the new role. However, not all workers engage in retirement planning. Lack of retirement planning is of concern because those individuals who do not plan for major life transitions tend to be less successful in adjusting to role changes. Data from the Health and Retirement Study were used (N = 1,115 dual-earner married couples); selection criteria required participants to be age 45 or older, working full- or part-time, and have complete data for the study variables. The sample was 87% White and 13% Black, with a mean age of 54.1 and 12.9 years of education. Using multilevel modeling of dyadic data, we examined predictors of anticipatory socialization (i.e., thinking about and discussing retirement). Higher education, higher income, and greater retirement wealth predicted greater anticipatory socialization by both husbands and wives. For wives (but not husbands): race (being White) and having a spouse who was looking forward to retirement predicted more anticipatory socialization. Those looking forward to retirement also engaged in more anticipatory socialization. This study found evidence of spousal congruence, with husbands, on average, engaging in more anticipatory socialization than wives. These findings identify couples that could most benefit from targeted efforts to increase anticipatory socialization, which predicts better retirement adjustment and satisfaction.

#### **TYOLOGY OF RETIREMENT READINESS AND CORRELATES OF THE KOREAN BABY BOOMERS**

G. Han<sup>1,5</sup>, J. Kim<sup>2</sup>, K. Kim<sup>3</sup>, S. Timmermann<sup>4</sup>, J. Migliaccio<sup>4</sup>, *1. College of Human Ecology, Seoul National University, Seoul, Republic of Korea, 2. Institute on Aging, Seoul National University, Seoul, Republic of Korea, 3. Pennsylvania State University, University Park, Pennsylvania, 4. MetLife Mature Market Institute, New York, New York, 5. Translational Gerontology and Retirement Research Center, Seoul National University, Seoul, Republic of Korea*

This study analyzed 3,783 non-retirees out of a total of 4,668 respondents to the 1st wave data(2010) of the Korean Baby Boomers Panel Study to examine how well Korean Baby Boomers are prepared for life after retirement across the 4 domains(Finance, Health, Mind, Social Engagement). And, to focus on the diversity in retirement preparation existing in the Korean Baby Boomers and to see in details strengths and weaknesses of each subgroup, we attempted to classify the sub-groups of retirement preparation among respondents and to explore attribute of each subgroup. Korean Baby Boomers showed the highest score in the social engagement, followed by health, mind, and the finance domain. Using Latent Profile Analysis based on 4 domains, we identified five retirement readiness types: Well-prepared, Average, Poorly-prepared, Poor Social Relationship, High-risk Type. Looking at the attributes of each type, Well-prepared type showed the highest level of education and household income and the highest percentage of regular employment than Average Type being considered a common type as this type comprised almost half of all respondents. High-risk Type being in the lowest retirement readiness score in all four domains, showed the lowest in SES, a much lower percentage of regular employment and a



much higher percentage of displaced worker, broken career paths, and people without a spouse than the Average Type. These findings have a variety of meanings as they presented us the need for interventions in the vulnerable groups for enhancing the quality of life after retirement.

#### **WHY DO THE JAPANESE WORK UNTIL OLD AGE?**

N. Yatomi, I. Sugawara, H. Akiyama, *Institute of Gerontology, The University of Tokyo, Kashiwa, Chiba, Japan*

Japan has been experiencing a rapid aging of her population over the past few generations. This rapid aging has forced changes in the various social welfare systems. One such change is in the pension system, with the impact on retirement age being enormous. Many companies have been pushing the retirement age back to 65 years old. Even still, Japanese people tend to be willing to work into old age. The purpose of this study is to examine the reason why Japanese people don't seem to mind to continue working until as they are as old as possible. The sample of this study is 2,000 residents who live in Kashiwa City, Chiba prefecture, a suburb of Tokyo located about 30 kilometers north of the capital. Structured interviews were conducted with 1,133 people aged 55 or over. The result shows that almost three-fourths of respondents selected the choice of working until as old as possible. However, they tended to prefer light work load. Of the four choices of reasons for why they wish to continue to work, the most popular reason selected was self-realization. The other three reasons were chosen in order of: to receive income; to engage in relationships with others; and lastly, to maintain health. Interestingly, the rate of "self-realization" as a choice does not decrease as much as "to receive income". This may suggest that Japanese elderly people may be seeking the meaning of life through their work and, therefore, are willing to work in and through old age.

#### **FINANCIAL LITERACY AND EARLY LEARNING AMONG YOUNG ADULTS**

J. Kopusko, D.A. Hershey, *Psychology, Oklahoma State University, Stillwater, Oklahoma*

A lack of financial literacy is a serious problem in our country, and it likely inhibits individuals' abilities to effectively plan and save for retirement. In the present study, college students were surveyed about various concepts related to financial planning for retirement. The goal was to develop an empirically-based developmental gradient that reflects individuals' financial knowledge levels. A second goal was to examine the prevalence rates of familiarity with certain key financial planning concepts. Participants completed a 14-item measure to indicate approximately when they became familiar with various financial concepts. Some of the concepts were simple in nature (e.g., "I understood that I needed to save money if I wanted to see my financial resources accumulate"), and some were more complex (e.g., "I am familiar with the concept of vesting"). Not surprisingly, most students reported that they became familiar with some of the more rudimentary concepts during their elementary school years. For more complex or technical financial concepts, individuals reported a later average age of learning, and a larger percentage of the sample indicated they were unfamiliar with the concept. More than half of all students reported being unfamiliar with concepts such as pension plans, retirement nest eggs, vesting, and retirement income replacement rates. This lack of knowledge could have a considerable impact on future patterns of lifespan planning and saving. Implications suggest that positive early financial learning experiences could help individuals to plan and save responsibly for the future.

#### **THE LIFE SATISFACTION AFTER RETIREMENT OF KOREAN OLDER ADULTS BY THE STATUS OF RETIREMENT**

M. Kim<sup>1</sup>, H. Lee<sup>2</sup>, *1. Daegu University, Daegu, Republic of Korea, 2. Joongbu University, Geumsan-Gun, Chungnam, Republic of Korea*

Descriptions: In Korea, retirement is enforced when people turn 65. But in some sectors it is earlier than that. Depending on voluntary retire-

ment or not, it will affect the results of retirement differently. If older adults are economically independent and still healthy, they will enjoy the rest of their life. However, if they retire involuntarily and their economic status is bad, it will have negative effects. Therefore, it will be interesting to compare the different outcomes by the status of retirement. It will also be interesting to examine how bio-psycho-social factors, economic status, spouse and children's work status affect older adults' life satisfaction. Method: This study used the 3rd wave of individual data of KReIS (Korean Retirement and Income Study). The data was collected in 2009 using national random sampling. The sample size of this study was 2,106 (voluntary retirement=708, involuntary retirement=1,398). The factors affecting the life satisfaction after retirement were compared by the status of retirement. Hierarchical multiple regressions were used to test factors affecting life satisfaction after retirement. Findings: For both groups if they were healthy physically and psychologically, and if they were satisfied with their leisure, their life satisfaction increased. For group 1 (involuntary retirement), if they were economically independent after retirement and had private pension, it had positive effects on their life satisfaction. For group 2 (voluntary retirement), the preparation of living expenses after retirement affected the life satisfaction positively. Whether or not spouses had a job affected their life satisfaction differently. Also, the spouse's attitude about retirement affected the life satisfaction of older adults.

#### **SESSION 1315 (POSTER)**

#### **SELF/OTHER ATTITUDES TOWARD AGING**

##### **THE ALLOPHILIA SCALE TO ASSESS STUDENT ATTITUDES TOWARD PERSONS WITH DEMENTIA**

T. Yamashita, J.M. Kinney, J. Brown, P. Sauer, *Miami University, Oxford, Ohio*

Despite longstanding recognition of the importance of assessing attitudes toward older adults, most instruments lack conceptual and methodological sophistication. Further, the majority of attitudinal measures assess negative rather than positive attitudes toward members of outgroups, with the goal of understanding and reducing negative attitudes. In contrast, Pittinsky and colleagues maintain that the assessment of positive attitudes can promote proactive and prosocial behavior. This distinction is important when evaluating educational interventions that target attitudes toward older adults and specific subpopulations of older adults (e.g., those with dementia). The Allophilia scale (Pittinsky et al., 2010) was designed to measure five domains of positive attitudes (i.e., affection, comfort, kinship, engagement, enthusiasm) toward members of different outgroups. We examined the psychometric properties of the Allophilia (i.e., "like or love for the other") scale when used to assess college students' attitudes (N = 532) toward older adults with dementia. Confirmatory factor analysis revealed good reliability and validity for both females and males. Subsequently we examined changes in students' attitudes (n = 465) as a function of participating in an introductory gerontology course and a structured, weekly intergenerational service learning program for individuals with dementia (n = 31). Pre/post-test comparisons indicate that students with positive attitudes were more likely to take advanced gerontology courses and students who participated in the service learning program demonstrated significantly more affection, comfort, enthusiasm and kinship toward older adults with dementia at the end of the program. Results have theoretical and methodological implications for the study of attitudes toward older adults.

## FUTURE OLDER SELVES: TESTING A MEDIATIONAL MODEL OF THE EFFECTS OF OUTGROUP CONTACT ON ATTITUDES TOWARDS AGING

S.E. Jarrott<sup>1</sup>, B. Levy<sup>2</sup>, T. Savla<sup>1</sup>, *1. Human Development (0416), Virginia Tech, Blacksburg, Virginia, 2. Yale University, New Haven, Connecticut*

Practitioners advocate that intergenerational contact improves attitudes about aging, but researchers present mixed results. We tested whether Pettigrew and Tropp's (2008) mediational model of the mechanisms (knowledge, anxiety, and empathy) of attitudinal change apply to how contact with elders influences attitudes towards own aging. Using a cross-sectional convenience sample of 368 undergraduates, statistical equation modeling indicated an acceptable fit for positive images ( $\chi^2(9) = 30.66$  ( $p < .01$ ); CFI = .98; RMSEA = 0.062) and negative images of self as elder ( $\chi^2(9) = 27.61$  ( $p < .01$ ); CFI = .97; RMSEA = .06). As predicted, greater quantity and quality of intergenerational contact was associated with greater knowledge, lower anxiety, and greater empathy, as well as more positive and less negative images of aging. Also, anxiety about aging mediated the contact-image association; lower anxiety was associated with more positive and less negative images. Further, greater empathy mediated the greater contact- more positive image of aging self association but not the contact-negative image association. More empathy was associated with more positive images of aging self. Lastly, knowledge about aging mediated contact's influence on negative but not positive image of self as elder. More knowledge predicted more negative images of the aging self. Our findings indicate that more frequent and positive intergenerational contact contribute to more positive and less negative images of self as elder, which can inform early interventions targeting wellness in late life. Findings regarding knowledge may suggest that knowledge leads to ambivalence about aging self and should be explored further. Intergenerational programs should target mechanisms of aging anxiety reduction and empathy promotion to achieve positive outcomes for future elders.

## GRANDPA'S GRUMPY, GRANDMA'S A HOUSEKEEPER: GENDER-SPECIFIC AGE STEREOTYPES IN DIFFERENT LIFE DOMAINS

A.E. Kornadt, P. Voss, K. Rothermund, *Department of Psychology, Friedrich-Schiller-University Jena, Jena, Germany*

In her much-cited work, Susan Sontag (1979) argues for a double standard of aging, indicating that older men and older women are evaluated differently, and – on the side of older women – more unfavorably. Research on age stereotypes has so far largely neglected the gender specifics of age stereotypes. Recent findings regarding the domain-specificity of age stereotypes, however, provide a new and interesting perspective on this topic: Whereas in some life domains older women might be evaluated more negatively than older men, there might be no gender differences or even a more favorable evaluation of older women in other domains. Adopting a newly developed instrument for the assessment of domain-specific age stereotypes (Kornadt & Rothermund, 2011), a sample of younger ( $N = 86$ , aged 20-30), middle-aged ( $N = 86$ , aged 40-50), and older participants ( $N = 59$ , aged 60+) had to indicate their views of 'old women' and 'old men' in eight different life domains. We found considerable gender differences and also a gender by domain interaction: Whereas older women were evaluated more positively than older men in the domains family, leisure, and health, older men were evaluated more positively in the domain finances. No gender differences emerged for the domain friends. This study yields first support for the domain-specific interaction of age and gender stereotypes, and implies that a differentiated look on the phenomenon is necessary for a better understanding of aging processes in different social groups of aging societies.

## THE ROLE OF TRAIT NEUROTICISM, SELF-PERCEPTIONS OF AGING, AND DAILY PERCEPTIONS OF USEFULNESS FOR PERCEIVED STRESS

P. Allen<sup>1</sup>, S. Mejia<sup>1</sup>, K. Hooker<sup>1</sup>, H. Ko<sup>1</sup>, S. Choun<sup>1</sup>, T. Pham<sup>2</sup>, R. Metoyer<sup>2</sup>, *1. Oregon State University - Human Development and Family Sciences, Corvallis, Oregon, 2. Oregon State University - School of Electrical Engineering and Computer Sciences, Corvallis, Oregon*

Theory suggests that personality traits and Awareness of Age Related Change (AARC) in the social-cognitive domain should influence major outcomes such as physical and emotional wellbeing (Diehl & Wahl, 2010). The current study used self-perceptions of aging (SPA) as a measure of AARC to examine the joint influence of AARC and trait neuroticism on self-rated daily levels of perceived stress in a sample of 98 older adults (52-88 years) over 100 days in the internet-based Personal Understanding of Life and Social Experiences (PULSE) study. To address processing of AARC, a daily single-item rating of perceived usefulness and productivity ("Today I felt useful and productive") was also examined. A multilevel random coefficient model controlling for day, age, and gender tested the effects of neuroticism, self-perceptions of aging (SPA), and daily perceived usefulness/productivity ratings on a daily composite score of stress. We found SPA to predict stress level independent of neuroticism. Daily perceptions of usefulness/productivity were negatively associated with perceived stress level, and fully mediated the association between SPA and stress. Neuroticism was related to between person differences in this association, suggesting increased sensitivity to daily perceptions of usefulness/productivity among those high in neuroticism. Positive global SPAs alone do not appear sufficient to predict reduced levels of stress in our sample of older adults. Rather, enacting the global perception by perceiving oneself as useful and productive on a day-to-day basis is what allows for this relationship.

## LOOKING AS YOUNG AS YOU FEEL: FINANCIAL STRESS CAN MAKE YOU LOOK AND FEEL OLDER

S. Agrigoroaei, A. Lee, M. Lachman, *Brandeis University, Waltham, Massachusetts*

Stress has been identified as a key contributor to poor health and may even accelerate the aging process. Based on photographs of U.S. presidents at the beginning and end of their terms, some have suggested that job stress can lead to premature aging and greater mortality risk. We examined changes in the appearance of adults ages 26 to 75, based on photographs taken on two occasions eight to ten years apart, in relation to self-reported financial and work-related stress and subjective age. Photographs are from participants in the Boston sub-study ( $N = 229$ ) of the Midlife in the United States Study (MIDUS). On average, adults felt younger than they thought they looked, and also thought that they looked younger than others thought they did. Those who looked older relative to their actual age had poorer health, and those who felt younger than their actual age had greater life satisfaction. We examined the effects of financial and work stress on perceived age, controlling for age, sex, education, income, self-rated health, attractiveness, and amount of time between the two occasions. Those who reported higher levels of financial stress were perceived as older than their actual age and showed larger increases in perceived age over time. Higher levels of work-related stress were associated with feeling older than one looks. The results are discussed in terms of physical/biological changes associated with stress and their effects on appearance and subjective age.

## FUTURE TIME PERSPECTIVE ACROSS THE ADULT LIFESPAN: A MULTIDIMENSIONAL APPROACH

A.F. Brothers<sup>1</sup>, H. Chui<sup>2</sup>, M.K. Diehl<sup>1</sup>, *1. Colorado State University, Fort Collins, Colorado, 2. Flinders University, Adelaide, South Australia, Australia*

Future time perspective (FTP), or the perception of how much time a person has left, is an important construct in aging research. Most exist-

ing measures have assessed FTP as a unidimensional construct, but recent evidence suggests that FTP may be better represented as a multidimensional construct. Consequently, we developed items that were related to three a priori dimensions of FTP: Future as opportunity, future as being limited, and future as being ambiguous. This multidimensional structure was examined in a sample of 625 adults, ranging in age from 18–93 years. Factor analyses yielded a 4-factor solution: Factor 1—Future as Open, Hopeful; Factor 2—Future as a Time to Achieve Goals; Factor 3—Future as Limited; and Factor 4—Future as Uncertain. One-way analyses of variance were used to examine age differences in these dimensions as expected based on propositions of lifespan theory. These analyses showed that younger adults had a greater sense of openness toward the future compared to middle-aged and older adults. Conversely, older adults viewed the future as more limited than young adults. Young adults reported the highest level of ambiguity about the future. These age differences held equally for women and men. Across all ages, Factors 1 and 2 were positively correlated with extraversion, openness, and optimism, as well as subjective health, self-esteem, and life satisfaction. In contrast, Factors 3 and 4 showed significant positive associations with neuroticism and depressive symptoms. Findings suggest that it is informative to operationalize FTP as a multidimensional construct.

### **CHANGING PERCEPTIONS BY TALKIN' 'BOUT MY GENERATION WITH ANOTHER GENERATION**

L. Wagner, M. Barnett, *University of San Francisco, San Francisco, California*

Many college students anecdotally report having limited meaningful interactions with older adults. This lack of interaction can result in skewed perceptions between these age groups. To test whether regular intergenerational interactions might change these perceptions, a course at the University of San Francisco for both older (over age 55) and young (18–25 year old) adults was designed using social psychological principles to promote positive intergenerational contact. Thirty-six (18 older and 18 young adult) students met once a week for 8 weeks and discussed topical issues raised in assigned articles read outside of class. Discussions were held in 4–6 person intergenerational groups. Two field trips to locations chosen by each age group were also taken by these same small groups. Brief pre- and post-course questionnaires assessing frequency and interest in contact were distributed to both age groups, and a longer attitudinal measure was included in the young adult questionnaire. At Time 1, both older and young adults reported limited opportunities to interact with the other generation. Frequency of intergenerational contact outside of class did not change pre and post course, but many of the perceptions of the young adults showed significant change. Young adults reported significantly higher levels of belonging, comfort, and kinship with older adults after the course than before the course. Positive attitudes also increased, as well as the desire to be more like older adults and become friends with more older adults. Results suggest that the course may indeed improve intergenerational attitudes.

### **AGE DIFFERENCES IN NUMBER OF HEALTH CONDITIONS AND HEALTH RATINGS: HEALTH OPTIMISM IN OLDER ADULTS**

K. Douglas<sup>1</sup>, C.S. McCrae<sup>2</sup>, N.D. Dautovich<sup>1</sup>, *1. University of Alabama, Tuscaloosa, Alabama, 2. University of Florida, Gainesville, Florida*

Introduction: The purpose of this study was to investigate: 1) age differences in number of health conditions and self-rated health, 2) age differences in the relationship between number of health conditions and self-rated health, and 3) variables differentially associated with health ratings based on age. Methods: 50 younger ( $M=19.88$ ,  $SD=2.76$ ) and 50 older ( $M=67.81$ ,  $SD=6.73$ ) adults completed demographic questionnaires assessing number of health conditions, a subjective measure of overall health, Positive and Negative Affect Schedule, Beck Depression Inventory II, and Pre-Sleep Arousal Scale. Results: There was a significant difference in younger ( $M=.34$ ,  $SD=.68$ ) and older ( $M=1.24$ ,

$SD=1.25$ ) adults in number of health conditions,  $t(98)=-4.45$ ,  $p<.01$ , and a significant difference between younger ( $M=3.84$ ,  $SD=.88$ ) and older ( $M=3.48$ ,  $SD=.84$ ) adults in self-reported health,  $t(98)=3.48$ ,  $p<.01$ ). There was a significant correlation ( $r(50)=-.31$ ,  $p<.05$ ) between number of health conditions and self-rated health in older adults, with lower self-rated health associated with more health conditions. Positive affect predicted health ratings in older adults,  $\beta=.32$ ,  $p<.05$ . In younger adults, depression predicted health ratings,  $\beta=-.34$ ,  $p<.05$ . Conclusions: Older adults exhibit more health conditions and lower health ratings than younger adults. Implications for the age differences in factors predicting perceptions of health, such as positive affect in older adults and depressive symptoms in younger adults are discussed.

## **SESSION 1320 (POSTER)**

### **SEXUALITY**

#### **MEASURING OLDER ADULT SEXUALITY: HEALTHCARE PROVIDER KNOWLEDGE, ATTITUDES, AND BEHAVIORS**

S.A. Jacobson, *1. Hunter College, New York, New York, 2. Mount Sinai Hospital, New York, New York*

Background: Older people report a desire for healthcare providers to help them manage and maintain sexual health. However, many healthcare providers are hesitant to discuss sexuality with older patients. Many researchers use the Aging Sexual Knowledge and Attitudes Scale (ASKAS) to study the knowledge and attitudes of healthcare providers toward older adult sexuality. The ASKAS is limited in its utility today as it was developed thirty years ago. A more contemporary validated scale would improve current inquiry of the role of healthcare providers in older adult sexuality. Method: A thematic analysis using Baum and Clarke's six-phase method (2006) was conducted, drawing from available scales and related literature. Patterns and themes were identified to determine inclusion criteria for an updated scale. Results: The following themes were identified from existing scales: continuity of sexuality throughout the lifecycle; benefits of continued sexual expression; relationship status; masturbation; normal changes in male and female sexual functioning; relationship between disease and sexual functioning; and influence of medication on sexual functioning. Topics found in the literature, but excluded from currently available scales, include themes of LGBT and aging, treatments for male and female sexual dysfunction, sexually transmitted infections, and safe sex practices. Conclusions: This thematic analysis of available scales and literature lays sufficient groundwork for the development of a new scale to measure the role of healthcare providers in older adult sexuality. These findings, along with key-informant qualitative interviews will be used to develop items for a scale that will be tested for reliability and validity.

#### **THE "BIRDS & BEES" IN MIDDLE AGE & OLDER ADULTS: COMPARISONS OF ATTITUDES & KNOWLEDGE**

A.S. Graf, J.H. Patrick, *Psychology, West Virginia University, Morgantown, West Virginia*

A spike in sexually transmitted infections among older adult communities has challenged the common belief that older adults are not sexually expressive. One plausible explanation is that aging cohorts are increasingly sexually permissive. Using a subset of data from a larger study, comparisons were made between middle-aged ( $n=30$ ,  $M$  age=49.27) and older adults ( $n=27$ ,  $M$  age=64.04) on sexual information, attitudes towards sexual expression generally, and attitudes and knowledge of older adult sexual expression and function. Chi-square analyses indicated middle-age and older adults are similar in the type of sexual information experienced, except formal sex education (middle-age report more),  $\chi^2(1, N=56)=4.52$ ,  $p=0.034$ . T-tests comparing attitudes towards sex generally revealed no significant differences, but gender differences consistent with previous findings show that women are less approving of infidelity,  $t(59)=-2.67$ ,  $p=0.01$ ,  $CI_{.95}(-0.89, -0.13)$ ,

and casual sex,  $t(59)=-4.12, p<0.001, CI_{.95}(-1.48, -0.51)$ . Men reported sex as being more important to life,  $t(59)=3.45, p=0.001, CI_{.95}(0.35, 1.31)$ . No age or gender differences were found when comparing attitudes about older adults' sexual expression and function. A chi-square revealed that older adults show better knowledge of sexual function in older age than do middle-aged adults. Gender differences also indicate that women are more accurate in their knowledge. These findings suggest attitudes between age groups may not differ to a large degree, though differences did emerge between men and women. Further, middle-age adults may have some misconceptions about aging and sexual function, and these knowledge differences may vary as a function of gender.

#### **STAFF KNOWLEDGE AND PERCEPTIONS OF SEXUALITY AND DEMENTIA OF OLDER ADULTS IN LONG-TERM CARE**

E.A. DiNapoli<sup>1</sup>, G.L. Breland<sup>1,2</sup>, R.S. Allen<sup>1,2</sup>, 1. *University of Alabama, Tuscaloosa, Alabama*, 2. *Center for Mental Health and Aging, Tuscaloosa, Alabama*

Sexual expressions among long-term care residents may contribute to overall health; therefore, there is an increased need to further examine staff perceptions and prevalence of sexual expression among older adults in long-term care. One hundred staff members ( $M = 38.52$  years old;  $SD = 11.99$ ; Range 20 - 67; 94% women; 80% African American) from three skilled nursing homes completed a comprehensive survey examining whether religiosity, dementia knowledge or knowledge of sexuality among older adults effects staff attitudes and reports of prevalence of sexual expression among residents with and without dementia. Results indicated that the most frequently reported sexually active dyads were non-demented men with non-demented women, followed by demented men with demented women. In addition, staff with higher levels of education reported more sexual activity among non-demented residents. African American staff, however, were less likely to report sexual activity between non-demented men and demented women. Staff with higher levels of organizational and non-organizational religiosity reported less positive attitudes toward sexual expression among residents. Contrary to our predictions, there was not a significant association between staff knowledge of dementia and attitudes toward sexual expression among residents; whereas those with greater knowledge of sexuality among older adults trended toward reporting more positive attitudes of sexuality. Discussion will address the impact of staff knowledge and attitudes regarding sexuality and dementia on the sexual expression of residents in long-term care.

#### **SESSION 1325 (POSTER)**

#### **SUCCESSFUL AGING AND HEALTH**

##### **SOCIAL NEEDS FULFILLMENT, AGING, AND HEALTH: A CROSS-CULTURAL VALIDATION**

O. Adedugbe<sup>1,2</sup>, L.J. Ficker<sup>1,2</sup>, P.A. Lichtenberg<sup>1,2</sup>, 1. *Wayne State University, Detroit, Michigan*, 2. *Institute of Gerontology, Detroit, Michigan*

The present study examined the Social Production Function – Successful Aging questionnaire (SPF-SA; social needs) in older African Americans in Detroit, and compared the scores and pattern of responses with the original Dutch SPF-SA sample (Steverink & Lindenberg, 2006). We interviewed 501 community-dwelling African American elders with average age 70.8 years ( $SD = 8.9$ ). SPF-SA subscales of Affection, Behavioral Confirmation (e.g., feeling appreciated and useful), and Status (e.g., feeling influential and accomplished) have three questions each on a Likert-type scale. Detroit elders reported significantly higher behavioral confirmation and status fulfillment for all age groups, while affection fulfillment was similar to the Dutch sample. Patterns of physical loss were similar in both samples and elders who had the most losses reported lower status need fulfillment. Detroit elders with a higher num-

ber of social roles (e.g., being married, employed, and volunteering) scored higher on all SPF-SA subscales. Regression analyses were performed on self-reported problems in depression, cognition, and finances. Younger age, more physical loss, and low affection explained variance in depression and financial dissatisfaction (11.4% and 12.1%, respectively). Variance in cognitive complaints (10.4%) was explained by physical losses, social roles, and interaction between roles and behavioral confirmation. Our results confirm findings of Dutch researchers that social needs do not necessarily change with age; however, behavioral confirmation and status needs appear to be more sensitive to culture than affection. Some unmet social needs for elders are associated with difficulties with mood, cognition, and finances among African Americans in an urban context.

##### **REPEATABILITY OF THEMES FROM LAY-DEFINITIONS OF SUCCESSFUL AGING: THE MANITOBA FOLLOW-UP STUDY**

R.B. Tate, A.U. Swift, D.J. Bayomi, *Manitoba Follow-up Study, University of Manitoba, Winnipeg, Manitoba, Canada*

Since 1996, members of the Manitoba Follow-up Study cohort have been surveyed for their narrative response to the open-ended question: "What is your definition of successful aging?". Keyword coding identified 21 themes, leading to a longitudinal database spanning men's lives from a mean age of 78 years to over 90 years. Seven themes (independence, physical health, cognitive health, adaptation, lifestyle, companionship, and relationships with society) were found to have stable population prevalence with advancing age. Our objective was to examine the repeatability of these themes, at the individual level, from one survey to the next, over five survey times between 1996 and 2006. Generalized linear models for binary outcomes (presence or absence of a theme) on successive surveys were used. We also examined evidence for an interaction effect for repeatability of each theme with self-assessed successful aging, marital status, self-rated health, and life satisfaction. The adjusted odds ratio for a theme to remain in a definition from one survey to the next ranged from 2.17 [95%CI:(1.84,2.55)] for "independence" to 3.34 [95%CI:(2.44,4.56)] for "societal relationships". Significant interactions ( $p<0.05$ ) were apparent with self-assessed successful aging showing a greater likelihood of repeating the themes of cognitive health, adaptation and relationships with society among those who have not aged successfully, and higher likelihood of repeating the theme of lifestyle or companionship among those who have aged successfully. Also, men with excellent self-rated health (in contrast to those with less than excellent self-rated health) were more likely to repeat themes of adaptation, lifestyle and companionship.

##### **PROPOSING SUPPORT SYSTEMS FOR ELDERLY VOLUNTEERS WITH HEALTH ISSUES IN JAPAN**

K. Nonaka, H. Ohba, M. Yasunaga, M. Kuraoka, Y. Murayama, N. Sakuma, S. Shinkai, Y. Fujiwara, *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

Objective: This study explores factors that affect elderly volunteers with health problems who are volunteers. We proposed support systems that volunteer group leaders could utilize, in order to facilitate each elderly volunteer continuing their activities regardless of their health issues. Methods: We recruited 10 volunteers, aged 65 years and over. These elderly volunteers read picture books to children in Tokyo schools. A criterion for participation in the study was the presence of one or more health problems. Semi-structured, in-depth interviews were conducted in 2010 and 2011. We analyzed the qualitative data using Grounded theory. Results: Perceived difficulties in continuing volunteering were more heavily influenced by ideas about aging and volunteering, and the perceived level of support offered by other group members, rather than perceptions of the severity of health problems. Volunteers who were confident in continuing accepted age-related loss of abilities as a natural part of the aging process, and saw volunteering as an opportunity for

social participation. Volunteers who perceived difficulties related to continuing considered the aging process as a loss of abilities essential to function as a “productive member” of society, perceiving volunteering as a form of social work with responsibilities. Moreover, volunteers who had perceived difficulties had less perceived support from their group members. Conclusion: It is important for volunteer group leaders to promote an organizational culture that accepts aging and the associated loss of abilities, and to facilitate a mutual support network among volunteer members.

#### **GENDER AND REGIONAL DIFFERENCES IN BIOPSYCHOSOCIAL RESOURCES OF SUCCESSFUL AGING: A COMPARISON OF CENTENARIANS RESIDING IN GEORGIA, IOWA, AND OKLAHOMA**

C.R. Hixson<sup>1</sup>, A.J. Bishop<sup>1</sup>, P. Martin<sup>2</sup>, L. Poon<sup>3</sup>, 1. *Oklahoma State University, Stillwater, Oklahoma*, 2. *Iowa State University, Ames, Iowa*, 3. *University of Georgia, Athens, Georgia*

This examination involved integration of psychosocial data within centenarian studies conducted in Georgia, Iowa, and Oklahoma (N = 434 centenarians, M = 101.03 years old, SD = 1.93). Univariate analyses were computed to evaluate mean differences of functional capacity, social provisions, economic security, depressive affect, and personality traits across gender and region. Functional capacity emerged as the only variable with significant mean differences between both gender,  $F(1, 408) = 7.39, p < .05$ , and geographical location,  $F(2, 408) = 15.36, p < .01$ . Relative to regional differences, centenarians residing in Oklahoma had significantly higher averages reflecting social provisions  $F(2, 315) = 144.52, p < .01$ , economic security,  $F(2, 242) = 93.12, p < .01$  and emotional stability,  $F(2, 401) = 12.20, p < .01$ . In addition, centenarians residing in Georgia reported significantly higher average scores involving functional capacity,  $F(2, 408) = 15.36, p < .01$ , and extraversion,  $F(2, 322) = 28.07, p < .01$ . Finally, centenarians residing in Iowa maintained a higher mean average score for depressive affect,  $F(2, 401) = 12.20, p < .01$ . No significant Gender X Regional differences were evident. Results have implications relative to identifying key biopsychosocial resources that independently vary by gender and regional location of extremely long-lived persons in the United States.

#### **AGE DIFFERENCES IN PROSOCIAL AND PROSELF INTERESTS FOLLOWING A REMINDER OF MORTALITY**

M. Maxfield<sup>1</sup>, J. Greenberg<sup>2</sup>, T. Pyszczynski<sup>1</sup>, 1. *University of Colorado, Colorado Springs, Colorado Springs, Colorado*, 2. *University of Arizona, Tucson, Arizona*

Terror management theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986) suggests that awareness of mortality contributes to a diverse range of human behaviors: intolerance of different others, preference for similar others, and many other ways people strive to give life meaning and themselves value. Older and younger adults' responses to mortality differ (Maxfield et al., 2007 & 2012), which may be based on age differences in preferred sources for existential comfort. Based on the work of Erikson (1950/1963), we hypothesized that reminders of mortality would increase interest in making significant contributions to society, particularly among older adults. Older and younger adults were reminded of mortality or an aversive control topic and then asked to read two essays: one with outcomes providing great benefit to self but little-to-no benefit to society (proself) and one with outcomes providing great benefit to society but little-to-no benefit to self (prosocial). Participants were instructed to imagine themselves as the protagonist in these essays and indicate their satisfaction with the outcomes. A prosocial bias score was created by subtracting mean proself scores from mean prosocial scores. Results indicated that where contemplating mortality led older adults to display a greater prosocial bias, younger adults did not. In other words, there were no age differences in the control condition, but in the mortality condition, older adults displayed a significantly greater prosocial bias than younger

adults. From a TMT perspective, this is interpreted as a strategy for obtaining symbolic immortality by passing on valuable information to future generations.

#### **CHANGING PREDICTORS OF SELF-RATED HEALTH: CROSS-SECTIONAL AND LONGITUDINAL AGE-GROUP DIFFERENCES**

S. Weinz, S. Wurm, O. Huxhold, C. Tesch-Roemer, *German Centre of Gerontology, Berlin, Germany*

Numerous studies have shown that people who were asked to rate their own health, base their rating not only on their physical health status but include many more information. Furthermore, it is known that the importance of different indicators for self-rated health (SRH) varies with age. Previous findings on factors influencing SRH are mostly based on cross-sectional studies. Therefore, this study investigated whether cross-sectional age group differences also apply in the longitudinal perspective. Longitudinal data of community-dwelling adults aged 40 years and older from the German Aging Survey (DEAS) was used, analyzing two age groups (middle age: 40-64 years, N = 1.771; old age: 65+ years, N = 1.313). Latent multivariate regression models with a multiple group design were employed to analyze cross-sectional and longitudinal differences regarding the importance of various health indicators and psychosocial factors on SRH. Cross-sectional analysis showed age group differences for health indicators only: Chronic conditions, functional health status, and endurance sports were better able to predict SRH in middle-aged than in older adults. In contrast, the longitudinal analyses showed that the prediction strength of all health indicators did not change over time in both age groups. Psychological factors (depressive symptoms and positive affect) became more important over time in the older age group only. Together these findings suggest that especially in old age psychological factors become more important for SRH. This might explain how good and stable SRH besides worsening physical health status is possible up to old age.

#### **RV LIVING AND POSITIVE AGING: PATTERNS OF LEISURE ACTIVITIES AMONG OLDER RVERS**

S. Halbert, E. Sikorska-Simmons, *Sociology, University of Central Florida, Orlando, Florida*

Leisure is an important aspect of quality of life and successful aging. Research suggests that housing influences participation in leisure activities. The majority of studies on leisure, however, have been conducted among community-dwelling elderly, and little is known about leisure activities of older people in alternative housing. This study examined leisure activities among older RVers (i.e., individuals who chose to live and/or travel in a recreational vehicle). Consistent with previous research, the leisure patterns were examined according to gender, marital status, and self-rated health. The sample included 117 residents of an RV retirement park. Data were collected, using a self-administered questionnaire. Of the 117 participants, 48% were women, all were white, and 69% were married. The mean age was 76, and 59% were 75 or older. The most common activities were dining (88%), visiting friends (82%) and walking (70%). Compared to males, females were more likely to pursue educational activities (20% vs. 10%) and crafts (45% vs. 10%). Single RVers were more likely to engage in educational activities than married RVers (50% vs. 12.5%). Those who rated their health as “very good” were more likely to engage in outdoor sports than those whose health was “fair” (53.2% vs. 6.4%). These findings are in line with previous research which suggests that leisure activities vary by gender, marital status, and health. Compared to community-dwelling elderly, RVers were more likely to pursue outdoor activities and socially-oriented activities. More research is needed to examine positive effects of leisure activities on well-being.

## TRANSPORTATION SAFETY

**VALIDATION AND FEASIBILITY OF AN ORIENTATION ASSESSMENT ROADSIDE TOOL FOR LAW ENFORCEMENT OFFICERS**

L. Hill, J. Rybar, T. Styer, D. Salmon, UCSD, San Diego, California

Background: While most older adults are safe drivers, declining sensory and cognitive function can interfere with driving skills. While the individual, family members, and health professionals all play a role in identifying medical impairments, some impaired individuals continue to drive, and come to the attention of law enforcement. Purpose: The purpose of this paper is to report on the development and validation of a tool for the CHP in the identification of disorientation, most frequently due to dementia. Methods: Supported by the Office of Traffic Safety, and partnering with California Highway Patrol (CHP), we developed a training curriculum for law enforcement officers, including a roadside tool. In the pilot year, feedback from officers during training was used to modify the tool. Subsequently, validation of the tool was conducted using individuals diagnosed with dementia comparing with normal, age matched controls. Field testing was done with 'ride alongs' with officers, and trained officer interviews. Results: Retrospective testing compared the questions on this roadside tool with similar standardized questions on other dementia screens. Prospective testing was done with the questions in the order found on the screen. In both retrospective and prospective testing, three types of patients were compared, and sensitivity and specificity calculated: cognitively normal; mild cognitive impairment; dementia. The tool behaved favorably in these studies. Feasibility testing was done with 'ride alongs' and officer interviews, and the tool was found to be practical and acceptable. Conclusions: A roadside tool for use by law enforcement officers to determine disorientation was is feasible, useful, and acceptable.

**IMPACT OF ROAD SIGNAGE ON DRIVING PERFORMANCE OF OLDER AND MIDDLE-AGED DRIVERS ON RURAL HIGHWAYS**N. Gayzur<sup>1</sup>, L. Langley<sup>1</sup>, A. Saville<sup>1</sup>, K. Vachal<sup>2</sup>, E. Alvarez Vazquez<sup>1</sup>, R.D. Gordon<sup>1</sup>, 1. North Dakota State University - Department of Psychology - Center for Visual and Cognitive Neurosciences, Fargo, North Dakota, 2. North Dakota State University - Upper Great Plains Transportation Institute, Fargo, North Dakota

The proportion of drivers who are 65 and over is increasing, especially in rural areas. Road signage in rural areas can be sparse and less consistent than in urban areas. The purpose of the present study was to investigate older adults' driving performance on a simulated rural highway during day and night conditions. We manipulated the distance of destination road signs from the intersections (close – 200 feet; middle – 400 feet; far – 600 feet) and the presence of intersection warning signs (present or absent). The task of middle-aged (40-59 years) and older (60-80 years) participants was to turn at an intersection marked with a particular destination city. In general, older adults drove more slowly than middle-aged adults. Although general speed did not vary by lighting conditions, participants went into turns with greater speed at night than during the day. Older adults slowed down near destination signs more than middle-aged adults, particularly at night. Destination road sign distance impacted both age groups. When a sign was close to the intersection, drivers slowed down more at the sign, but went faster into the turn, than when the sign was at middle or far distances. Intersection warning signs also impacted both groups. When the warning sign was present, drivers slowed down more at the destination sign than when the warning sign was absent, particularly at night. These findings suggest that moving the destination road sign farther from the intersection

and using warning signs in rural areas would benefit middle-aged and older drivers.

**DETERMINING SUITABILITY TO DRIVE AMONG PEOPLE WITH STROKE WITHIN AN IRISH CONTEXT OF PRACTICE**T. Stapleton<sup>1</sup>, D. Connolly<sup>1</sup>, D. O'Neill<sup>2</sup>, 1. Trinity College Dublin, Dublin, Ireland, 2. AMNCH, Dublin, Ireland

Fitness to drive following stroke is usually determined on an individual basis and practice varies across clinical settings. The decision is typically informed by a combination of clinical factors and tacit clinical judgement of healthcare professionals. This study aimed to describe and explore this process within an Irish context. A sequential mixed method design using a follow-up explanation model was used. Quantitative data were collected in a prospective clinical study comprised of off-road and on-road assessment. Follow-up qualitative interviews were conducted to examine the clinical decision making preceding referral for driving assessment. Ethical approval was obtained for all phases of the research. Forty-six stroke patients (mean age 65) were recruited. All 35 patients who completed on-road driving assessment passed, albeit some with restrictions. A limited number of standardised off-road assessments may be useful in determining readiness for driving assessment, and differentiating between restricted and unrestricted drivers. The most significant determinants were the assessing therapist's overall impression of suitability to drive ( $P < 0.001$ ), measures of driving self-efficacy ( $P = 0.001$ ) and those of a proxy ( $P = 0.012$ ). Follow-up interviews with occupational therapists ( $n = 17$ ) and stroke consultants ( $n = 7$ ) highlighted observable rather than measurable behaviours such as insight, awareness, and impulsivity that influenced the stratification of patients suitability to drive post stroke. A combined approach using standardised assessment and behavioural observations appears to be accurate in stratifying stroke patient's suitability to drive. This combined approach may screen out inappropriate referrals and explain some of the sensitivity and specificity issues evident in research using quantitative approaches alone.

**EVALUATING THE DEMTECT AND SIMARD MD AS SCREENING TOOLS FOR OLDER DRIVERS**N.W. Mullen<sup>1</sup>, S.V. Ostap<sup>1</sup>, M. Bedard<sup>1,2</sup>, 1. Centre for Research on Safe Driving, Lakehead University, Thunder Bay, Ontario, Canada, 2. St. Joseph's Care Group, Thunder Bay, Ontario, Canada

With the number of older drivers increasing, effective tools are needed to assist with identifying drivers who may no longer be safe on the road. The SIMARD MD, a modification of the DemTect, was recently adopted in British Columbia, Canada, for physician use as a screening tool for older drivers. This study examined: a) how strongly older drivers' scores on the DemTect and SIMARD MD were associated with other measures of visual attention and cognitive status, and b) how strongly DemTect and SIMARD MD scores were associated with on-road driving scores. Thirty older drivers (17 men, 13 women; aged 70 to 87 years) completed laboratory assessments and an on-road driving evaluation. Performance on the DemTect and SIMARD MD was significantly associated with performance on the SMMSE, Trails B, UFOV, and ANT ( $r$  ranged from .44 to .59,  $p < .05$ ), but neither DemTect nor SIMARD MD scores were associated with performance on the driving evaluation ( $r = .19$ ,  $p = .31$ , and  $r = .17$ ,  $p = .36$ , respectively). Using the SIMARD MD cut-points identified by Dobbs and Schopflocher (2010), likelihood ratios showed that the SIMARD MD failed to accurately predict driving outcome. Neither the DemTect nor SIMARD MD appear to be suitable screening tools for older drivers. More research is needed with drivers who have been referred for a driving assessment before deciding whether other Canadian provinces should adopt the SIMARD MD for physician use.

## **MAINTAINING MOBILITY AMONG OLDER ADULTS IN MICHIGAN: RESULTS OF A TELEPHONE SURVEY TO IDENTIFY TRAVEL PATTERNS, NEEDS, AND PREFERENCES**

L.J. Molnar, D.W. Eby, L. Kostyniuk, R. St. Louis, N. Zanier, *UMTRI, Univ Michigan, Ann Arbor, Michigan*

Mobility, or the ability to get from place to place, enables people to conduct activities of daily life, stay socially connected, participate in activities that make life enjoyable, and enhance quality of life. As part of a larger project to help maintain safe mobility for Michigan's older adult residents, a statewide telephone survey of 300 adults age 70 and older, was conducted. The sampling frame consisted of records from the state's driver license database and included both drivers and non-drivers. Respondents' average age was 78, two-thirds were women, 60% were currently married, and nearly all were White. Results indicated that: most respondents lived in one or two person households that had one or two motor vehicles; few worked outside the home for pay, but a third volunteered; 20%-30% were in fair to poor health; and about 20% did not currently drive or rarely drove. Those who drove did not drive very much but were satisfied with their current mobility. Those who did not drive had stopped driving for a variety of reasons and about one-quarter were not satisfied with their current mobility. Respondents, regardless of driving status, engaged in a wide variety of mobility-related activities and reported low social isolation. Use of public transportation was low as was awareness of community programs such as volunteer driver, dial-a-ride/senior van, and voucher/senior discount programs. Those who did use public transportation were generally happy with it. Based on the results of the survey, a set of recommendations for maintaining safe mobility was developed.

## **TOP CAR TECHNOLOGIES AND SAFE DRIVING FOR A LIFETIME**

B. Tracton-Bishop<sup>1</sup>, L. D'Ambrosio<sup>2</sup>, *1. The Hartford, Simsbury, Connecticut, 2. MIT AgeLab, Cambridge, Massachusetts*

With an increasing number of high-tech safety and comfort features in cars today, drivers of all ages must often consider which ones are most beneficial for them. For older drivers, in particular, who have been on the road for quite some time, it's important to fully understand what new features offer and which ones may deliver meaningful benefits around their driving safety. This project explores what academics and practitioners who work regularly with older drivers think about newer technologies available for the automobile, and how they think these technologies may affect older adults' driving experiences. Older adults need to evaluate car technologies based on their vehicle, their driving abilities and their comfort level with technology. Through the study's findings older drivers can make better informed decisions about which technological safety features they may benefit from most.

## **SESSION 1335 (POSTER)**

### **HEALTH CARE**

#### **GOALS PRIORITY OF DRUG THERAPY AMONG ELDERLY PATIENTS: A PILOT STUDY ON PATIENT-CENTERED OUTCOMES**

H. Cheng, *medicine, university of virginia, Charlottesville, Virginia*

Background: elderly patients often take multiple drugs due to multiple co-existing chronic conditions. Drugs could achieve one or more of the following five goals: 1). Relieve symptoms; 2). Reduce complications; 3). Live longer; 4). Reduce hospitalization; 5). Improve independent function. However, one drug could achieve one goal while it could worse other goals. Therefore, eliciting goals priority of drug therapy will be critical for providers to help elderly patients to achieve their preferred goals. This pilot study was to explore how elderly patients rated goals priority of drug therapy. Methodology: It was an observa-

tional study. Community-dwelling elderly patients were asked to rate goals priority of drug therapy from most important to very important, important, less important, and maybe important at community outreach programs and Author's geriatric clinic. Descriptive analysis was performed using SPSS. Results: 42% elderly patients (37/88) was able to rate goals priority. Mean age was 76 y/o with 70% (26/37) as female. On average, they had 5 co-existing chronic conditions and took 7 drugs. Relieving symptoms was rated as the most important goal and living longer rated as the least important goal of drug therapy. However, goals priority varied among participants. Conclusions: this small pilot study demonstrated a challenge to elicit goals priority and variability of goals priority of drug therapy among community-dwelling elderly patients. Relieving symptoms rated as the most important goal of drug therapy and living longer rated as the least important goal could guide providers prescribe drug therapy for elderly patients.

#### **THE COMMUNITY "MATCHMAKER": CONNECTING THE RIGHT CARE TO THE RIGHT CLIENT**

S. Low, *Care Integration Division, Agency for Integrated Care, Singapore, Singapore*

In Singapore, there is a wide spectrum of community and residential healthcare services that cater to patients who need nursing care, rehabilitation or institutionalization. When patients are discharged from hospitals after an acute episode, they and their caregivers are often lost, stressed and unsure in navigating the system. Hence, the challenge in accessing the appropriate services. In 2009, Singapore's Ministry of Health set up the Agency of Integrated Care as the national healthcare integrator. One of its departments, the Referral Management Team (RMT) assists patients and their caregivers to navigate the healthcare system with ease and confidence, and matches the right services to the right patients to achieve better health outcomes. It primarily works with the acute and rehabilitation hospitals in moving patients along the continuum of care, ensuring safe handoffs. RMT mainly manages referrals for 3 categories of services. First, home nursing and medical services for patients who require nursing procedures at home, such as changing feeding tubes and wound management. Second, it looks at centre-based care in particular community rehabilitation. Specifically, for patients who require occupational or physiotherapy services at Day Rehabilitation Centers. Third, placements to residential service such as nursing homes, chronic sick facilities and psychiatric homes in particular for patients with high nursing needs but do not have available or capable caregivers. In 2011, RMT successfully matches over 7600 patients with a healthcare service. This presentation illustrates how RMT conducts assessment on patients' needs, co-ordinates referrals for patients to ensure appropriate clinical siting and gatekeeping.

#### **DIFFERENCES IN COMMUNICATION PERCEPTIONS INVOLVING CARE TRANSITIONS OF MEDICAID CLIENTS**

M.C. Corrigan, *Central Plains Area Agency on Aging, Wichita, Kansas*

Almost one in five hospitalized older patients is readmitted within a 30 day time frame at a cost of over \$26 billion. The Partnership for Patients initiative seeks to reduce care transition complications. The first step in designing improvement strategies is an assessment of the current system. Care transition perceptions of hospital discharge planners and community based service providers (CBSP) are crucial. This session presents analysis of data collected from 48 hospital discharge planners and 87 CBSPs in one mid-west community. Responders were asked to consider planning situations for clients with prior services under Medicaid and Medicare. Almost 74% of discharge planners indicated having at least 2 to 3 days to develop post-hospital plans, and 79% of indicated making contact with prior CBSP during this time. The perceptions of the CBSP did not match these perceptions. Almost half (49%) indicated that the hospital did not notify them about a client's admission; a

majority (66%) were informed by family members/caregivers. A majority (67%) felt they had difficulty getting information about the new functional limitations or needs. These differences in communication perceptions can contribute to care transition problems and re-hospitalizations. Data from the perceptions study has been used to design two projects: alert stickers placed on a client's Medicaid card and an online communication system connecting discharge planners with CBSP. Data collection on those two projects is now underway. After attending this session, participants will be able to discuss ways to increase communication between discharge planners and CBSP.

#### **PARADOXICAL VOCAL CORD MOVEMENT- A RARE CAUSE OF STRIDOR IN THE ELDERLY**

K. Alagiakrishnan<sup>1</sup>, Z. Goodarzi<sup>2</sup>, 1. *Geriatric Medicine, University of Alberta, Edmonton, Alberta, Canada*, 2. *University of Calgary, Calgary, Alberta, Canada*

**Introduction:** Paradoxical vocal cord movement (PVC) is a functional airway limitation due to the improper movement of the vocal cords. **Case Report:** A 90 year-old woman was admitted to the hospital with worsening shortness of breath, stridor and increased sputum production over the past 2 weeks. Her past medical history includes: hypertension, hypothyroidism, GERD, macular degeneration, a TIA, bladder prolapse, anxiety and vocal cord problems. She was a life-long non-smoker. The patient noted significant anxiety with occasional panic attacks and insomnia due to a past abusive relationship with her husband. On examination, the patient was afebrile with 20 breaths per minute at 97% on room air, her heart rate was 76bpm with a blood pressure of 200/98. She had a hoarse voice with inspiratory stridor. She was only able to speak in 2-3 word sentences, but had no other signs of respiratory distress. Otherwise, physical exam was unremarkable. Chest x-ray revealed no acute abnormalities. ECG showed no acute abnormalities. Blood investigations revealed low sodium of 126. Patient was treated for a possible respiratory infection with levofloxacin. Hyponatremia resolved with stopping thiazide diuretic. ENT was consulted to help delineate the nature of the stridor. Bedside laryngoscopy revealed a paradoxical movement of her vocal cords probably associated with anxiety; in her case, they moved towards midline with inspiration producing stridor. Voice exercises and breathing techniques from speech pathologist improved (reduced) her audible stridor. **Conclusion:** PVC is often misdiagnosed as asthma, due to the wheeze, stridor and apparent respiratory distress.

#### **DEVELOPING THE NEXT GENERATION OF LEADERS IN HEALTHCARE INNOVATION FOR OLDER ADULTS**

H. Goel<sup>1</sup>, J. Mohler<sup>2</sup>, N. Landman<sup>3</sup>, M. Fain<sup>2</sup>, 1. *University of Arizona, College of Medicine, Tucson, Arizona*, 2. *University of Arizona, Arizona Center on Aging, Tucson, Arizona*, 3. *Healthcare Transformation Institute, Phoenix, Arizona*

**Background/Rationale:** We developed an elective course for health professional students to provide them with competencies in health care policy and advocacy, to become the next generation of leaders in healthcare delivery innovation. Despite the needs of an aging society and the promise of health delivery innovation to provide value-based care, few health professional students pursue this career path. This elective builds a pipeline of future leaders prepared for this vital role. **Objectives:** Our objective was to engage and prepare the next generation of leaders in healthcare innovation, and assure that they achieve key competencies in health policy, chronic conditions/geriatric care, leadership and advocacy. **Methods:** The University of Arizona's program is a structured, faculty-mentored experience that encompasses healthcare administration, finance, delivery and policy. It includes training in leadership and professionalism, conflict resolution and team care. The students participate in observation and shadowing, and complete relevant readings about the US healthcare system, including provider, payer, population and patient perspectives, and advances in medical technology. Based

upon the student's interests, s/he completes a mentored capstone project, further building the skills needed to continue in healthcare innovation. **Conclusions:** The students benefit from a comprehensive mentoring program designed to identify, engage and guide the next generation of leaders in healthcare innovation. This elective facilitates the development of leaders capable of building value-based healthcare for older adults, leading to better health and better healthcare, at lower cost.

#### **HEALTH DIFFERENCES BETWEEN VA HOME-BASED PRIMARY CARE & STATE MEDICAID WAIVER PROGRAM CLIENTS**

T. Wharton<sup>1,2</sup>, J. Nnodim<sup>3,2</sup>, R.V. Hogikyan<sup>1,2</sup>, L. Mody<sup>2,1</sup>, M.L. James<sup>4</sup>, M. Montagnini<sup>1,2</sup>, B. Fries<sup>1,4</sup>, 1. *VA Ann Arbor Healthcare System Geriatric Research, Education and Clinical Center (GRECC), Ann Arbor, Michigan*, 2. *Division of Geriatric and Palliative Medicine, University of Michigan Health Care System, Ann Arbor, Michigan*, 3. *VA Ann Arbor Healthcare System, Ann Arbor, Michigan*, 4. *Institute of Gerontology, University of Michigan, Ann Arbor, Michigan*

Comprehensive health care for older adults is complex, involving multiple co-morbidities and functional impairments of varying degrees and numbers. In response to this complexity and associated barriers to care, home-based care models have become prevalent. The home-based primary care (HBPC) model, based at a Michigan Veterans Administration Medical Center, and the Michigan Waiver Program (MWP) that includes home-based care are two of these. While both models are formatted to address barriers to effective and efficient health care, there are differences in disease prevalence and functional performance between groups. Using a retrospective analysis of data collected using the interRAI-Home Care (HC), we examined a cross-sectional representation of clients enrolled in both programs in 2008. Veterans were more independent in basic activities of daily living, but there was no difference in the rate of falls between the groups. Veterans had more pain and higher prevalence of coronary artery disease ( $z=7.0$ ;  $p<.001$ ), Chronic Obstructive Pulmonary Disease (COPD;  $z=3.9$ ;  $p<.001$ ), and cancer ( $z=8.5$ ;  $p<.001$ ). There was no statistically significant difference between the two groups in terms of the prevalence of geriatric syndromes. Scores on subscales of the interRAI-HC indicated a greater risk of serious health decline and adverse outcomes for HBPC compared to MWP clients ( $1.4 \pm 1.1$  v.  $0.9 \pm 0.1$ ;  $z=2.5$ ;  $p=.012$ ). Overall, clients treated through MWP home-care in MI have higher than national average rates of dementias, diabetes, hypertension, and coronary artery disease.

#### **PATIENT EDUCATION FOR CHINESE ELDERLY BEFORE EYE SURGERY: A MORE EFFECTIVE MODE OF DELIVERY**

J. Hu, *Peking University Third Hospital, Beijing, China*

**Objective:** Older adults usually have memory and sensory impairments which can influence the effectiveness of patient education. This study was to explore a more effective mode of patient education especially delivered for elderly before they received eye surgery. **Methods:** Two hundreds and six older inpatients were consented and recruited from an Eye Center in Beijing China before they received eye surgery. They were randomly assigned into three patient education groups with different modes of delivery. There were 68 in the group educated by physicians and 68 in self-learning materials group. These were common education modes for patient education in China. The third group with 70 elderly was led by ophthalmological nurses who were trained with essential gerontology knowledge and communication skills. Questionnaires were filled out by the elderly before and after the education. The contents include the basic understanding of the surgery and related self-care knowledge and behavior. **Results:** The correct rate of answers for different groups were significant different ( $P<0.01$ ). The group educated by physicians had the lowest correct rate (68.45%), followed by self-learning materials group (72.9%). The group guided by nurses had



the highest correct rate of answer (97.23%). Conclusions: Compared with self-learning material group and physician-lead group, patient education delivered by nurse specialists is the best mode for patient education in elderly before they take eye surgery. Gerontology-related knowledge and skills can strengthen the effectiveness of patient education for elderly.

#### **HOME CARE FOR OLDER ADULTS AT HIGH RISK FOR HOSPITALIZATION: RESULTS OF A RANDOMIZED TRIAL**

J. Gonzalez<sup>1</sup>, S. Enguidanos<sup>1,3</sup>, S. Levine<sup>2</sup>, B.A. Steinman<sup>2,3</sup>, *1. Partners in Care Foundation, San Fernando, California, 2. HealthCare Partners, Tustin, California, 3. University of Southern California, Los Angeles, California*

Effective methods to improve and manage care for high-risk patients with multiple chronic conditions are urgently needed. This need is underscored by increased accountability brought by the Patient Protection and Affordable Care Act for improved quality and costs among hospitals and health plans. This study tested the efficacy of Choices for Healthy Aging (CHA), a home care program designed to improve access to medical care for older adults with multiple chronic conditions at risk for hospitalization. A randomized controlled trial was conducted among 298 older adults who scored at risk of hospitalization, using a risk stratification tool. Results. The intervention group reported significantly higher satisfaction with care than usual care recipients. CHA patients were less likely to be admitted to the hospital as compared to usual care, (25.6% and 37.1%, respectively). No statistically significant relationship was found between study groups for emergency department utilization; though a smaller proportion of participants in the CHA group (16.7%) utilized emergency department services compared to 21.4% usual care participants. Despite decreased odds of hospitalization, there was no difference in costs of care by study group. CONCLUSION: Provision of home care among older adults at high risk of hospitalization may improve satisfaction with care while reducing hospitalization. Lack of cost savings may be due to a targeting tool that may not be well-suited to identifying those with greatest need for home care, thus the population may not have had sufficient burden of illness to obtain cost savings. Further studies using improved targeting criteria are needed.

#### **CARE TRANSITIONS FOR OLDER HIP FRACTURE PATIENTS: A TALE OF TWO CITIES AND A TOWN**

J.B. Elliott, P. Stolee, *University of Waterloo, Waterloo, Ontario, Canada*

Introduction: Quality of care and patient safety are often at risk during transitions between health care settings. Following a hip fracture, older patients typically undergo transitions through several care settings during the course of their recovery. We explored care transition experiences of frail older hip fracture patients at three Canadian sites (a large urban, a small urban and a rural setting). Methods: Guided by an ethnographic approach, semi-structured interviews, observations and document reviews were completed with patients (n=21), family caregivers and healthcare providers during multiple post-surgical care transitions. Using data for similar patients from each of the three sites, a multiple case study analysis (Stake, 2006) was used to compare and contrast care transition experiences. Results: Similar difficulties in communication between patients, caregivers and healthcare providers were experienced in all three sites, although communication with rural family caregivers was often challenged by distance. Rural patients had fewer rehabilitation options; urban patients were more likely to experience complicated care trajectories. Discussion: There were noticeable similarities and differences between all three locations regarding communication, care pathways, rehabilitation options and caregiver support. Based on this research, we are currently developing, implementing and evaluating interventions to improve the quality of care transitions in each of the study locations.

#### **EFFECTS OF HORMONE REPLACEMENT THERAPY AND AGE ON HEART RATE VARIABILITY IN HEALTHY WOMEN**

N.M. Perseguini<sup>1</sup>, A.M. Takahashi<sup>1</sup>, E. Silva<sup>2,1</sup>, A. Borghi-Silva<sup>1</sup>, J.R. Rebelatto<sup>1</sup>, A. Porta<sup>3</sup>, N. Montano<sup>3</sup>, A.M. Catai<sup>1</sup>, *1. Universidade Federal de São Carlos, São Carlos, São Paulo, Brazil, 2. Universidade Metodista de Piracicaba, Piracicaba, Brazil, 3. Università degli Studi di Milano, Milano, Italy*

The Female Aging Process Has its own Characteristics Due to Hormonal Changes in Postmenopausal. Therefore, This Study Aimed to Investigate Hormone Replacement Therapy (HRT) Effect and Age Effect on Heart Rate Variability (HRV) Analysis in Healthy Middle-Aged and Elderly Women. Four Groups Were Evaluated: Group 1 (G1) - 14 Middle-Aged Without HRT (55±2.5 Years), Group 2 (G2) - 10 Middle-Aged With HRT (54±3.3 Years), Group 3 (G3) - 16 Elderly Without HRT (65±2.9 Years), Group 4 (G4) - 10 Elderly With HRT (62±2.9 Years). Postmenopausal Women Using Conjugated Equine Estrogen, Synthetic Hormone or Isoflavone Were Evaluated. The Beat-To-Beat Heart Rate Was Recorded in Supine Position for 10min. Statistical Analysis Was Carried Out Using the Sigma Plot For Windows Version 11.0. Age and HRT Effects on HRV Were Analyzed by Two-Way ANOVA. The Level of Significance Was Set at P<0.05. HRV Was Analyzed by Spectral Analysis: Low (LF) and High (HF) Frequencies in Normalized Units (nu), Predominantly Cardiac Sympathetic Modulation and Cardiac Parasympathetic Modulation Indicator, Respectively. LF/HF Ratio Was Also Calculated. There Was No Age Effect on HRV. However, it Was Found HRT Effect on HRV: LFnu and LF/HF Ratio Were Higher (Showing Cardiac Sympathetic Modulation Increased), While HFnu Was Lower (Representing Cardiac Parasympathetic Modulation Decreased) in G2 (48.7; 1.4; 49.5, Respectively) and G4 (47.6; 2.1; 51.2, Respectively) than G1 (41.7; 1.1; 56.6, Respectively) and G3 (25.7; 0.5; 72.3, Respectively). In Conclusion, The Studied Women Using HRT Presented Higher Sympathetic and Lower Cardiac Parasympathetic Modulation Compared to Women Not Using HRT.

#### **ASSOCIATION BETWEEN DIABETES MELLITUS SELF-MANAGEMENT AND SELF-RATED HEALTH AMONG 40 AND OLDER CHINESE IN MAINLAND, CHINA**

X. Pan, *Miami University, Oxford, Ohio*

Objective: the aim of the present study is to examine the association between diabetes mellitus (DM) self-management and self-rated health (SRH) among 40 and older Chinese population in Mainland, China. Design: the current study is a cross-sectional study by using the data of China Health and Nutrition Survey 1997-2009 (CHNS). Sample: 640 participants, who are with DM and managing the disease through either self-performing activities or self-regulation or both strategies, report their general health condition. Method: binary logistic regression is used to analyze the association between predictors and the outcome variable by controlling for age, gender, residency (rural vs. urban), SES, smoking and alcohol drinking status. Results: DM self-management is significantly associated with SRH (p<.05). People who are managing DM with both strategies are more likely to report their health as poor comparing to those who are managing the disease with one strategy (OR=1.30). Education and residency are also significantly associated with SRH, respectively (p<.05). Conclusion: DM self-management is a significant predictor for self-rated health among 40 and older Chinese in Mainland, China. The level of DM management reflects the severity of DM, which negatively impacts one's self-rated health.

#### **DEVELOPING EFFECTIVE COMMUNITY PARTNERSHIPS TO MEET PATIENT-CENTERED GOALS IN THE HEALTH CARE HOME**

C.E. Vanderboom, D.E. Holland, P. Targonski, *Mayo Clinic, Rochester, Minnesota*

Most healthcare systems do not connect with community resources beyond referral. Coordinating patient-centered care in Health Care

Homes (HCH) requires realignment between health care delivery systems and community service providers. Purpose: To develop and evaluate effective partnerships among patients/families, health care homes and community service providers to enhance care coordination using a Community Care Team intervention. Aim 1: Evaluate team cohesion and collaboration among community partners; Aim 2: Evaluate the effect of community partnerships on patient health outcomes (physical, emotional, social), care coordination and self-management support, and use of services compared to usual care. Methods: An RCT design was used. The sample included 60 older adults with multiple chronic conditions and their support persons from a Midwest HCH with randomization to intervention or usual care. The intervention was guided by the Chronic Care Model and the Wraparound Process and included a strengths-based assessment, an Action Plan based on patient priorities, and follow-up strategies. Team meetings were monitored to assure intervention fidelity. Qualitative data from interviews/focus groups and team and patient quantitative data collected at baseline and at 3 months were merged to address study aims. Findings: Preliminary data suggest high levels of team cohesion and collaboration and positive effects on care coordination and self-management. Data collection and analysis will be complete June, 2012. Conclusion: Findings will inform ambulatory care redesign and realignment strategies between health care homes and community service providers to improve biopsychosocial well being of older adults with multiple chronic conditions.

#### **CURRENT SITUATION OF DIAGNOSIS OF OBSTRUCTIVE SLEEP APNEA HYPOPNEA SYNDROME AND THE SCREENING INDICATORS**

S. Zhang, *People's Hospital, Peking Univ., Beijing, China*

Method: A total of 100 cases with suspected OSAHS were enrolled. The ESS scores were completed by questionnaire and the results of BMI, neck circumference and polysomnography (PSG) monitoring are analyzed. According to AHI, the patients were classified into non-OSAHS, mild, moderate and severe OSAHS groups, and the initial symptoms, the way of getting treatment, influence factors and so on were described. Analyze the time interval ('TI' for short) between the first time of realizing sleep-related disease, getting treatment and the relevant factors. The correlation of AHI with ESS, BMI, neck circumference and LSpO<sub>2</sub> was analyzed by comparing the ESS, BMI, neck circumference and LSpO<sub>2</sub> among the four groups. Results: There were 91.01% people who realized they have sleeping-related diseases, but only 14.61% went to clinic promptly. The longest TI was 31 years; there was no difference between the different demographic characteristics group ( $p > 0.05$ ). 61.80% people didn't go to clinic for having no influence on routine life; and 57.30% didn't realize it needs diagnosis and treatment. ESS has lower correlation with AHI ( $r = 0.290$ ,  $P = 0.003$ ), and BMI and neck circumference have moderate positive correlation, and LSpO<sub>2</sub> has moderate negative correlation. These indicators all have been correlated with the severity of OSAHS. According to Logistic regression, BMI was a risk factor and LSpO<sub>2</sub> was a protective factor. Conclusion: Regarding OSAHS, patients have poor knowledge and awareness to visit doctor. Healthcare education should be strengthened to improve their knowledge of OSAHS. And the community healthcare needs to be enhanced to improve the prevention, diagnosis and treatment of OSAHS. ESS plays an important role in screening the severity of OSAHS. ESS combined with BMI, neck circumference LSpO<sub>2</sub> and other objective index, would improve the value to screen OSAHS.

#### **HETEROGENEITY OF TREATMENT EFFECTS AND EVIDENCE-BASED GERIATRIC MEDICINE**

R. Varadhan, C. Weiss, *Geriatric Medicine, Johns Hopkins Center on Aging and Health, Baltimore, Maryland*

It is widely recognized that older adults are not well served by evidence based medicine. Older adults with two or more chronic conditions comprise the majority of patients seen in routine clinical practice.

Multimorbid older adults have increased susceptibility to adverse responses to treatment and may also have significant competing risks of mortality. However, they are either completely excluded or poorly represented in. While such restriction likely enhances the internal validity of the trials, it raises severe concerns about the applicability of evidence from such trials to most clinically relevant patient populations. Systematic reviews and clinical practice guidelines often conclude that there is insufficient evidence to guide clinical practice for elderly women and for frail older adults with multiple chronic conditions. There are numerous interventions whose efficacy and safety have not been reliably established in geriatric patients. To cite a couple of examples: (i) efficacy of treatments for prevention and treatment of heart failure in older women, (ii) efficacy of CT colonoscopy for cancer screening in patients > 65 years. How do we obtain reliable evidence on treatment effects to inform geriatric medicine? We discuss the methodological issues and challenges involved in obtaining reliable evidence on the effects of interventions for geriatric populations which are either excluded or poorly represented in clinical trials. We will present a case study to demonstrate our novel method for extending the applicability of trial evidence to a target group that is poorly represented in the trial.

#### **WHAT'S EVIDENCE GOT TO DO WITH IT: MEDICARE'S NEGLECT OF HOME CARE SOCIAL WORK COVERAGE FOR PERSONS WITH ALZHEIMER'S DISEASE AND THEIR CAREGIVERS**

W.D. Cabin, *Stockton College, Glen Rock, New Jersey*

Social work has limited use in Medicare home health (MedPac, 2011). Ironically most elderly live at home cared for by primarily family and friends (MetLife, 2010). The portion of the elderly population living at home with Alzheimer's disease (AD) has been rapidly increasing and is projected to continue through at least 2050 (Alzheimer's Association, 2011). Despite these projections, Medicare home health continues to limit social work coverage and eligibility. These limitations deny evidence-based bio-psychosocial interventions for persons with Alzheimer's disease and their caregivers. The limitations also limit home care social worker knowledge of such interventions. The paper presents the results of a quantitative study conducted between 2008-2010 in a major metropolitan area. One part of the study used a convenience sample of 243 home care social workers who completed a survey on knowledge and use of specific evidence-based AD interventions for home care patients. The survey found that 93% had no knowledge of the interventions and 100% did not use the interventions. The second part of the study involved 25 social workers in three different home care agencies applying one evidence-based AD intervention with a total of 182 patients and caregivers, with statistically-significant results in terms of quality of life, as measured by five normed scales.

#### **DIGNITY IN CARE FOR OLDER PEOPLE: THE PROFESSIONAL PERSPECTIVE**

C. Victor<sup>1</sup>, D. Cairns<sup>1</sup>, V. Williams<sup>1</sup>, S. Richards<sup>2</sup>, W. Martin<sup>1</sup>, A. LeMay<sup>4</sup>, D. Oliver<sup>3</sup>, *1. Brunel University, Uxbridge, United Kingdom, 2. Oxford Brookes University, Oxford, United Kingdom, 3. City University, London, United Kingdom, 4. University of Southampton, Southampton, United Kingdom*

Within the United Kingdom there is an increased emphasis on ensuring dignity in caring for older people in hospital. However, a wealth of empirical evidence and high profile reports continues to highlight examples in which the practice of dignified care does not occur suggesting there are gaps between policy and practice. This study focuses on 4 NHS Hospital Trusts in England recognised as providing dignified care and explores (1) how dignified care for older people is understood and delivered by the health and social care workforce and; (2) how organisational structures and policies can promote and facilitate/hinder the delivery of dignified care. We are using a case study approach using both quantitative (questionnaire) and qualitative (interviews and focus groups)

methods in settings where older people are cared for. This paper provides preliminary findings, based on 135 returned questionnaires, which explore health and social care staff's understandings and meanings of what dignity is and the key aspects when promoting the delivery of dignified care. Meanings of dignity included: respect, being treated as an individual, being involved in decision making and privacy. Respondents rated privacy and being treated as an individual as the most important aspects of dignified care with physical tasks such as physical care, helping with meals, which are traditionally perceived as core nursing tasks, attributed much less importance. Our qualitative data will explore these responses and examine the factors underpinning these responses.

### **THERAPEUTIC EFFECT OF FOREST BATHING ON HYPERTENSION IN ELDER PATIENTS**

G. Mao, Y. Lv, Y. Cao, Y. Wang, X. Hu, G. Wang, J. Yan, *Zhejiang Hospital, Hangzhou, Zhejiang Province, China*

**Objective** To provide scientific evidence supporting the efficacy of forest bathing as a natural therapy on human hypertension. **Methods** Twenty-four patients ( $67.21 \pm 3.89$  year-old) with essential hypertension were randomly divided into two groups. One group was sent to a broad-leaved evergreen forest to experience a 7-day/7-night trip, and the other was sent to a city area for control. **Blood pressure (BP) indicators, cardiovascular disease (CVD)-related pathological factors including ET-1, Hcy, AGT, Ang II, AT1, and AT2 as well as inflammatory cytokines IL-6, TNF- $\alpha$  were detected. Meanwhile, POMS evaluation was used to assess the mood state of subjects. The air quality in the two experimental sites was monitored, simultaneously. Results** The baselines of the indicators between the two groups were not significantly different. Little alteration of the indicators in the city group was observed after the experiment. While subjects exposed to the forest environment showed a significant reduction of BP in comparison to that of city group. The levels of bio-indicators in forest group were also lower than those in urban group and the baseline levels of themselves. POMS evaluation showed that scores of negative subscales were lowered after experiencing the forest bathing. Besides, the air quality in forest site was much better than that of urban area evidenced by the quantitative detection of negative ions and PM10. **Conclusion** Our results provided a direct evidence that forest bathing has therapeutic effects on human hypertension, which may partly result from its inhibition on several CVD associated factors, and thus inspiring its preventive efficacy against CVD.

### **HEALTH CARE OF ELDERLY FEMALE PRISONERS: IS AGE SPECIFIC TREATMENT NECESSARY?**

B.S. Elger, W. Bretschneider, V. Handtke, T. Wangmo, *Institute for Biomedical Ethics, University of Basel, Basel, Switzerland*

To date, very little is known about the healthcare conditions of ageing prisoners and almost no substantial knowledge is available concerning elderly female prisoners (EFP). Only a very few studies have explored this topic in the UK and the US. The aim of this study is to draw attention to the health issues faced by female prisoners in general and EFP in particular. A quantitative study was conducted in two prisons housing female prisoners: one located in the German- and the other in the French-speaking part of Switzerland. Healthcare related data from all available medical records of EFP were obtained (prisoners 50 years and older are deemed old). This EFP data was analysed and compared with a sample of younger female prisoners (YFP), younger than 50 years. Upon evaluating their healthcare patterns, it was evident that EFP were suffering from several health conditions such as musculoskeletal pains, osteoporosis, diabetes, and hypertension. Preliminary results highlight that EFP consume slightly more medications than YFP (15.0 vs. 12.6) and visits to nursing staff in the last six months were also more frequent for EFP (59 vs. 45.5). These numbers show that the healthcare patterns of EFP and YFP are not completely different. It is possible that other risk factors prevalent among prison population such as substance abuse and infectious diseases may have compounded their current health-

care patterns. However, with increasing age, EFP will display unique age specific needs, which would call for targeted and appropriate healthcare access.

### **COMMUNITY BASED PARTICIPATORY RESEARCH METHODS TO PARTNER WITH AN AMISH COMMUNITY TO RESEARCH CARE OF AGING ADULTS**

H.M. Farrar, J.S. Wilson, *University of Oklahoma, Claremore, Oklahoma*

Amish communities are increasingly utilizing English (term for non-Amish) healthcare resources to promote the health and well-being of their community members. This intersection between Western healthcare systems and the Amish culture has not been explored in the scientific literature. Amish sequestration, resistance to acculturation, and minority population status are important considerations before research is done to investigate these interactions. Community Based Participatory Research (CBPR) principles engaged an Oklahoma Amish population with academic researchers. Discussions between the researcher and an Elder of this community identified a need to know more about healthcare resources used to care for aging adults both within the Amish community of Oklahoma and from English healthcare systems. The researcher and the Elder collaborated upon a qualitative research design with a central research question, the consent, and recruitment process. CBPR principles and a qualitative research design promoted equality during the course of the research, ensuring that their community would receive an equal share of the benefits of the research without bearing a disproportionate burden. The researcher's IRB also provided oversight to ensure a sustainable relationship between the academic and Amish communities. Throughout this process, enhanced engagement, equalization of power differentials, and promotion of community confidence and trust was noted. The Amish, although very self sufficient, are vulnerable to being left out of healthcare research and benefits because of being sequestered. Use of CBPR principles and collaboration with IRB provided additional protections for this minority group as they engaged and partnered in the English process of research.

### **THE EFFICACY OF A COMMUNITY-BASED SENIOR OUTREACH PROGRAM IN THE REDUCTION OF HOSPITAL READMISSIONS AND EMERGENCY DEPARTMENT VISITS AMONG LOW-INCOME CHRONICALLY ILL SENIORS**

M.K. Prior, B. Bahret, *Social Work, University of Toledo, Toledo, Ohio*

This purpose of this presentation will be to report on the effectiveness of a community-based senior outreach program in decreasing rehospitalizations and emergency department visits among low income chronically ill seniors. Participants had been repeatedly hospitalized with chronic illnesses and were subsequently served in an in-home program designed to address their psychosocial and medical needs. Participation in the program was found to be related to lower hospital readmission rates and emergency department usage. Clients also reported decreased financial concerns and depression and anxiety and increased social support. The study adds to the growing body of work supporting community-based programs as effective strategies for decreasing health care usage and improving quality of life for chronically ill seniors.

### **EXPLORING THE DEPTHS OF HEALTH LITERACY: ARE WE TEACHING THIS AND WHY DOES IT MATTER?**

S. Toth-Cohen, T. Vause Earland, *Thomas Jefferson University, Philadelphia, Pennsylvania*

Healthcare practitioners often work with older persons with low health literacy without realizing that this issue is limiting the success of their interventions. They may also lack awareness of the serious impact that low health literacy can have, since it associated with lower reported health status, increased hospitalizations, and increased morbidity (Levasseur & Carrier, 2011). This is especially problematic in the

current US healthcare system, which places an increased demands on consumers to manage their own their own health (Smith & Gutman, 2011). Thus, educators in the health professions must instill a sense of responsibility in future practitioners to understand the important role they play in promoting health literacy. Furthermore, students in the health professions must acquire the tools necessary to empower their clients using health literacy principles. This session will review the foundations of health literacy and discuss its particular significance for health professionals who aim to empower older persons to take charge of their own health. Discussion will include strategies for fostering health literacy in consumers to meet the demands of a changing health care environment; applications of health literacy for productive aging; use of virtual worlds in promoting the health literacy of older adults; and the development of a new instrument to evaluate knowledge of health literacy in students and practitioners in the health care field.

#### **MUTUAL DEPENDENCE OF RISKS OF CANCER AND CHRONIC NON-CANCER DISEASES: MEDICARE-BASED ANALYSIS**

I. Akushevich, J. Kravchenko, S.V. Ukraintseva, K.G. Arbeev, A.I. Yashin, *Duke University, Durham, North Carolina*

Interrelationships between risks of incidence of aging-associated diseases occurring in the same individual during lifetime are unclear. However, this phenomenon is common, especially in older adults. Recognizing the factors which impact diseases risks, help to optimize prevention strategies. Quantitative evaluation of such mutual dependence can be performed using the Medicare-based datasets, but it stays largely unexplored. Using the SEER-Medicare data, we empirically evaluated age patterns of incidence of cancer and chronic non-cancer diseases occurred after the onset of an earlier developed disease and compared these patterns with age-patterns observed in general population. In most cases, the onset of the disease increased the risk of subsequent diseases. Approximately twofold increase of subsequent diseases risk was observed for secondary cancers among patients with primary cancers, for lung cancer among myocardial infarctions (MI), for MI among diabetes, for MI among chronic kidney diseases, for asthma among lung cancers, for hip fracture among Parkinson's diseases, and for kidney disease among patients with chronic obstructive pulmonary disease. Lower risk of subsequent disease was registered for cancer among Alzheimer's disease patients, for colon cancer among arthritis, for asthma among melanomas, for goiter among prostate cancers, and for prostate cancer among patients with diabetes. Thus, there exists a mutual dependence between chronic diseases in older adults. Being Black and being male affected the risk of certain subsequent diseases and exceeded respective hazard ratios in general population. The gender and racial disparities decrease with increase of the number of comorbidities supporting unification of characteristics of health with aging

#### **DEVELOPING A MODEL OF MEDICATION ADHERENCE AMONG FILIPINO ELDERLY**

F.B. Guiang, K.J. Guevara, A.I. Gutierrez, A.S. Habaluyas, M.P. Hizon, S.G. Idanan, A.B. De Guzman, *University of Santo Tomas, Manila, Philippines*

Anchored on Ajzen's Theory of Planned Behavior, this paper purported to develop and test a model of medication adherence among Filipino elderly (n= 325) relative to their medication belief, follow-up visits, consultation satisfaction, memory task, trust with physician, perceived stress, memory strategies, social support, memory load, depression, length of time taking the medication, number of conditions, and self-efficacy with medication adherence. Structural equation modeling (SEM) was employed to study causalities among all parameters. Results revealed that depression, trust with physician, and number of conditions affect adherence positively while event-based memory, consultation satisfaction, memory load, and external memory strategy affect otherwise. Some suggested variables were found to have no impact. As this study

reveals, careful consideration should be given to multiple factors and their interrelationship should be examined well. Since many factors can influence medication adherence behavior and the reasons of their non-compliance are also varied, multifaceted solutions must be developed.

#### **A CASE FOR CONSUMER ACTIVATION: LESSONS FROM CARE TRANSITIONS PILOTS**

E.S. Kearns, V. Parker Callahan, *Planning and Development, Greater Lynn Senior Services, Lynn, Massachusetts*

The Coleman CTI model has been used as a cornerstone for care transitions pilots across the country including those funded by the Administration on Aging (AoA) and the Center for Medicaid and Medicare Services (CMS). This paper examines findings based on evaluation of our regional ADRC care transitions project, which is one of sixteen funded nationally, and a modified pilot created in response to evaluation findings in the former. This paper presents findings and suggests recommendations for subsequent pilots. Findings indicate that the model fails in three areas: 1) hospitals are not uniformly ready to become open systems; 2) consumers are not well enough to understand and agree to coaching while sick and in the hospital; and 3) thirty days is not enough time to grow sustainable consumer activation. The paper includes analysis of variables from patient activation measure, Coleman's CT3, medical discrepancy tool, and red flags tool, and additional demographics; follow-up surveys; and coaches' focus groups. Recommendations informed by these findings have potential national implication for replicating an augmented model that includes: 1) using the CTI model to activate in some settings and at some points in time but not all; 2) moving from a hospital-centric model to activating community pulse points where coaches meet consumers and begin the activation process while they are out of the hospital and well; 2) using the hospital as one of many community pulse points; and 3) extending coaching beyond the 30-day period.

### **SESSION 1340 (POSTER)**

#### **HEALTH PROMOTION**

##### **COMMUNITY CASE MANAGEMENT SERVICE – A PILOT PROJECT AT AGENCY FOR INTEGRATED CARE**

K.H. Chua, *Care Integration Department, Agency for Integrated Care, Singapore, Singapore*

Purpose Singapore's ageing population (above 60 years old) will grow from about 10% to 26% in 2030. With increase in life expectancy and low fertility, those aged above 75 years old will grow from 2.6% in 2010 to 7.6% in 2030. This rapid increase will see more elderly with limitations in activities of daily living, mobility, higher prevalence of chronic conditions and possibly social issues such as lower involvement with family, society, work and financial adequacy. About CCMS In June 2011, the Agency for Integrated Care (AIC) piloted Community Case Management Service (CCMS) to improve the longitudinal integration of care services across the continuum. AIC is set up by Singapore's Ministry of Health to oversee, coordinate and facilitate all efforts in care integration. CCMS supports the 'frail frequent fliers' who move across hospitals, and the frail elderly to live in the community as long as possible. It takes a preventive approach to delay or avoid deterioration of the elderly, as well as unnecessary utilization of institutionalised care. CCMS scope includes specialised case management, complex care coordination, chronic disease management, education and information to empower clients, caregivers and caregivers' support. It aims to reduce unplanned hospital admissions and ED visits; improve or maintain quality of life for clients and families; and reduce caregivers' stress. Con-

clusion The programme will continue to enable our clients and caregivers have a better quality of life in the community.

### THE EFFECTS OF AGE AND EXPERIENCE ON COMMUNITY SUPPORT AMONG VOLUNTEER TO PREVENT ELDERLY ISOLATION

Y. Kanaya<sup>1</sup>, A. Kono<sup>1</sup>, E. Tadaka<sup>2</sup>, Y. Dai<sup>2</sup>, W. Itoi<sup>2</sup>, *1. School of Nursing, Osaka City University, Osaka, Japan, 2. Yokohama City University, Yokohama, Japan*

The purpose of the present study was to investigate relationships between community support for the elderly across years of experience and age among volunteer social worker (VSW). VSW are expected to support community-dwelling elders to detect and prevent social isolation in Japan. Methods : A total 748 VSW were administered questionnaires concerning community commitment (CC), self-efficacy in supporting community-dwelling elders (ESCE), generativity (G), and sense of community (SC). Two-way ANOVA on age and years of experience (0-3, 4-8 and >9 years) were performed on each of the measures. Results : Across all age groups, levels of CC was higher for those with 4-8 years and 9 and more years of experience than those with 0-3 years experience, while only those with 9 and more years of experience showed higher levels of ESCE relative to those with 4-8 years or 0-3 years of experience. There was not an interaction between age and experience of CC, but levels of CC was significant for the main effect of years of experience. There was not an interaction between age and experience of ESCE, but levels of ESCE was significant for the main effect of age. Levels of ESCE was greatest for older VSW compared with younger VSW. Conclusion : The results suggest that CC increased with more years of experience, while level of ESCS increased with age but not years of experience. At promoting activities of LVHG, it is important to educate them how to support community-dwelling elders from isolation at each ages.

### DO SOCIAL NETWORKS BUFFER THE NEGATIVE EFFECTS OF HEALTH PROBLEMS ON DEPRESSIVE SYMPTOMS FOR COMMUNITY DWELLING OLDER ADULTS?

J. Yoon, B.J. Bowers, *School of Nursing, Univ of Wisconsin-Madison, Madison, Wisconsin*

Research has demonstrated that stressors, such as physical or cognitive health problems, have negative effects of on mental health of older adults. Studies of stress-buffering model indicate that social networks are an important factor in reducing depression caused by life stressors. This study examined whether social networks decrease the effects of health related stressors on depressive symptoms for community dwelling older adults. A secondary data analysis was conducted on data from the Korean Longitudinal Study of Ageing. Analyzed of 8,688 adults over 65 years from the first wave in 2006 was conducted. Health related stressors were measured by IADL function and cognitive impairment. Social networks were measured by two family networks (marital status and number of children) and two non-family networks (level of relationships with friends/relatives and level of social activities). Moderating effects were examined by adding eight interaction terms of two health problem variables and four social network variables on the main effect regression model while controlling for demographics including age, gender and income. Results showed that relationship between cognitive impairment and depressive symptoms was moderated in the group of married older adults. And the relationship between the level of IADL function and depressive symptoms was moderated in the older adults who had closer relationships with friends or relatives. These results indicate that positive effects of social networks reduce the negative effects of health related stressors on psychological wellbeing in the sense of coping resources for older adults.

### VARIATION IN DNA REPAIR PATHWAY GENES IS ASSOCIATED WITH HUMAN LONGEVITY AND AGING PHENOTYPES

M. Soerensen<sup>1,2</sup>, K. Christensen<sup>1,2</sup>, T. Stevnsner<sup>3</sup>, V.A. Bohr<sup>3,4</sup>, L. Christiansen<sup>1,2</sup>, *1. The Danish Aging Research Center, Epidemiology, Institute of Public Health, University of Southern Denmark, Odense, Denmark, 2. Department of Clinical Genetics and Department of Clinical Biochemistry and Pharmacology, Odense University Hospital, Odense, Denmark, 3. The Danish Aging Research Center; Department of Molecular Biology and Genetics, Aarhus University, Aarhus, Denmark, 4. Laboratory of Molecular Gerontology, National Institute on Aging, National Institute of Health, Baltimore, Maryland*

Genetic factors contribute to variation in human life span as well as to aging-related traits such as cognitive decline and impaired physical functioning. The candidate genes thought to contribute to these phenotypes take part in several biological processes including oxidative stress, IGF/insulin signaling and DNA damage signaling and repair. We have previously explored 77 genes of the DNA damage signaling and repair pathway by investigating 592 tagging SNPs in 1089 oldest-old and 736 middle-aged Danes (Soerensen et al., in press). We found variation in the *H2AFX*, *MLH1*, *NTLH1*, *POLB*, *RAD52*, *RAD23B*, *WRN*, and *XRCC5* genes to be associated with longevity. Of these, variation in *RAD52* showed a non-significant tendency of similar direction of effect in a replication sample of German oldest-old. In the present study we investigated the 77 candidate genes with respect to aging phenotypes known to predict mortality in the oldest-old: physical functioning (grip strength), cognitive functioning and disability (activity of daily living). The most interesting findings of the present study are the associations of variations in *RAD23B* and *RAD52* to cognitive and physical functioning: the minor allele of a *RAD23B*-SNP associated with reduced cognitive functioning and the minor allele of a *RAD52*-SNP associated with increased grip strength (P-values (F-test) =  $8.1 \times 10^{-5}$  and  $2.7 \times 10^{-5}$ , respectively). Interestingly, we previously reported minor alleles of SNPs in *RAD23B* and *RAD52* to pose negative and positive effects on longevity, respectively. Finally, the *RAD23B*-SNP identified in the present study was in LD ( $R^2=0.71$ ) with rs1805329-*RAD23B* previously reported as negatively associated with longevity.

### A COMPARISON OF A VETERANS DIRECTED HEALTH CARE PROGRAM VS. COMMUNITY NURSING HOME PLACEMENT

F.J. Kier<sup>1,2</sup>, J. Snider-Meyer<sup>1</sup>, A.J. Byrne<sup>1</sup>, D.A. Levine<sup>1</sup>, S.K. Gresser<sup>1</sup>, H.M. Smith<sup>1,2</sup>, *1. RECC, Milwaukee VAMC, Milwaukee, Wisconsin, 2. Medical College of Wisconsin, Milwaukee, Wisconsin*

Many age-related illnesses require support and/or assistance from others in order for the affected individual to be able to adequately function, but do not require residence in a long term care facility (Benjamin, 2001). To assist such individuals who simply need an able-bodied person in order to remain in their homes, "consumer directed" models of care, whereby these individuals were able to "hire" a person of their selection to provide them with care, were developed, and became popular, with studies suggesting a high degree of user satisfaction (Wiener, Anderson, & Khatutsky, 2007; Clark, Hagglund & Sherman, 2008). Public policy makers felt that consumer directed home programs would also be less costly, but more research on the issue of cost savings needs to be done (Buntin, et al, 2006). The purpose of this study is to compare the cost effectiveness and patient satisfaction of a veterans directed health care program (VDHC) with traditional community nursing home (CNH) care. This study retrospectively compared the costs of care and patient satisfaction ratings of 23 patients in the VDHC program with a sample of 31 controls who are receiving care via the VA CNH program. Results showed significant cost savings with VDHC compared to CNH care. While there were statistically significant differences

between the two groups in terms of age, gender, ethnicity, and diagnoses, both groups appeared to have similar medical and/or psychiatric conditions that would typically require CNH or similar level of care, suggesting that VDHC programs would be cost effective for a portion of those patients who require continuous, supportive care.

#### **CARE PATHWAYS FOR COMMUNITY-DWELLING ELDERS PRESENTING VARIOUS PROFILES OF DISABILITY AND FRAILTY**

N. Dubuc<sup>1,2</sup>, L. Bonin<sup>3</sup>, L. Mathieu<sup>1,2</sup>, A. Tourigny<sup>3</sup>, M.Y. Tousignant<sup>1,2</sup>, C. Yves<sup>1,2</sup>, N. Delli-Colli<sup>2</sup>, 1. *School of nursing, Université de Sherbrooke, Sherbrooke, Quebec, Canada*, 2. *Research Center on Aging, Sherbrooke, Quebec, Canada*, 3. *University Laval, Quebec, Quebec, Canada*

**Introduction:** The home care and services provided to older adults with the same needs are often inadequate and highly varied. Care pathways (CPs) can resolve these issues. **Objective:** Present the development and validation of CPs for following up community-dwelling elders presenting various profiles of disability and indices of frailty. **Method:** A systematic, rigorous process was applied: (1) select a conceptual framework and determine expected characteristics; (2) document current practices and conduct a review of the literature; (3) define CPs based on the collective wisdom of an interdisciplinary working group; and (4) validate through consultation with a group of experts using the Delphi method and Lynn's approach (content validity index). **Results:** CPs are intended to prevent specific problems, maximize independence and promote successful aging. Based on real time data exploitation, they are organized according to a logical, dynamic process with the following general phases: (1) assessment and identification of risk factors; (2) synthesis of information and determination of needs; (3) planning interventions appropriate to the clinical situation and the expectations of the individual and family caregivers; (4) delivery and follow-up; (5) assessment of results and statement of discrepancies; and (6) revision and adjustment of plans. **Conclusion:** Clinically, CPs will facilitate the exchange of information between professions and services, and will support professionals in clinical decision-making with a view to adequately using resources and facilitating access to the necessary services. Once aggregated, the data will support managers in organizing the work of teams and providing follow-up for clients.

#### **DEVELOPMENT OF A SCALE TO EVALUATE THE QUALITY OF END-OF-LIFE HOME CARE SERVICES IN JAPAN**

A. Akiyama<sup>1</sup>, H. Hanabusa<sup>2</sup>, H. Mikami<sup>1</sup>, 1. *Division of Health Sciences, Osaka University Graduate School of Medicine, Suita city, Osaka, Japan*, 2. *Shinjuku Hiro Clinic, Shinjuku-Ward, Tokyo, Japan*

**Aim:** Evaluation of the quality of home care is an important issue for the improvement of end-of-life home care. The purpose of this study was to develop a scale to measure the quality of home care from the perspective of the bereaved family and to examine the reliability and validity of the scale. **Methods:** We conducted an anonymous mailed survey for 349 bereaved family members who received home care services from home care supporting clinics (HCSC) in the 23 wards of Tokyo, Japan. Questionnaires contained a 28-item questionnaire to measure overall satisfaction with home care and the Texas Revised Inventory of Grief (TRIG). **Results:** Of the 349 subjects, 143 responders were finally analyzed. Using the exploratory factor analysis we determined a 15-item HCSC scale consisting of six subscales: 1) good relationship with the physician, 2) care by medical staff, 3) fulfilled home care service system, 4) psychological well-being of the caregiver, 5) provision of direct care by the caregiver, 6) being free from pain or symptoms. Cronbach's alpha coefficient of this scale ranged from 0.77 to 0.93. Test-retest reliabilities ranged from 0.66 to 0.88. **Conclusions:** Our results indicate that the 15-item HCSC scale we developed is a useful tool with

satisfactory reliability and validity to measure the quality of end-of-life home care from the perspective of the bereaved family.

#### **VIOLENCE IN THE WORKPLACE IN NURSING HOME SETTINGS: A PRELIMINARY ANALYSIS**

C. VandeWeerd, M. Coulter, V. Chee, J. Nguyen, *Department of Community and Family Health, College of Public Health, University of South Florida, Tampa, Florida*

The World Health Organization estimates that more than half of all workers in the healthcare sector worldwide have experienced violent incidents at some point during their careers (World Health Organization, 2009). In an effort to better understand negative interactions experienced by staff in nursing homes, qualitative interviews were conducted with nine staff members employed in nursing homes throughout the United States. These semi-structured interviews focused on: (1) The experience and impact of physical, psychological, and sexual aggression towards staff from residents or co-workers; (2) The identification of the contextual factors that influence these interactions; (3) Recommendations for future changes in the workplace. Emergent themes identified included (1) A lack of support from administration in dealing with workplace aggression (2) Experiencing physical assault. Preliminary findings suggest that acts of co-worker to co-worker, and patient to co-worker violence are occurring in nursing home settings and represent a danger to nursing home employees. Effective screening and placement of dementia patients was suggested by front line nursing home staff to address these dangers. The results presented are preliminary. As our sample size increases, further analysis will confirm consistency across larger samples.

#### **WAIVER PROGRAMS MEDICATION RECONCILIATION: A COLLABORATION OF HOME CARE AND PRIMARY CARE PHYSICIANS**

K.S. Beckholt<sup>1</sup>, S. Spoelstra<sup>2</sup>, C.W. Given<sup>1</sup>, 1. *College of Human Medicine, Michigan State University, East Lansing, Michigan*, 2. *Michigan State University - College of Nursing, East Lansing, Michigan*

Medication reconciliation for the elderly can promote optimal health and improve quality of life. This research describes a "Medication Reconciliation Algorithm" founded upon current evidence based literature and protocols, tailored to the elderly. Purpose and need of medications are included along with comparison to the Beers list. Patient symptoms are assessed as well as adherence issues. Need for medication reconciliation is based on the mean of 11 medications with scripts from multiple physicians. A total of 15 "steps" define the algorithm. Clients served by Home and Community Based Waiver programs scheduled appointments with their primary care physicians. Patients had their medications reviewed/updated based upon a) their medication lists from their medical care records, b) the medication lists obtained by care managers during home care assessments, and c) the medications they bring to the medication reconciliation appointment. Differences existed related to multiple providers, hospitalizations. Purposes of medications, drug-drug interactions, and adherence were evaluated. The medications from each collection method were compared, the differences summarized and revised, and patient reported adherence to medications assessed. This work is designed to evaluate how primary care physicians can rely on medication lists and to develop collaboration with home care coordinators to reconcile medications and improve treatment of chronic conditions among the elderly.

#### **HOSPITAL AT HOME: TRANSITIONS OF CARE TEAM MODEL, REDUCING RE-ADMISSIONS WHILE TRAINING IN GERIATRICS**

B. Maloney, F. Silverman, *Social Work, Beth Israel Medical Center, New York, New York*

Beth Israel Medical Center is an urban teaching hospital in New York City. The Department of Social Work's Hospital at Home program pro-

vides a seamless patient centered transition through varied levels of care (ie. acute, sub-acute, and home). A multi-disciplinary team coordinated by a licensed social worker, consists of social work interns, medical residents, psychiatric fellows, nursing students, chaplaincy interns, para-professional health navigators and other community partners. This program bridges the gap in services during critical transitions of care. The continuity of care model ensures patient health and well-being, allowing safe and independent living in their home. Hospital at Home reduces hospital readmission through review of discharge orders, medication reconciliation, and community connection for otherwise isolated seniors. Services include bio-psycho-social, psychiatric and spiritual assessment, individualized care planning, monitoring vitals, fall prevention safety checks, health education and counseling. Health navigators assist with concrete needs. In addition, the program facilitates collaboration across disciplines, training young professionals in geriatric services - an effort that also allows for a low-cost program model.

#### **“GUIA PARA UM ENVELHECIMENTO + ATIVO”: A STEP-BY-STEP BROCHURE TO PROMOTE ACTIVE AGING**

M. Machado, V. Moniz-Pereira, F. Carnide, H. André, F. Ramalho, A. Veloso, *Biomechanics and Functional Morphology Laboratory, Faculty of Human Kinetics, Technical University of Lisbon, Cruz Quebrada, Portugal*

**PURPOSE:** Aging population has significant public health implications for Portugal. The purpose of this study was to develop a consensus home exercise program that outlines each of the major areas of fall prevention by promoting lifestyle choices and behaviors for an active aging. **METHODS:** A cross-sectional study was designed to identify fall determinants. 647 subjects, aged  $\geq 65$ , were randomly recruited in Lisbon's metropolitan area. Trained interviewers administered questionnaires including socio-demographic, health perception and fall parameters; Yale Physical Activity Survey; and Functional Fitness Tests (CS; UG from Senior Fitness Test and items 4-7 from Fullerton Advanced Balance scale). Logistic regression analysis was used to model fall occurrence considering 3 fall groups. **RESULTS:** Poor health and lack of functionality are the most determinant factors to assess fall risk in Portuguese elderly. **CONCLUSION:** We tailored a safe and easy exercise program through the judicious application of these research results and exercise principles.

#### **A CORRELATIONAL STUDY OF SOCIAL SUPPORT NETWORKS WITH QUALITY OF LIFE AND HEALTH PROMOTION BEHAVIORS AMONG CHINESE COMMUNITY-DWELLING**

Y. Sheng<sup>1</sup>, Z. Li<sup>1</sup>, S. Wei<sup>4</sup>, A. Li<sup>2</sup>, Q. Pi<sup>3</sup>, D. Kong<sup>5</sup>, Y. He<sup>1</sup>, *1. School of Nursing of Peking Union Medical College, Beijing, China, 2. Beijing Fang Zhuang Community Health Center, Beijing, China, 3. Beijing He Ping Li Hospital, Beijing, China, 4. Wuhan Health Bureau, Wuhan, Hubei, China, 5. Wuhan Center of Disease Control, Wuhan, Hubei, China*

**Methods:** A convenience sample of 1142 elderly persons whose age were above 60yrs were recruited in the communities of Beijing and Hubei province. LUBBEN social network scale, the World Health Organization Quality of Life—OLD scale and Health-Promoting Lifestyle Profile II (HPLPII) were used to measure the social networks, the QOL and the health promotion behaviors of the elderly people. **Results:** The average age of the elderly people who were involved in the investigation was  $65.56 \pm 7.07$ . There were positive correlations between social support network and QOL ( $r=0.183, P<0.01$ ), and health promotion behavior ( $r=0.201, P<0.01$ ) of community-elderly people. And there was a moderate intensity positive correlation between the QOL and health promotion behavior ( $r=0.419, P<0.01$ ). There were significant differences among the three correlations above ( $P<0.01$ ), family networks have a correlation with QOL ( $r=0.184, P<0.01$ ) and neighbor networks, friendship networks have a correlation with health promo-

tion behaviors of elderly people ( $r=0.158; r=0.134, P<0.01$ ). **Conclusions:** Findings demonstrate the importance of social networks on quality of life and health promotion behaviors in community healthy aging. Intervention programs which improving QOL and health promotion behaviors of elderly people should be developed based on a social support networks.

#### **AVOIDING THE AVOIDABLE THROUGH EFFECTIVE REPROCESSING OF RME**

T. Saucedo, L. Baynosa, J. Hill, C. Hall, A. Barela, M. Buschmann, *VHA - Greater Los Angeles, Anaheim, California*

**Background :** The CDC recommends prevention screening for colorectal cancer for those 50 – 75 years by sigmoidoscopy or colonoscopy. For endoscopic procedures, reprocessing of reusable medical equipment (RME) is required yet it has become an area of concern due to breaches in equipment reprocessing. Between 2004-2010, 11,400+ Veterans were potentially exposed to hepatitis B, hepatitis C, and HIV secondary to such breaches. Despite low risk, sequelae associated with RME infection undermine patient safety and public trust. **Purpose:** To create and implement a program for proper reprocessing of RME. **Methods / Action Plan:** An interdisciplinary, nurse-led team developed and implemented an RME program evaluating required documentation, i.e., comprehensive inventory lists, manufacturers' manuals, and standard operating procedures (SOPs). Physical locations for reprocessing, incidence of flash sterilization, and instrument repair costs were identified. Routine maintenance of major capital equipment for automated reprocessing of RME was evaluated. **Findings / Results:** Assessment revealed significant deficits in compliance including manufacturer guidelines, training and competencies. Multiple reprocessing areas were centralized to enhance oversight. Post-training audits noted 100% of all staff competent in reprocessing RME. Flash sterilization occurrences were reduced by  $>90\%$ . In 2010, post-intervention RME repair cost savings were \$186,796.60. **Conclusion:** Although no one enjoys colorectal prevention screening, it is much less worrisome when there is confidence in healthcare providers and their equipment. Studies have confirmed that older adults who had colorectal screening were 50% less likely to experience colorectal cancer. Correct reprocessing of RME is essential to ensure positive health outcomes in healthcare procedures.

#### **A LONGITUDINAL EFFECT OF A NOVEL EXERCISE PROGRAM ON COGNITIVE AND PHYSICAL FUNCTION IN OLDER ADULTS**

T. Okura<sup>1</sup>, Y. Mitsuishi<sup>2</sup>, J. Yoon<sup>1</sup>, N. Kitano<sup>2</sup>, J. Yoon<sup>2</sup>, E. Himori<sup>2</sup>, T. Kim<sup>2</sup>, Y. Soma<sup>2</sup>, *1. Faculty of Health and Sport Sciences, University of Tsukuba, Tsukuba Ibaraki, Japan, 2. Doctoral Program in Physical Education, Health and Sport Sciences, University of Tsukuba, Tsukuba Ibaraki, Japan*

To prevent physical frailty and a decline in cognitive function in older adults, regular physical activity and exercise training are considered indispensable. We have developed a novel exercise program for preventing falls and dementia called “Square-Stepping Exercise” (SSE), which can induce functional activation of the brain. We previously demonstrated a short-term (3 months) effect of the SSE in older Japanese people. The purpose of this study was to investigate the longitudinal effect on the cognitive and physical functions of community-dwelling, older, Japanese women who regularly performed the SSE over 2 years. Our study had 2 groups: the SSE Group ( $n=25$ , mean age  $70.8 \pm 3.5$  years) in which participants voluntarily continued the SSE program once or twice per week for 2 years; and the Control (C) Group ( $n=28$ , mean age  $72.2 \pm 4.8$  years) who were randomly selected from the basic resident register. We evaluated cognitive function using the Five Cognitive Function Test and used a standard group of 11 physical performance tests to evaluate physical function. The SSE Group improved significantly in physical function such as walking ability ( $p<0.001$ ), hand dexterity ( $p<0.05$ ) and reaction time ( $p<0.001$ ), while

no improvement was observed in the C Group, and walking ability declined ( $p < 0.01$ ). There was a greater increase in the cognitive function score in the SSE Group (+16.8%, effect size:  $\eta^2 = 0.44$ ) compared with the C Group (+9.8%,  $\eta^2 = 0.29$ ). These results suggest that regular and voluntary performance of SSE by older women over two years could help them maintain or improve their cognitive and physical functions.

#### **UTILIZING THE OMAHA DOCUMENTATION SYSTEM TO MEASURE THE BENEFITS OF PROVIDING ROSEN METHOD EXERCISE SESSIONS TO ADULTS FIFTY-FIVE AND OLDER AT AN INDEPENDENT LIVING COMPLEX TO INCREASE MOVEMENT AND ENHANCE WELL BEING**

T. Adelman, *The Valley Foundation School of Nursing, San Jose State University, San Jose, California*

**Purpose:** This study measures the benefit of adult residents participating in weekly gentle Rosen Method exercise sessions at an independent living facility in Northern California over a twelve-week period. **Design and Methods:** The Omaha Documentation System was utilized to measure the knowledge, behavior, and status, of adult residents, fifty-five years of age and older, prior to providing gentle Rosen Method Exercise classes and again 12 weeks later. **Results:** Residents expressed an increase in well being after participating in the weekly Rosen Method exercise class. In addition their knowledge on the importance of movement increased, their behaviors indicated an improvement in activity levels, and their overall health status and energy improved as indicated by the Omaha Documentation System measures. **Implications:** Rosen Method Exercises are a gentle, health promoting and sustaining activity for adults motivated to increase movement in their lives. **Key Words:** Omaha Documentation System; Rosen Method Exercise; Community Health.

#### **RELATIONSHIP OF VITAMIN D3 DEFICIENCY TO DIABETES AND DEPRESSION IN OLDER ADULTS**

E. Farrington, M.D. Moller, *Yale University, School of Nursing, New Haven, Connecticut*

In recent years, vitamin D deficiency (25-hydroxyvitamin D) has gained much attention in the public eye and has been recognized as a pandemic, especially among the aging population. The aging process affects the way vitamin D is absorbed and metabolized in the human body. Older adults have decreased ability to absorb Vit D through the skin, often do not receive adequate sunlight, and often have poor nutrition, which further places them at an increased risk for vitamin D deficiency. This vitamin deficiency in late life may place older adults at an increased risk for developing other chronic diseases as well as exacerbating existing conditions. It has been well established that vitamin D promotes skeletal health and bone mineralization, however, the relationship between vitamin D and other chronic diseases, such as diabetes and depression, is controversial. Using an integrative literature review method, published research on vitamin D deficiency was obtained and the relationship between vitamin D3 deficiency in older adults and the development of diabetes, and depression was explored. Results have implications on the use of vitamin D3 supplementation in health care settings as nurse practitioners are at the forefront of health promotion, health maintenance and patient education.

#### **WITH ADEQUATE SLEEP, DOES BEDTIME AFFECT PHYSICAL AND COGNITIVE FUNCTION AND DEPRESSIVE SYMPTOMS?**

N. Kitano<sup>1</sup>, K. Tsunoda<sup>1</sup>, T. Tsuji<sup>1</sup>, J. Yoon<sup>1</sup>, T. Monma<sup>1</sup>, T. Muraki<sup>2</sup>, I. Sanada<sup>2</sup>, T. Okura<sup>1</sup>, *1. University of Tsukuba, Tsukuba, Ibaraki, Japan, 2. Ibaraki Prefectural University of Health Sciences, Ami, Ibaraki, Japan*

Although it is well-known that 6–8 hours of sleep provides many health benefits, little is known about the effect of bedtime on health. We investigated associations between bedtime, depressive symptoms, and

physical and cognitive function in older adults who usually sleep 6–8 hours per night. We mailed invitation letters to 1,347 Japanese adults aged 65–85 years and signed up 240 eligible subjects (73.4±4.9 years; 119 men, 121 women). Sleep duration and bedtime were self-reported. Subjects were assigned to 4 groups according to usual bedtime: before 9 PM (early), 9–10 PM (middle-early), 10–11 PM (middle-late), and after 11 PM (late). We measured physical function using 8 physical performance tests. We used the Geriatric Depression Scale to measure depressive symptoms, and the Five Cognitive Function Test for cognitive functions. An analysis of covariance was performed adjusted for age, gender, body mass index, and education. Individuals with an early bedtime performed significantly worse in the timed up and go, timed standing from a long sitting position, and choice stepping reaction time tests, compared with the other three groups ( $P < 0.05$ ). Moreover, although there was no statistical significance, the early bedtime group tended to have lower scores for depressive symptoms and cognitive function than the other three groups. Going to bed early may lead to poor physical performance in older adults, even when receiving 6–8 hours of sleep.

#### **DIFFERENCES AMONG PEOPLE WHO DISCONTINUE, CONTINUE OR LEAD EXERCISE AFTER INITIAL EXERCISE PROGRAM**

Y. Mitsuishi<sup>1</sup>, K. Tsunoda<sup>1</sup>, T. Muraki<sup>2</sup>, K. Hotta<sup>2</sup>, T. Tsuji<sup>1</sup>, J. Yoon<sup>1</sup>, J. Yoon<sup>1</sup>, T. Okura<sup>1</sup>, *1. University of Tsukuba, Tsukuba, Japan, 2. Ibaraki Prefectural University of Health Sciences, Ami, Japan*

The purpose of this study was to investigate group differences in physical function, depression status, and cognitive function at the end of an organized exercise program. After participating in our exercise program, participants were divided into one of three groups for this study: the Community Circle Group, which continued the exercise program at a community circle ( $n = 28$ , mean age 71.1±3.6 years); the Leader Group, which participated as a volunteer leader of a community circle ( $n = 27$ , mean age 70.1±3.4 years); and the Discontinue Group, which did not continue the exercise program ( $n = 40$ , mean age 71.8±5.5 years). We evaluated physical function using a standardized score of 11 physical performance tests and evaluated depression status using the Geriatric Depression Scale (a higher score represents a more unfavorable psychological status). Cognitive function was evaluated by the Five Cognitive Function Test. In comparing the three groups, the standardized physical performance score was significantly lower in the Discontinue Group ( $-2.2 \pm 7.5$ ) than in the Community Circle Group ( $1.6 \pm 4.0$ ) and Leader Group ( $2.8 \pm 4.8$ ). Depression status also was more unfavorable in the Discontinue Group ( $4.8 \pm 3.2$ ) than in the Community Circle ( $2.6 \pm 1.9$ ) and Leader ( $2.7 \pm 1.9$ ) Groups. Cognitive function was significantly lower in the Discontinue Group ( $67.0 \pm 20.2$ ) than in the Leader Group ( $83.7 \pm 16.3$ ). These results suggest that people who volunteer as a leader for or continue in an exercise program at a community circle after an initial exercise program have improved physical and cognitive functions and a favorable psychological status.

#### **ROLE OF MACRO AND MICRONUTRIENTS ON COGNITIVE FUNCTIONING AMONG OLDER ADULTS**

E. Handing<sup>1</sup>, B. Small<sup>1</sup>, K. Rawson<sup>1</sup>, N. Kumar<sup>2</sup>, *1. Aging Studies, University of South Florida, Tampa, Florida, 2. University of South Florida, College of Medicine, Department of Nutrition, Moffitt Cancer Center, Tampa, Florida*

In recent years, considerable attention has been focused on ways for older adults to maintain their cognitive abilities. A healthy diet has been shown to be positively related to cognitive performance among older adults. For example, adherence to a Mediterranean diet has been related to lower incidence of Alzheimer's disease (AD). Moreover, dietary antioxidants reduce free radical damage in the brain, and decrease



oxidative stress associated with aging and AD. One limitation of past research is the reliance upon questionnaires that focus on the frequency and adherence of general dietary patterns, without considering specific nutrient intake. In the current study, we administered 2-day 24-hour dietary recall that enabled us to evaluate the relationship between dietary nutrients and cognitive performance. Nutrient intake was further analyzed for primary energy sources, fat and cholesterol, carbohydrates, fiber, vitamins, carotenoids, and fatty acids using the National Data Systems database. Participants consisted of 55 older adults (Mean Age=74.23) who were participating in a clinical trial of a nutrition supplement on cognitive performance. Results indicate an association between intake of monounsaturated fatty acids, polyunsaturated fatty acids, vitamin B12, vitamin B1, and vitamin D3 on attention, working memory, visuospatial scanning, and speed of processing. The results suggest that dietary properties can be an important source of variation in the cognitive performance of older adults, as well as an avenue for future interventions.

### **ASSOCIATIONS BETWEEN WALKING HABITS, FREQUENCY OF PUBLIC TRANSIT USE AND OBESITY IN OLDER ADULTS: RESULTS FROM THE VOISINUAGE STUDY**

J. Desroches<sup>1,2</sup>, M. Brochu<sup>1,2</sup>, M. Levasseur<sup>1,4</sup>, L. Richard<sup>3,7,8</sup>, L. Gauvin<sup>5,6,7</sup>, Y. Kestens<sup>5,6,9</sup>, H. Payette<sup>1,10</sup>, 1. *Research Centre on Aging, Health and Social Services Centre – University Institute of Geriatrics of Sherbrooke (CSSS-IUGS), Sherbrooke, Quebec, Canada*, 2. *Faculty of Physical Education and Sports, University of Sherbrooke, Sherbrooke, Quebec, Canada*, 3. *Institut de recherche en santé publique de l'Université de Montréal, Université de Montréal, Montréal, Quebec, Canada*, 4. *School of Rehabilitation, Faculty of Medicine and Health Sciences, Université de Sherbrooke, Sherbrooke, Quebec, Canada*, 5. *Department of Social and Preventive Medicine, Université de Montréal, Montreal, Quebec, Canada*, 6. *Centre de recherche du Centre Hospitalier de l'Université de Montréal, Montreal, Quebec, Canada*, 7. *Léa-Roback Research Centre on Social Inequalities of Health in Montréal, Université de Montréal, Montreal, Quebec, Canada*, 8. *Faculty of Nursing, Université de Montréal, Montreal, Quebec, Canada*, 9. *Montreal Public Health Department, Montreal, Quebec, Canada*, 10. *Department of community medicine, Faculty of Medicine and Health Sciences, Université de Sherbrooke, Montreal, Quebec, Canada*

To reduce obesity rates, a high priority for the World Health Organization, a better understanding the relationship between lifestyle habits, neighbourhood factors and obesity is necessary. This study examined the association between the number of hours walking, the frequency of public transit use and obesity within an urban aging population. This cross-sectional study (632 older adults) is part of the VoisiNuAge longitudinal study. Data: obesity, personal characteristics and related-health variables (age, education, marital status and family income, physical and mental health status perception, number of medications and number of chronic diseases), lifestyle habits related to neighborhood (frequency of eating at restaurant, tobacco use, frequency of public transit use, availability of a motor vehicle and driver's license, number of year of residence in current dwelling, number of years of residence in neighborhood and number of hours walking per week) and neighborhood factors (availability to resources, proportion of services/amenities and restaurant density). Multiple linear regression analyses were performed. Lower number of hours walking, lower frequency of public transit use and lower frequency of meals intake explained 9.6% of obesity in older men after controlling for personal characteristics, lifestyle habits and neighborhood factors. In older women, poorer perceived physical health status, older age, tobacco use and lower family income explained 14.5% of obesity. Future studies should investigate why obesity is influenced

by the number of hours walking and the frequency of public transit use in older men while having no effect in women.

### **BEHAVIORAL HEALTH COACHING FOR RURAL VETERANS WITH DIABETES AND DEPRESSION**

S. Robertson<sup>1,2</sup>, A. Naik<sup>1,2</sup>, C. White<sup>3</sup>, M. Armento<sup>1,2</sup>, B. Lawrence<sup>1,2</sup>, J. Cully<sup>1,2</sup>, 1. *Health Services Research & Development Center of Excellence, Michael E. DeBakey Veteran's Affairs Medical Center, Houston, Texas*, 2. *Baylor College of Medicine, Houston, Texas*, 3. *Texas A & M, College Station, Texas*

Depression is Associated with Nonadherence to Self-Care and Poor Blood Glucose Control among Individuals with Diabetes. Concurrent Treatment of Depression and Diabetes Remains Limited, Especially in Rural Communities with Limited Access to Comprehensive Care. Our Study Tested the Feasibility and Preliminary Outcomes of a 10-Session (12-Week) Telephone-Delivered Coaching Intervention (Healthy Outcomes through Patient Empowerment [HOPE]) for Rural-Dwelling Older Adults with Uncontrolled Diabetes and Comorbid, Clinically Significant Depressive Symptoms. Eight Participants (Mean Age = 62) Were Recruited from the National VA Database System and Enrolled. Measures of Diabetes Control (HbA1c), Depressive Symptoms (Patient Health Questionnaire-9 [PHQ-9]), and Diabetes-Related Distress (Problem Areas in Diabetes Scale [PAID]) Were Obtained at Baseline, Post-Intervention and 6-Month Follow-Up. Clinically Significant Improvements Were Realized Post-Intervention and at 6-Month Follow-Up on All 3 Measures. Notable Effect Sizes using Cohen's d Were Found Post-Intervention and at 6-Month Follow-Up, Respectively, for HbA1c (d=0.36; d=0.28), PHQ-9 (d=1.48; d=1.7), and PAID (d=1.50; d=1.06). On Average, HbA1c Values Dropped 1.1% (SD = 1.7) from Baseline to Post-Intervention. PHQ-9 and PAID Scores Also Decreased by an Average of 5.14 (SD = 2.3) and 17.68 (SD = 10.7), Respectively. Improvements Were Sustained at 6-Months. Clinically Significant Changes in Outcome Measures among this Medically Complex Subset of Patients Provide Preliminary Evidence of the Effectiveness of a Telephone-Based Behavioral Coaching Approach to Chronic Illness Management. A Future Randomized Clinical Trial Will Test HOPE's Broader Effectiveness with Rural Veterans within an Implementation Framework.

### **AGE, SELF-EFFICACY AND STRESS-RELATED GROWTH: FINDINGS FROM THE DAVIS LONGITUDINAL STUDY**

X. Bi<sup>1</sup>, C.M. Aldwin<sup>2</sup>, 1. *Center for Health Care Evaluation, Menlo Park, California*, 2. *Oregon State University, Corvallis, Oregon*

It is widely believed that older individuals are more likely to be coping with chronic stressors which may be more difficult to resolve, and which may impact their ability to experience stress-related growth (SRG). We examined this in a cross-sectional sample of 424 members of the Davis Longitudinal Study (Mage = 42.85, SD = 11.50). Dividing the sample into individuals who reported that their problems had been resolved or not, we found that there were no age differences and no demographic differences between these groups. However, individuals who had not resolved their problem were less likely to use positive action coping and reported lower levels of self-efficacy. They also reported lower levels on four of the five indicators of stress-related growth. A confirmatory factor analysis identified significant differences between the pathways of the two groups ( $\Delta\chi^2 = 3.714$ ,  $\Delta df = 1$ ,  $p = 0.05$ ). In individuals who had not resolved their problems, there was no relationship between self-efficacy and SRG,  $\beta = -.014$ , but there was a significant pathway between these two variables for those who had resolved their problems,  $\beta = .159$ . Thus, middle-aged adults were just as likely to resolve their problems as younger adults, and resolution of problems was more dependent on coping strategies and self-efficacy than on demographics.

## DENTAL CARE AND DENTITION STATUS ARE ASSOCIATED WITH QUALITY OF LIFE IN OLDER VETERANS WITH DIABETES

D.L. Huang<sup>1,2</sup>, K.C. Chan<sup>2</sup>, B.A. Young<sup>1,2</sup>, 1. *Veterans Affairs Puget Sound Health Care System, Seattle, Washington*, 2. *University of Washington, Seattle, Washington*

**BACKGROUND:** This study's objective was to determine the association between quality of life and oral health measures in older veterans ( $\geq 65$  years) with self-reported diabetes. **METHODS:** Cross-sectional analysis of Behavioral Risk Factor Surveillance System 2006, 2008, and 2010 data. Quality of life was assessed using the Centers for Disease Control and Prevention Healthy Days Core Module (CDC HRQOL-4). Descriptive and multivariable logistic regression analyses were performed. **RESULTS:** Of 17,646 subjects, mean age was 74.8 years, 97.8% male, 19.9% racial/ethnic minority, 88.8%  $\geq$ high school graduate, 98.1% had health care coverage, 4.6% reported a cost barrier to health care, 36.1% reported no dental care in the past year and 81.5% had permanent teeth removed due to caries or periodontal disease. Approximately 41% of older veterans with diabetes reported fair or poor self-rated general health and on average 7.46 physically unhealthy days, 2.33 mentally unhealthy days and 7.78 activity limitation days. Logistic regression models evaluating self-rated general health showed that older veterans with diabetes who received no dental care in the past year had 1.35 odds of fair or poor self-rated general health (95% CI 1.19, 1.55) compared to those who received dental care in the past year. Those with permanent teeth removed had 1.27 odds of fair or poor self-rated general health (95% CI 1.07, 1.51) compared to older veterans who reported no permanent teeth removed. **CONCLUSIONS:** Lack of dental care in the past year and loss of permanent teeth were associated with worse self-rated general health in older veterans with diabetes.

## CHILDHOOD SOCIOECONOMIC STATUS AND ADULT BONE STRENGTH: FINDINGS FROM THE MIDLIFE IN THE U.S. STUDY

T. Mori<sup>1,2</sup>, C.J. Crandall<sup>3</sup>, S. Merkin<sup>4</sup>, T. Seeman<sup>4</sup>, N. Binkley<sup>5</sup>, G.A. Greendale<sup>4</sup>, A.S. Karlamangla<sup>4</sup>, 1. *Geriatric Research Education and Clinical Center, VA Greater Los Angeles Healthcare System, Los Angeles, California*, 2. *UCLA Fielding School of Public Health, Los Angeles, California*, 3. *Division of General Internal Medicine, David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, California*, 4. *Division of Geriatrics, David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, California*, 5. *University of Wisconsin-Madison Osteoporosis Clinical Center and Research Program, Madison, Wisconsin*

Adult bone mass depends on acquisition in childhood, which can be influenced by childhood socioeconomic conditions. Socioeconomic adversity is also associated with weight, an important factor in fracture risk. Composite indices of femoral neck strength integrate body height and weight, femoral neck axis length (FNAL), and bone mineral density (BMD) to index bone strength relative to loads borne during falls. These indices are inversely associated with incident fractures, and unlike BMD, are consistent with fracture risk differences between Asians and Caucasians, and between diabetics and non-diabetics. Data from 729 participants in the Midlife in the United States Study were used to create composite indices of femoral neck strength in different failure modes:  $BMD \cdot FNW / \text{weight}$  for compression,  $BMD \cdot (FNW)^2 / (FNAL \cdot \text{weight})$  for bending,  $BMD \cdot FNW \cdot FNAL / (\text{height} \cdot \text{weight})$  for impact. A childhood socioeconomic advantage score (range, 0-6) was created from parental education, self-rated financial status relative to others, and not being on welfare. Analyses were stratified by race (White/non-White) and gender, and adjusted for age, body mass index, menopause status in women, medication use, adult financial advantage, and adult education. Childhood socioeconomic advantage was independently associated positively with indices of compression strength (0.09 SD per advan-

tage unit) and bending strength (0.14 SD per unit) in white men, but not in the other three groups. Adult education level and current financial advantage were not associated with any strength index in any group. Childhood socioeconomic factors may influence adult bone strength, but the influences of minority race and menopause may swamp these effects in women and minority race groups.

## OPTIMISM AND MORTALITY AMONG THE OLDEST OLD

J.M. Jacobs<sup>1,2</sup>, Y. Maaravi<sup>1,2</sup>, J. Stessman<sup>1,2</sup>, 1. *The Jerusalem Institute of Aging Research, Jerusalem, Israel*, 2. *Geriatrics and Rehabilitation, Hadassah Hebrew-University Medical Center, Jerusalem, Israel*

**Purpose:** The influence of optimism among the oldest old is poorly defined. We examined the association between optimism and mortality from age 85-90. **Methods:** The Jerusalem Longitudinal Study (1990-2010) is a prospective study of a representative community-dwelling cohort, born 1920-21. Comprehensive assessment at 85 included a 7 question (0-2 points each) optimism scale, (maximum optimism scoring 14 points). Quartiles for optimism were determined (Q1 lowest-Q4 highest optimism). Mortality data were collected from age 85-90, from the Ministry of Interior. Cox proportional hazards ratios (HR) were determined after adjusting for gender, education, diabetes, ischemic heart disease, hypertension, depression, self-rated health, and cognitive impairment. **Results:** 1122 subjects were assessed at 85. Men had higher mean optimism score compared to women (8.45  $SD \pm 4.14$  vs. 7.34  $SD \pm 4.29$ ,  $p < 0.0001$ ). Subjects with highest optimism (Q4) were significantly more likely to be married, better educated, have improved self-rated health, with lower rates of comorbidities including diabetes, heart failure, hypertension, cognitive impairment (MMSE  $< 24$ ), depression and dependence in basic activities of daily living. Optimism was consistently associated with improved survival: Kaplan-meier survival analyses according to optimism quartiles (Q1,2,3,4) among men was 55%, 59.7%, 72.9%, 83.2% (log rank  $p < 0.0001$ ), and among women was 69.4%, 74.4%, 84.1%, 80% (log rank  $p = 0.011$ ). Using the lowest optimism quartile (Q1) as a reference (HR = 1), the adjusted HR's for mortality according to optimism was Q2 HR = 0.98 (95% CI 0.73-1.32), Q3 HR = 0.67 (95% CI 0.46-0.99), Q4 HR = 0.64 (95% CI 0.42-0.95). **Conclusions:** Optimism among the oldest old is associated with improved markers of health, and predicts improved survival.

## THE ASSOCIATION OF LOW TO MODERATE ALCOHOL USE WITH MULTIPLE INDICES OF SUCCESSFUL AGING

R.R. Gorney<sup>1,2</sup>, S. Koh<sup>1</sup>, C. Depp<sup>1,2</sup>, D. Jeste<sup>1</sup>, 1. *Psychiatry, UCSD, San Diego, California*, 2. *Veterans Administration Medical Center, La Jolla, California*

**Background** Low to moderate (L-M) alcohol use in older people has been associated with lower incidences of dementia, multiple medical problems and all-cause mortality. Little research has been performed on L-M alcohol use and its potential role in successful aging. We hypothesized that L-M alcohol use in older person would be associated with higher ratings on multiple domains of successful aging compared with those who abstain from alcohol. **Methods** Data was utilized from the Successful AGing Evaluation (SAGE) study, a structured multi-cohort population based study designed to assess successful aging in 1,006 community-dwelling men and women in San Diego County, aged 50-99 years. Random digit dialing was used to recruit subjects. Evaluation included a 25-minute phone interview followed by a self-report survey of various domains of functioning. Alcohol use was measured using 3 self-report questions and people were grouped into current abstainers, and current L-M drinkers (drink 2 or fewer drinks/day) based on their self reported use. **Results** A total of 746 people met criteria for either abstaining ( $n = 201$ ) or L-M alcohol use ( $n = 545$ ). When accounting for the potential confounders of age and gender, L-M alcohol users reported lower perceived stress, higher physical functioning, and better cognitive status, but no difference in life satisfaction. **Conclusions** Findings suggest an association between L-M alcohol intake and

improved scores on measures of successful aging across multiple domains when compared with abstainers. More research is needed in the area of alcohol use as it relates to successful aging.

### **WEB BASED QUALITY IMPROVEMENT SYSTEM DEVELOPMENT OF HOME HEALTH CARE FOR THE OLDER ADULTS**

H. Chang<sup>1</sup>, T. Lee<sup>2</sup>, 1. *Elderly Welfare, Namseoul University, Cheonan-city Choongnam, Republic of Korea*, 2. *Korea Electronic Research Institue, Ansan, Kyunggi, Republic of Korea*

Purpose In Korea a trend of longevity increases population over 65 years, in particular population over 75 grows, In 2008 new introduced public long-term care insurance system. New qualification system of long-term care worker was first introduced in 2008 same year. The present in 2010, elderly population is more than 5.4 million, long-term care workers about 1 million. There was not computerized management system so more than 16,000 home based long-term care institutions' caregivers are having note down their service record. Therefore most of the home based long-term care institutions' managers could not manage their tasks and caregivers effectively. Main purpose of this research will be development of total quality management system of home health care for the beneficiary older adults based on Korean national long-term care insurance system. More special interests are safety care management modules for the older adults. Methods 1. Research equipments as server and accessory and DB management s/w by Internet Data Center placed on outsourcing, terminal units (small notebook personal computers) with wireless Internet for home care workers to input data, education equipment as portable beam projector and movie camera, personal computers built up completion 2. Research on actual condition survey for home care needs of the enrolled older adults in community elderly welfare centers 3. Construction and operation of server and clients network as home-page(www.qlongtermcare.or.kr). System module development of homecare beneficiary services and safety management for the elderly (fall down prevention, safely bathing etc.) 4. Development of field based continuing on-line, off-line education program for homecare workers 5. Based on internet server-client network, input service data into upload representative modules via terminal units by homecare workers Results 1. Research on actual condition survey for homecare needed the elderly(302 elderly people nationwide), Average age 80.3 years, Female elderly 76.5%, illiteracy 24.5%. Care level: Grade I(severe case): 6.0%, Grade II: 8.3%, Grade III: 76.2%, Cognitive level: decision making<defects of short term memory<forget date, ADL function level: bathing<out of the room<dressing<meal assistance 2. Research on actual condition survey for homecare workers' field education needs level (169 homecare workers nationwide): Access Internet 57%, Average age 52years, Female workers 98% 3. Currently monitoring of server DB: According to plan for analysis performance of long-term care workers

### **COLLABORATING WITH OLDER ADULTS: AN INNOVATIVE WHEELCHAIR SKILLS HOME PROGRAM**

E. Giesbrecht, W.C. Miller, I.M. Mitchell, *University of British Columbia, Vancouver, British Columbia, Canada*

Background: Older adults frequently use wheelchairs to maintain engagement in important activities of life. However, the expense and limited availability of rehabilitation therapy means most receive little or no training in effective wheelchair use. The purpose of this study was to develop an individualized home training program monitored by an expert trainer that could be delivered via a computer tablet. The specific needs of novice older adult wheelchair users were addressed by incorporating principles from Andragogy and Social Cognitive theory. Method: Participatory Action Design integrates stakeholder involvement throughout the process of assistive technology research and development. A total of eight focus groups were conducted with three stakeholder groups: older adult wheelchair users, caregivers, and prescribing clinicians. Results: A team of occupational therapists and computer

scientists adapted the training program content, delivery, and user-interface for three successive prototypes in response to participant evaluation. Stakeholder feedback mirrored many of the incorporated theoretical principles and initiated substantive program innovations. Program content is self-paced and individualized to address participant-relevant goals. Brief, achievable, and progressive skill components enhance mastery experience for success. Training activities are practical and activity-oriented to maintain focus on engagement rather than physical demands. Video demonstrations employ older adult peers to promote vicarious experience and self-efficacy. Built-in tablet video recording allows for user self-appraisal and trainer evaluation. All three stakeholder groups strongly affirmed the training program. Conclusion: A collaborative research process culminated in a beta prototype ready for pilot testing. The training program will be evaluated in a multi-centre randomized control trial.

### **DECLINING RATE OF FATAL CRASHES IN OLDER DRIVERS AND RURAL DRIVING**

O. Ekundayo, R. Levine, I. Goldzweig, *Family and Community Medicine, Meharry Medical College, Nashville, Tennessee*

OBJECTIVE: The purpose of this study was to examine the most recent data on older drivers' fatal and nonfatal crashes in the United States to determine changes in fatal crash rates and examine its association with rural driving. METHODS: Data for calendar years 2005 to 2009 were extracted from the Fatality Analysis Reporting System. To calculate crash rates, licensed driver data were obtained from the Federal Highway Administration data. Multivariable logistic regression was used to examine the association of fatal crashes with rural driving. RESULTS: Fatal crash involvements per 100,000 licensed drivers declined for all age groups, but a strong decline was noticed among the very elderly drivers 85 years and older. Rate of fatal crashes fell from 23 fatal crashes per 100,000 drivers in 2005 among drivers in this age group to about 15 crashes per 100,000 drivers in 2009. Compared with drivers 65-69 years, odds ratio (OR), 95% confidence interval (CI) for fatality for age categories 70-74, 75-79, 80-84, and ≥85 years, were respectively, 1.36 (1.23 to 1.50), 1.57 (1.42 to 1.74), 2.07 (1.85 to 2.31), and 3.34 (2.92 to 3.80). Driving on rural roads compared to urban was associated with increased odds of involvement in fatal motor vehicle crash, OR 1.04, 95% CI 1.04-1.20. CONCLUSIONS: Older drivers still remain a high risk for fatal motor vehicle crashes, but there has been a substantial decline in rate of fatal crashes in recent years. Fatality occurring among older drivers is significantly driven by crashes occurring on rural roads.

### **EFFECT OF GREEN TEA ON ANTHROPOMETRIC PARAMETERS IN ELDERLY WITH METABOLIC SYNDROME**

C.H. Schwanke, A.E. Senger, I. Filho, M.G. Gottlieb, *Geriatrics and Gerontology Institute, PUCRS, Porto Alegre, RS, Brazil*

Objective: To evaluate the effect of the consumption of green tea (*Camelia sinensis*) on anthropometric parameters in elderly with metabolic syndrome (MS). Methods: intervention study. The sample was selected from the Geriatric Service of Hospital São Lucas of Pontifical Catholic University of Rio Grande do Sul. 45 elderly with MS were enrolled and allocated into two groups: green tea group (GTG, n= 24), who drank green tea (they received sachets of 1.0 g of green tea, and should drink three cups per day for 60 days) and control group (CG, n=21) without intervention. All participants were instructed to not make changes in their lifestyle and medicine intake. The diagnostic criteria for MS used were the International Diabetes Federation (IDF). The anthropometric measurements were evaluated before and after intervention, as well as blood pressure measurement. Results: There were a statistically significant (p<0.001) weight loss [71.5±12.6 kg to 70.3±12.6 kg], and decrease on BMI (30.5±4.3 kg to 30.0±4.4 kg), and on waist

circumference (99.0±12.8 cm to 96.8±13.0 cm) only in GTG. A statistically significant decrease on the difference before/after intervention was observed on BMI [-0.5±0.4 kg/m<sup>2</sup> in GTG and -0.2±0.6 kg/m<sup>2</sup> in CG (P=0.032)], and on waist circumference [-2.2±2.0 cm in GTG and -0.3±1.8 cm in CG (P=0.002)]. The intake of green tea did not change the blood pressure. Conclusion: The consumption of green tea was effective in reducing weight, BMI, and waist circumference in elderly with MS.

### ESSENTIAL ROLE OF SOCIAL SERVICES IN FULFILLING TRIPLE AIM GOALS

G. Shier<sup>2</sup>, M. Ginsburg<sup>1</sup>, J. Howell<sup>3</sup>, P.J. Volland<sup>1</sup>, R. Golden<sup>2</sup>, 1. *Social Work Leadership Institute, New York Academy of Medicine, New York, New York*, 2. *Rush University Medical Center, Chicago, Illinois*, 3. *County of San Diego Health and Human Services Agency, San Diego, California*

The Institute for Healthcare Improvement's Triple Aim: better care for individuals; better health for populations; and lower per capita costs; establishes goals for health care improvement and sets the framework for innovation efforts happening nationally. From the recent Center for Medicare and Medicaid Innovations Healthcare Innovation Challenge (CMMI HIC) to Affordable Care Act-driven initiatives such as the Community-Based Care Transitions Program (CCTP; Section 3026), considerable resources have been committed to meeting the Triple Aim. These investments concretely demonstrate the promise of improvement that health care leaders see in emerging models of care, including: care transitions; Patient-Centered Medical Homes (PCMHs); Accountable Care Organizations (ACOs); and payment system reform. A growing evidence base suggests that services to address the psychosocial factors impacting health must be integrated into innovation if the Triple Aim is to be realized. The National Coalition on Care Coordination (N3C) representing 40+ social, family caregiver, and professional organizations, formed in 2008 to advocate for better coordinated health and social services for older adults with chronic conditions. N3C efforts to synthesize and disseminate the evidence for a comprehensive approach to care coordination delivered by an interdisciplinary team process that links medical care with long-term social supports contributed to assuring the Patient Protection and Affordability Care Act (ACA) including access to care coordination. This paper explores the role of psychosocial factors in health care outcomes, highlights current evidence on the impact of social support services and makes suggestions to ensure the psychosocial dimension is adequately addressed in health care systems change.

### LISTENING TO THE NURSE PAYS OFF: AN INTEGRATED NURSE HEALTHLINE PROGRAM WAS ASSOCIATED WITH SIGNIFICANT COST SAVINGS

J. Navratil-Strawn<sup>2</sup>, K. Hawkins<sup>1</sup>, T.S. Wells<sup>1</sup>, S.K. Hartley<sup>2</sup>, R.J. Ozminkowski<sup>1,3</sup>, H. Chan<sup>2</sup>, R.J. Migliori<sup>3</sup>, C.S. Yeh<sup>4</sup>, 1. *Analytics and Data Management, OptumInsight, Ann Arbor, Michigan*, 2. *OptumHealth, Golden Valley, Minnesota*, 3. *UnitedHealth Group Alliances, Minnetonka, Minnesota*, 4. *AARP Services, Inc., Washington, District of Columbia*

Objective: To evaluate the impact of compliance with nurse recommendations about where to seek care on healthcare expenditures for a Nurse HealthLine (NHL) triage program. Methods: Data from 53,206 adults with an AARP® Medicare Supplement Insurance plan insured by UnitedHealthcare who called into a NHL triage program were included. About 46 percent of the NHL calls involved triage where the nurse recommended a course of action. Callers following the nurse's recommendation regarding where to receive care (e.g., emergency room, urgent care, doctor's office, or home) were classified as adherent, while those who did not were classified as non-adherent. Program-related savings were estimated by comparing the difference in downstream healthcare expenditures between adherent and non-adherent callers after using

multivariate modeling to adjust for case-mix differences between these groups. Results: 55 percent of callers were adherent. Nurses were over three times as likely (41% versus 13%) to recommend seeking a higher level of care (e.g. emergency room versus urgent care), indicating that the program focused on directing members to the appropriate level of care for their individual circumstance. The program resulted in a total savings of \$13.8 million dollars (p<0.05). Conclusions: This study focuses on compliance to nurse recommendations for a NHL triage program designed solely for Medicare members with supplement (Medigap) coverage. The program was associated with significant savings, most of which were attributable to Medicare.

### PSYCHOLOGICAL EFFECTIVENESS OF FITNESS WALKING FOR OLDER ADULTS

K. Yamauchi<sup>1</sup>, Y. Lau<sup>1</sup>, S. Oshita<sup>2</sup>, T. Ichikawa<sup>3</sup>, I. Yanagawa<sup>4</sup>, A. Ogita<sup>5</sup>, 1. *Institute of Physical Education, Keio University, Yokohama, Kanagawa, Japan*, 2. *Izumi Junior College, Sagami-hara, Kanagawa, Japan*, 3. *Matsuyama Shinonome Junior College, Matsuyama, Ehime, Japan*, 4. *Tohoku University of Art and Design, Yamagata, Yamagata, Japan*, 5. *Osaka City University Research Center for Urban Health and Sports, Osaka, Osaka, Japan*

Introduction: Walking exercise is popular in order to maintain health condition. According to announcement of Japanese government in 2009, forty eight percent of total population chose fitness walking among various exercise and sports. On the basis of this reality, sticks and grips were specifically designed for fitness walking in recent years. Fitness walking is suitable for older adults to strengthen not only legs muscle but also upper limbs. Fitness walking also reduce load of weight to legs and reinforce walking impulsion so that it's possible to walk long distance comfortably and consume calorie. Purpose: The purpose of this research was to investigate the psychological effectiveness of fitness walking among older adults and pursue possibility of endurance and practice of exercise. Methods: Four types of walking exercise were provided to older adults who are living in the suburb of K prefecture in Japan. These four types of exercise were normal walking, sticks walking, Nordic walking, and sports grip walking. After these trials, learners were asked about their impression by researchers in questionnaires. Mood check list as criteria were used to analyze their impression. Results: Compare with normal walking, three factors "pleasure", "relaxation", and "satisfaction" were increased among other three types of walking. Satisfaction was the highest in Nordic walking and sticks walking was high in secondly. Fitness walking is effective for older adults to be motivated and improve strength. Type of fitness walking should be chosen depend on learner's health condition.

### LATENT CONSTRUCTS FOR ADJUSTMENT TO AGING, AGE REPRESENTATION AND SUBJECTIVE AGE IN OLDER ADULTS

S. von Humboldt, I. Leal, *Research Unit in Psychology and Health, I&D, ISPA – Instituto Universitário, Lisbon, Portugal*

Aims: To investigate latent constructs that can act as major determinants in the adjustment to aging (AtA), age representation (AR) and subjective age (SA), and to explore relations between these constructs in an older adults cross-cultural population. Methods: Measures were completed using a variety of culturally appropriate methods, including demographics and interviews. Complete information on 33 older adults aged between 74-101 years (M=86.2; SD = 5.4) from eight different nationalities, was available. The data was subjected to content analysis. Representation of the associations and latent constructs were analyzed by a Multiple Correspondence Analysis (MCA). Standardized instruments measured regular cognitive abilities. Results: Findings showed a model for each pre-category. SA was explained by a two-factor model: 'age-cautious' and 'young-at-heart'. A three-dimension model formed by 'maximizers', 'optimizers' and 'essentialists' was indicated as a best-fit solution for AtA, and AR was best explained in a three-

dimension model by 'past-oriented', 'present-oriented' and 'future-oriented'. AtA is shown to bear associations with individuals' SA and AR in a model composed by 'enjoyers', 'engaged', 'regardful' and 'conciliated'. Conclusions: AtA is related to SA and AR in older adults. Enhancing AtA on shared perceptions of SA and AR might be an important target to improve older adults' interventions' outcomes in aging well. Key Words: Adjustment to Aging, age representation, older adults, subjective age, latent constructs.

#### **EOSINOPHILIC GRANULOMA OF THE TONGUE: A CASE REPORT WITH LITERATURE REVIEW**

K.E. Noel, M.S. Cappuccilli, D. Bolger, *Community Health, UMDNJ-New Jersey Dental School, Somerdale, New Jersey*

HIV/AIDS in the geriatric population adds to the complexity of managing their healthcare needs. The virus can affect every organ and every system in the body, producing uncommon clinical manifestations. The eosinophilic granuloma in this presentation with its unusual clinical appearance may be such a case. This lesion was diagnosed through clinical and histologic evaluation. The team approach is important. The dentist and staff are primarily responsible for maintaining the dentition, but the management of soft tissue lesions is also their responsibility. The presence of an eosinophilic granuloma in a geriatric immune-compromised patient initiates investigations into similar lesions, and in the endeavor for patient quality of life, the physicians and their staff also labor to minimize morbidity. An eosinophilic granuloma is a benign disease entity that is not clearly understood in terms of its etiology or pathogenesis. Mucosal trauma is a suspected cause, but it is usually unfounded, and spontaneous resolution adds to the enigmatic nature of this lesion. The clinical presentation can be alarming to a clinician who may be unfamiliar with this relatively rare lesion, and likewise the histologic presentation can be mistaken for a malignancy. Our patient in this case is a 62-year old African-American male who presented with a chief complaint of tenderness and varying episodes of pain on his tongue of 10-days duration. Oral examination revealed yellowish-white plaques on his dorsal tongue extending onto the anterior ventral surface as a raised, broad based growth. The growth was firm and also painful on palpation.

#### **MEDIATING FACTORS OF TECHNOLOGY ADOPTION BY SENIOR ADULTS: ENABLERS AND BARRIERS**

K.M. Daniel, *Nursing, UT Arlington, Arlington, Texas*

At least half of all American adults have at least 1 chronic disease. In adults over the age of 65, half have 3 or more chronic diseases. Chronic disease management is based on self-management. As our population ages, older patients and their families will consider adopting technology innovations to assist them in managing their health and safety at home. So although many of these products are designed with older adults in mind, adoption is not guaranteed. This purpose of this qualitative study was to describe the barriers and enablers that stakeholders (older adults, family caregivers, healthcare providers (physicians and nurse practitioners) and landlords or administrators of senior living facilities) perceive to the adoption of technology and compare to the Mahoney model for technology adoption. Focus groups and/or interviews of each category of end users were utilized to gather information about previous and current adoption and use of health and safety technology in the home. The overall goal of this study is exploration of the mediating factors in Mahoney's model that affect adoption of health and safety related technologies by older adults. Specific goals will be 1) to identify enabling factors most relevant or associated with different end-users, 2) to identify barriers throughout all groups, and 3) to identify mediating factors that may vary by age group or racial/ethnic characteristics of participants. Information learned from this study will be used to define the enablers and barriers to technology adoption by elder adults for the purpose of subsequent technology development.

## **SESSION 1345 (POSTER)**

### **INTERNATIONAL AND CULTURAL STUDIES**

#### **TOTAL AND ACTIVE LIFE EXPECTANCY IN CHILEAN OLDER PEOPLE. SOCIOECONOMIC AND GENDER DIFFERENTIALS**

C. Albala<sup>1</sup>, H. Sanchez<sup>1</sup>, L. Lera<sup>1</sup>, A. Fuentes<sup>2</sup>, X. Cea<sup>1</sup>, 1. *INTA, University of Chile, Santiago, Chile*, 2. *School of Public Health, University of Chile, Santiago, Chile*

**Background.** The rise of life expectancy (LE) in Chile has occurred at an unprecedented rate but this does not ensure that the years gained are healthy years. **Objective** To estimate the LE and the proportion of healthy years (ALE) gained in 2 cohorts of older people from different socioeconomic strata (SES) Methods. Follow up of 2 cohorts: the Santiago SABE cohort evaluated in 2000 in 1202 subjects 60+y community living in Santiago and the ISAPRE cohort of 266 people 60y and older from private health insurances (ISAPRES) registries. At baseline all the subjects completed home interviews including measures of disability/functional limitations and anthropometry. Functional limitation was defined as limitation in  $\geq 1$  ADL and/or  $\geq 1$  IADL and/or  $\geq 3$  mobility items. Mortality data were obtained from death certificates of the National Civil Registry. Evaluations done in 2005 and 2010 allows us to study the trajectories of disability according baseline gender and SES estimating LE and ALE (IMACH 0.98i). **Results.** LE at 65y in women from the ISAPRE cohort was 18.3y from which 11.1y(60.7%) were in healthy state (ALE) and the corresponding figures in men were TLE 17.9y and ALE 10.7y(62.9%). In the SABE cohort at 65y TLE in women was 16.6y from which 9.1y(45%) were in healthy state. The corresponding figures for SABE men were TLE 13.6y and ALE 8.7y(64.4%). **Conclusion** The years gained in LE in Chilean elderly, has not been accompanied by a decrease in functional limitation and disability, moreover the gained healthy years shows an uneven distribution among genders and SES. Funded by fondecyt grant 1080589

#### **EFFECTS OF BIOFEEDBACK AND ELECTRICAL STIMULATION ON URINARY INCONTINENCE AMONG OLDER WOMEN IN CHINA**

L. Ge, *Peking University Third Hospital, Beijing, China*

**Abstract: Objective:** To evaluate therapeutic effects of pelvic biofeedback and electrical stimulation and supporting psychological care on stress urinary incontinence in older women. **Methods:** Twenty menopausal female patients with urinary incontinence aged 60 to 79 (mean age 65.4 years) with a disease duration of more than 5 years were recruited in Beijing China. A biofeedback device with international certification was used with vaginal built-in electrodes for the functional rehabilitation of pelvic floor muscles. The intensity of electric stimulation was adjusted according to the responses of the patients during the therapeutic procedure with a range of 20~70mA. Two to three courses of treatment were administered to the patients depending on their responses and conditions. Patient education was implemented by healthcare personnel before every course. Real-time instructions on patients' pelvic floor muscle exercises were given during the therapeutic process with psychological support to achieve the best outcome. Glazer's assessment was conducted before and after the whole treatment to assess functional status of pelvic floor muscles. **Results:** Results for the rapid contraction test (Fast flick/rest) were significant different ( $p=0.038$ ) between before and after. However, the results of 60-second sustained contraction test did not show any significant difference before and after the treatment ( $p=0.441$ ). **Conclusion:** The pelvic biofeedback and electrical stimulation therapy combined with right Kegel exercise can significantly improve patients' self-control of the pelvic floor muscles, alleviating symptoms to a certain degree. The muscle strength of the type II fast-response muscle groups recovered more significantly than that of type I slow-response muscles.

## AGING BEHIND BARS: THE MEDICATION OF OLDER PRISONERS IN SWITZERLAND

V. Handtke<sup>1</sup>, W. Bretschneider<sup>1</sup>, A. Stuckelberger<sup>3</sup>, J. Page<sup>4</sup>, C. Ritter<sup>5,2,1</sup>, T. Wangmo<sup>1</sup>, B.S. Elger<sup>1</sup>, 1. *Institute for Biomedical Ethics, University of Basel, Basel, Switzerland*, 2. *University Center of Legal Medicine of Geneva and Lausanne, Lausanne, Switzerland*, 3. *Institute of Social and Preventive Medicine, Department of Community and Primary Care Medicine, Faculty of Medicine, University of Geneva, Geneva, Switzerland*, 4. *Institute for Ergotherapy, Health Department, Zurich University of Applied Sciences, Zurich, Switzerland*, 5. *Forensic Psychiatry Unit, University of Applied Sciences in Frankfurt am Main, Frankfurt am Main, Germany*

Population aging is a worldwide phenomenon that forces us to make radical changes on multiple levels of society. So far, studies have concluded that the health, both physical and mental, of prisoners in general and older prisoners in particular is worse than that of the general population. However, to date, very little is known about the actual healthcare conditions of aging prisoners and almost no substantial knowledge is available concerning the prescription of medication to older inmates. A quantitative study was conducted in eight prisons in Switzerland, including two women prisons. Medical records of 150 older prisoners (50+) were obtained upon patient consent and complete anonymity was ensured. Data gathered included basic demographic information, education and type of prison sentencing. Healthcare data obtained encompassed prevalence of diseases; visits to healthcare services and types of medication – prescribed and over the counter (OCT) – taken during the last five years. Preliminary results show that the age average was 58.6 years. Older prisoners took on average 11.3 medications during the last five years. More than half received pain-medication and cardiovascular drugs. Over a third used psychotropic medications. Prescriptions related to chronic diseases like type II diabetes or rheumatism accounts for 20% each. The data gathered in this study raise the issue of poly-pharmacy among aging prisoners and will provide evidence-based information on the medication of this vulnerable group. In the light of the principle of the equivalence of care, which Switzerland adheres to, older prisoners represent an important challenge for the prison healthcare services.

## HEALTH CARE SERVICES IN GERMAN SHARED-HOUSING ARRANGEMENTS FOR PEOPLE WITH DEMENTIA - RESULTS FROM THE WGQUAL STUDY

A. Worch, J. Gräske, K. Wolf-Ostermann, S. Meyer, *Alice Salomon Hochschule > University of Applied Sciences (ASH), Berlin, Germany*

Objectives Shared-Housing Arrangements (SHA) are a specific German kind of small-scale living facilities for older, care-dependent persons, predominantly with dementia. The community-dwelling residents are being served by community health care services (CCS), therapists and other medical services. There is a lack of current findings on structures and service providers in relation to residents' characteristics and outcomes. Methods In a standardized, written, cross-sectional study as part of the WGQual study, information of all CCS in Berlin were collected. CCS were asked for contacts to various services providers. In addition, residents' socio-demographics, quality of life (QoL, QUALIDEM), need-driven behavior (CMAI), dementia severity (GDS) and further outcomes were evaluated. Results 396 persons (69% woman) with a mean age of 78 years were assessed, 73% of them with a diagnosis of dementia - 58% with GDS $\leq$ 6 and 38% GDS=7. Residents' QoL is moderate (QUALIDEM total score: 69). 58% show at least one need-driven behavior. In the last 12 month, contacts to general practitioners (GPs) are high but to medical specialists (e.g. dentistry and gynecology low. 37% received physiotherapy, 19% occupational, 8% music-therapy and 2% speech therapy on prescription. With increasing dementia severity physio-therapies (Fisher Test;  $p=0,039$ ) and occupational therapies (Fisher Test;  $p=0,047$ ) are more often used. Conclusion The

prevalence of dementia and need-driven behavior requires a high level of professional care. The medical care provided by GPs is satisfactory, but by medical specialists improvable. The therapeutic treatment in SHA based on the disease is more common compared to findings in other settings.

## SELF-PERCEPTION OF QUALITY OF LIFE IN MEXICAN ELDERLY

N. Mendoza Ruvalcaba, E. Arias Merino, M.J. Arias-Merino, J. Cueva Contreras, *Universidad de Guadalajara, Guadalajara, Mexico*

Introduction Quality of Life (QoL) is considered as a multidimensional concept, which includes its self-appraisal as a subjective concept. Our aim is to know the self-perception of quality of life and the differences in age, education, symptoms of disease and sex. Methods This study was developed from Quality of Life Study in the CASOENAC project, FONCICYT-94670 (EU-CONACYT). To assess QoL was used the CUBRECAVI. Were included 1199 elderly 60 years and over in a multistage random sampling of the two main cities of the state of Jalisco and Colima (Mexico). Mean age was 70.19 $\pm$ 7.90, mean education 5.06 $\pm$ 4.73 years, were married 49.2%, widower 34.4%. Descriptive statistics and one-way Anova were performed. Results High QoL was rated by 10.9%, medium 63.7% and low 25.4%. There were found differences by age ( $p=.037$ ), education ( $p=.000$ ) and number of symptoms of diseases ( $p=.000$ ). Mean age of those who rated their QoL as high was 72.02 $\pm$ 7.74, medium 70.18 $\pm$ 7.85, low 69.43 $\pm$ 8.01. Mean education years of those who rated their QoL as high 2.31 $\pm$ 3.17, medium 4.86 $\pm$ 4.31, low 6.75 $\pm$ 5.59. Mean number of symptoms of diseases of those who rated their QoL as high was 10.78 $\pm$ 6.04, medium 8.76 $\pm$ 5.30, low 6.55 $\pm$ 4.89. No differences were found by sex. Conclusion Since QoL is a subjective concept, the results could be influenced by expectations of the participants, because a higher perception of quality of life was associated with older age, lower education and poorer health.

## CATASTROPHE CARE: AGING, WELLNESS, AND THE TSUNAMI IN JAPAN

D.B. Willis<sup>1,2</sup>, T. Shirai<sup>2</sup>, M. Obayashi<sup>1</sup>, 1. *Fielding Graduate University, Santa Barbara, California*, 2. *Saybrook University, San Francisco, California*

The extreme stresses on older people in Japan following the Great Tsunami of March 11, 2011, followed by the uncertainties of power, radiation, and general well-being of the society has been great indeed. This paper aims to delineate the impacts on aging populations in Japan, especially in Tohoku, where the catastrophe took place. Teams of various backgrounds have been working to deliver care consistent with what is understood about PTSD and its long-term consequences. This paper will report on our fieldwork in Tohoku, as well as a research project with samples from healthcare facilities in the Tohoku region. Nurses, doctors, and others have been surveyed, with comparison samples drawn from Kanto (Tokyo) and Kansai (Osaka-Kobe). We are particularly concerned about the theme of "risk" associated with disaster and PTSD. The team (two Japanese clinical psychologists and an American anthropologist who lived and worked in Japan for Japanese universities for 30+ years) will also report on earlier research conducted in South India following the Indian Ocean Tsunami of 2004.

## CROSS-NATIONAL COMPARISONS OF PHYSICAL PERFORMANCE VERSUS SELF-REPORTED DISABILITY: EVIDENCE ON TIMED WALK IN STUDY ON AGEING AND ADULT HEALTH (SAGE)

B.D. Capistrant, M. Glymour, *Dept of Society, Human Dev & Health, Harvard School of Public Health, Boston, Massachusetts*

**Background** Lack of data and validated measures challenge disability surveillance in lower and middle-income countries (LMIC), whose populations are aging faster than developed countries. Prevalence of disability is often estimated from self-reported ADL limitations; however,

little is known of how self-reports correspond to other measures of function and how this correspondence varies across LMICs. **Methods** Cross-sectional data from the WHO SAGE study samples of adults in China, India, Russia, South Africa, Ghana, and Mexico (total n=30,114) aged 50+ were used to compare performance of objective (4 meter walk; slow speed: <0.40 meters/second) and subjective (any/no self-reported difficulty walking across a room) measures of mobility. Correspondence was tested as sensitivity and specificity of any self report difficulty walking to identify slow walk speed; logistic regression was used to predict, among those with slow walk, who would report no difficulty. **Results** Across the countries, between 5% and 25% of people reported any difficulty walking across the room. The age- and sex-adjusted average walking speed was slowest in Russia (0.71 m/s) and fastest in China (0.97 m/s). However, correspondence between measures, or the fraction of people with slow walk who reported any difficulty walking across the room, ranged between countries (China=0.35; India=0.52; Russia=0.32; South Africa=0.28; Ghana=0.39; Mexico=0.70). Among those with slow walk, marital status, employment history and mental health (memory and depression) significantly predicted reporting no difficulty walking across the room. **Conclusions** Disability is highly prevalent in LMICs. The correspondence between objective and self-reported measures was generally modest and differed across LMICs.

#### AGING IN THE BERLIN AGING STUDY-I (BASE-I)

V. Moskiou, E. Steinhagen-Thiessen, R. Eckardt, *Research Group on Geriatrics, Charite-Universitaetsmedizin Berlin, Berlin, Germany*

With regard to highest ages the longitudinal Berlin Aging Study-I focused on individual courses of the aging process for up to 19 years (1990-2009) including seven follow-ups. The core sample of the study consisting of 516 individuals (70-104 years old) and representatively selected and stratified by age and gender, has been assessed concerning the physical and mental health, morbidity related risk profiles, medication quality, genetic and immunological factors as well as functional capacity and subjective health. In the last follow-up (2008-2009) the examination of 22 participants, aged 86-102 years, demonstrated many modifiable risk factors for illness and disability inducing new aspects of prevention and therapy. Furthermore, the longitudinal assessment proved the relative predictability of aging phenomena from earlier life history.

#### COMPARISON OF OLDER ADULTS' LEVELS OF ACCULTURATION ACROSS FOUR U.S. ETHNIC GROUPS

R.M. Tappen, C.L. Williams, M. Rosselli, *Florida Atlantic University, Plantation, Florida*

Few measures of acculturation allow comparison across cultural ethnic groups. The Cross Cultural Measure of Acculturation is designed to measure degrees of orientation to mainstream American culture and culture of origin. These levels were compared across two immigrant groups, Afro-Caribbean and Hispanic, and two non-immigrant groups, African American and European American older adults, Age ranges 54 to 100; one third male. The Afro-Caribbeans and Hispanic Americans were first generation averaging 28 years U.S. residence, the majority of African Americans were fifth generation and European Americans were second, third or greater. All the Hispanic Americans chose to be interviewed in Spanish. Scores on orientation to mainstream American culture differed significantly  $F(3,455) = 382.92, p < .001$  and all comparisons between ethnic groups were significant at .05 level. African Americans' mean score was 75 (SD = 13.12). The Hispanic mean was a low 38 (SD = 12.75) and the Afro-Caribbean mean was 52 (SD = 10.64). Scores on the orientation to culture of origin also differed significantly  $F(3,477) = 14.40, p < .0001$  but European American levels (M = 3, SD = 25.90) did not differ significantly from the Afro-Caribbean (M = 60, SD = 13.32) and African American (M = 71, SD = 13.32) scores did not differ significantly from the Hispanic American (M = 72, SD = 11.75). Results suggest that older adults

in different ethnic groups respond in different ways to pressures to acculturate to the mainstream or retain on orientation to their culture of origin.

#### PREDICTING SUBJECTIVE WELL-BEING IN A CROSS-CULTURAL OLDER POPULATION

S. von Humboldt, I. Leal, *Research Unit in Psychology and Health, I&D, ISPA – Instituto Universitário, Lisbon, Lisbon, Portugal*

**Aims:** This research aims to explore a causal model of subjective well-being predictors in a cross-cultural older population. **Methods:** Measures were completed using a variety of culturally appropriate methods, including mail-outs, self-administration and interviews. For the purposes of this study, the Positive and Negative Affect Schedule (PANAS), the Satisfaction with Life Scale (SwLS), one measure of cognitive functioning - the Mini-Mental State Examination (MMSE) and demographics, were included. All variables had fewer than 1% missing values and complete data were available for 709 older adults (M = 82.4, SD = 6.45, (range 74-102)) from eight different nationalities. Structural equation modeling was used. Controlling for age, gender and country of origin, we assessed the level of subjective well-being of elderly people, and its predictors. **Results:** Subjective well-being is predicted, not only by age progression, but also by adjustment to aging, among other variables. Age was significantly associated with cognitive impairment ( $\beta = .387; p = .003$ ) and perception of health ( $\beta = -.172; p = .004$ ). All estimates were statistically significant ( $p < .01$ ). **Conclusions:** Subjective well-being appears to be a catalyst to attitudinal markers of maturity and internal development, across cultures. This study highlights the predictors of subjective well-being in older age, warranting further study across cultures among frailer populations over time. Recommendations for future research on older adults' well-being measures and clinical practice are also presented. **Key Words:** Predictors, structural equation modeling, older adults, subjective well-being, adjustment to aging.

#### LATENT CONSTRUCTS FOR TIME PERSPECTIVE AND AGE REPRESENTATION IN PORTUGUESE AND ANGOLAN OLDER ADULTS

S. von Humboldt, I. Leal, *Research Unit in Psychology and Health, I&D, ISPA – Instituto Universitário, Lisbon, Portugal*

**Aims:** A focus in a balanced time perception is linked to higher levels of life satisfaction in senior years. This study aims to analyze the determinants of age representation (AR) and to explore the differences of latent constructs that can work as major determinants in AR, in Portuguese and Angolan older populations. **Methods:** Measures were completed, including demographics and interviews. Complete data were available for 32 Portuguese and Angolan older adults aged between 74-90 years (M=80.4; SD = 5.3). Data was subjected to content analysis. Representation of the associations and latent constructs were analyzed by a Multiple Correspondence Analysis (MCA). **Results:** The most prevalent response of the interviewed participants for AR was 'present challenge' (14.9%). Findings showed a model for each nationality. AR for Portuguese participants was explained by a two-factor model: 'present fatalistic' and 'future-oriented'. A two-dimension model formed by 'present hedonistic' and 'past positive' was indicated as a best-fit solution for Angolan elderly. **Conclusions:** AR is strongly explained by increased likelihood of specific constructs in its definition, although within distinct time perspectives. This cross-cultural study illuminates links among time perspective and age representation in older age, warranting further study across cultures among frailer populations over time. Recommendations for future research on older adults' time perspective and clinical practice are also discussed. **Keywords:** Age representation, Angolan, Portuguese, latent constructs, older adults; multiple correspondence analysis, time perspective.

## DIETARY TRAJECTORIES AND DIET QUALITY AMONG OLDER ADULTS FROM THE NUAGE STUDY

E. Vesnaver<sup>1</sup>, H.H. Keller<sup>2</sup>, H. Payette<sup>3,4</sup>, B. Shatenstein<sup>5,6</sup>, 1. *Department of Family Relations and Applied Human Nutrition, University of Guelph, Guelph, Ontario, Canada*, 2. *Department of Kinesiology, University of Waterloo, Waterloo, Ontario, Canada*, 3. *Département des sciences de la santé communautaire, Faculté de médecine et des sciences de la santé, Université de Sherbrooke, Sherbrooke, Quebec, Canada*, 4. *Centre de recherche sur le vieillissement, Centre de santé et des services sociaux, Institut universitaire de gériatrie de Sherbrooke, Sherbrooke, Quebec, Canada*, 5. *Département de nutrition, Faculté de médecine, Université de Montréal, Montréal, Quebec, Canada*, 6. *Centre de recherche, Institut universitaire de gériatrie de Montréal, Montréal, Quebec, Canada*

Older adults experience a number of age-related changes that can impact food intake and nutritional status. However, little is known about how older adults who have experienced a change in food intake view the stability of their diet. Based on a secondary analysis of interviews with older adults who demonstrated a change in diet quality over a 4 year period, we examined participants' perceptions of how their eating habits had changed using a Life Course Perspective. Participants were aged 73-87 years (n=18, 78% female); 10 had decreased diet quality and 8 had increased diet quality over this period. The original study was embedded in the Québec Longitudinal Study on Nutrition and Successful Aging (NuAge). NuAge participants with dietary data at years 1 and 4 of the study and presence of key barriers known to influence food intake were invited to take part in semi-structured interviews that explored how age-related changes affected participants' experiences with eating. The first part of the interview focused on dietary change over the study period. In the present study we thematically analysed the transcripts for themes of dietary change. Over 70% of participants thought that their eating habits had not changed since the beginning of the study, despite our quantitative data supporting a change. Three key themes emerged to describe this perception of dietary stability among participants: (1) steadfast habits, (2) minor changes, and (3) turning points. Implications for the application of the Life Course Perspective to older adult nutrition research will be discussed.

## HOME AWAY FROM HOME: ACCLIMATIZATION OF FILIPINO ELDERLY FROM BEING HOME TO SENSE OF BEING "AT HOME" IN AN ELDERLY INSTITUTION

F.B. Guiang, K.J. Guevara, A.I. Gutierrez, A.S. Habaluyas, M.P. Hizon, S.G. Idanan, A.B. De Guzman, *University of Santo Tomas, Manila, Philippines*

This grounded study examined the process of acclimatization or the process of changing perspectives of a person in order to feel "at home" in a nursing care facility among a selected group of Filipino elderly (n=20). As institutionalization of the elderly is atypical in the Philippine context, varied responses were analyzed to understand the factors and the course they undergo over a set period of time upon acclimatization. Through constant comparison method, an interesting model called the "Hourglass of Acclimatization" was emerged yielding two distinct phases. This included Conversion phase, describing the transformation of one's outlook of himself and his environment and Immersion phase, characterizing how an elderly involves himself completely into the life he is supposed to live. This emerged model can contribute to the development of nursing interventions focusing on elderly experiences in the entire course of relocation to a new environment other than what they call "home".

## THE CHALLENGES OF AGING-IN-PLACE IN ATLANTIC CANADA

S. Dupuis-Blanchard<sup>1</sup>, M. Simard<sup>1</sup>, O.N. Gould<sup>2</sup>, L. Villalon<sup>1</sup>, 1. *School of Nursing, Université de Moncton, Moncton, New Brunswick, Canada*, 2. *Mount Allison University, Sackville, New Brunswick, Canada*

The majority of North American seniors want to stay independent and age-in-place for as long as possible. In fact, only 7% of Canadian

older adults over the age of 65 years live in long term care facilities. Therefore, despite health challenges and loss of autonomy, many seniors do manage to live in their own home. We have little knowledge, however on the needs of seniors, the services required to age-in-place, and the differences between rural or urban communities. The findings from this qualitative study allow us to obtain a better understanding of the needs of seniors living in a rural and an urban community and services offered in the context of aging-in-place in the province of New Brunswick, Canada. The objectives were: 1) to identify the needs of seniors living in rural and urban communities related to aging-in-place; 2) identify existing services related to aging-in-place; and 3) understand the present contribution and vision for the future of community organizations offering services to seniors. Key informants from community organizations were interviewed individually and focus groups were held with older adults in the identified rural and urban communities. Interviews were recorded and transcribed followed by content analysis to identify common themes related to study objectives. Findings indicate that present home care services do not meet older adults' needs for aging-in-place nor are service ameliorations planned. This project allows a better understanding of the challenges of seniors living in rural and urban New Brunswick related to aging-in-place.

## HOME OWNERSHIP AND FALL-RELATED OUTCOMES AMONG OLDER ADULTS IN SOUTH KOREA

Y. Do<sup>1</sup>, C. Kim<sup>2</sup>, 1. *Duke-NUS Graduate Medical School Singapore, Singapore, Singapore*, 2. *Dongguk University, Seoul, Republic of Korea*

**Aim:** The purpose of this study is to test whether home ownership is associated with falls and other fall-related outcomes among older adults in South Korea. **Methods:** Using data from the first two waves (2006 and 2008) of the Korean Longitudinal Study of Ageing, four outcome variables were examined: 1) any falls in the past 2 years, 2) any serious fall injury requiring treatment in the past 2 years, 3) fear of falling, and 4) limiting activities due to fear of falling. To avoid the issue of reverse causality, information on outcome variables was derived from the second wave while using housing contract type and socioeconomic and health control variables from the first wave. **Results:** Results showed that compared with owned home, short-term rental home predicted a higher likelihood of reporting all the fall-related outcomes examined. **Conclusions:** Many of the previously identified environmental risk factors for fall-related outcomes (e.g., flooring, stairs and steps, kitchen, and bathrooms) are amenable to change, but the extent of the changes on these home-related risk factors are conditional on the residence characteristics of the elderly. The study findings suggest the important role of housing in fall-related outcomes among older adults.

## ADJUSTMENT TO AGING AND SUBJECTIVE AGE IN ROMANIAN AND PORTUGUESE OLDER ADULTS

S. von Humboldt, I. Leal, *Research Unit in Psychology and Health, I&D, ISPA – Instituto Universitário, Lisbon, Portugal*

**Aims:** To analyze the manifestations of adjustment to aging (AtA) and subjective age (SA) identified by older adults and to investigate the latent constructs that can work as major manifestations in AtA and SA in an older Portuguese and Romanian population. **Methods:** Measures were completed, using a variety of culturally appropriate methods, including demographics and interviews. Complete data were available for 64 older adults aged between 72-99 years (M=80.1; SD = 5.8). Data was subjected to content analysis. Representation of the associations and latent constructs were analyzed by a Multiple Correspondence Analysis (MCA). **Results:** The most prevalent response of the interviewed participants for AtA was 'Accomplishment, personal fulfillment, and future projects' (24.1%). 'With apprehension' (33.3%) was identified as the most frequent SA response. Findings showed a model for each nationality. AtA and SA for Portuguese elderly were explained by a three-factor model: 'conciliated', 'young-at-heart' and 'involved'. A



three-dimension model formed by 'satisfied', 'attentive' and 'concerned' was indicated as a best-fit solution for Romanian elderly. Conclusions: AtA and SA are strongly explained by increased likelihood of specific constructs in its definition. AtA was differently related to SA in older adults in both samples. Key Words: Adjustment to Aging, multiple correspondence analysis, older adults, Portuguese, Romanian, Subjective Age.

## SESSION 1350 (POSTER)

### MINORITY & DIVERSE POPULATIONS

**CHEWING FUNCTION IS ASSOCIATED WITH DEPRESSIVE SYMPTOMS OF JAPANESE FRAIL ELDERLY**  
M. Nishi<sup>1</sup>, S. Shinkai<sup>1</sup>, H. Yoshida<sup>1</sup>, Y. Fujiwara<sup>1</sup>, H. Murayama<sup>1</sup>, H. Amano<sup>1</sup>, N. Watanabe<sup>2</sup>, 1. *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*, 2. *Meiji Yasuda Institute of Life and Wellness, Inc., Tokyo, Japan*

**Background/Purpose :** With an aging population in Japan, the number of frail older adults is expected to increase as well. In addition, depression in older adults is also a serious problem, and the prevention of depression is an urgent issue. To address these problems, we examined the associated factors with depressive symptoms among frail elderly in Japan. **Methods:** We used data collected from a comprehensive health examination (aged  $\geq 70$  years) undertaken in 2005 within local areas in Japan. We used the Frailty Index which we developed (15-item Frailty Index, cut-off point 3/4) to screen the Japanese frail elderly and GDS-15 to assess depressive symptoms (cut-off point of 5/6). Chewing function was assessed by asking whether they are able to eat (chew) every foods or not. **Results:** Of 974 participants, 128 (13%) were evaluated as frail, and within the frail group, 52% were evaluated as depressed (16% in non-frail group). Among the frail elderly, there were no significant associations between age and depression and between sex and depression. Chewing function was significantly related to depression, using chi-square test (22% reported difficulty in chewing in depressed group and 8% in non-depressed group). Multiple logistic regression analysis showed that poor chewing function (having difficulty in chewing) was significantly associated with depression after adjusted for demographics, although physical performance and ability, history of disease were not significantly associated with. **Conclusions:** This finding suggested that it may be important to focus on chewing function for preventing depressive symptoms in frail elderly.

### COMPETING DEMANDS FOR SELF-MANAGEMENT OF DIABETES IN AFRICAN AMERICAN WOMEN CAREGIVERS OF PERSONS WITH DEMENTIA

C.S. Aaron, 1. *Menonite College of Nursing, Illinois State University, Normal, Illinois, Illinois*, 2. *University of Iowa, Iowa City, Iowa*

**Abstract** Charlene S. Aaron PhD (c) RN University of Iowa John A. Hartford BAGNC Archbold Scholar 2010-2012 Title- Competing Demands for Self-Management of Diabetes in African American Women Caregivers of Persons with Dementia Aim One: To compare the self-management of diabetes and glycemic control of older African American women with diabetes who have varying levels of dementia care intensity. Aim Two: To define the most difficult to perform self-management of diabetes activities for African American women who care for persons with dementia. Aim Three: To describe the relationship of time intensity of dementia caregiving with self-management of diabetes in older African American women. African Americans with chronic illnesses are at particular risk for worse health outcomes due to genetics, environment, income restrictions, and other barriers to healthcare, compared to Whites (Naples, Chahida, Eversley, & Moreno-John, 2010). There is a higher prevalence of diabetes in African American women as one in five African American women over age 55 has diabetes (ADA, 2011). In African American families, women juggle multiple responsi-

bilities and put their needs aside while prioritizing caring for the family. African American women prefer to care for their elder relatives at home rather than a nursing home. Because dementia care demands constant vigilance and can last up to 10 years, the intense caregiving may compete with the time allotted for self-management of diabetes. A cross-sectional descriptive design with a sample of N=50 African American women will quantify how African American women caregivers of persons with dementia maintain glycemic control.

### CHARACTERISTICS OF US EMERGENCY DEPARTMENT VISITS BY OLDER HOMELESS ADULTS: RESULTS FROM A NATIONALLY REPRESENTATIVE SURVEY

R.T. Brown<sup>1,2</sup>, M. Steinman<sup>1,2</sup>, 1. *University of California, San Francisco, San Francisco, California*, 2. *San Francisco VA Medical Center, San Francisco, California*

**Objectives.** Homeless adults age 50 and older experience premature onset of chronic illnesses and geriatric conditions, and use the emergency department (ED) at high rates. Although the proportion of the homeless population age 50 and older is increasing, little is known about use of health services among older homeless adults. **Methods.** To identify characteristics of ED visits among older homeless adults, we analyzed data from the National Hospital Ambulatory Medical Care Survey for 2005-2009, a nationally representative survey of visits to hospitals and EDs. We used sampling weights, strata, and clustering variables to obtain nationally representative estimates. **Results.** Homeless adults age 50 and older had 200,999 ED visits each year, accounting for 36% of visits by homeless patients. While demographic characteristics of ED visits (sex, race/ethnicity and geographic distribution) were similar in older compared to younger homeless adults, clinical and health services characteristics differed. Compared to their younger counterparts, older homeless adults had fewer discharge diagnoses related to psychiatric conditions (10% vs 20%,  $p=.002$ ) and drug abuse (7% vs 15%,  $p=.003$ ), but more diagnoses related to alcohol abuse (31% vs 23%,  $p=.03$ ). Older homeless adults were also more likely to arrive by ambulance (48% vs 36%,  $p=.02$ ) and to be admitted to the hospital (20% vs 11%,  $p=.003$ ). **Conclusions.** Older homeless adults have unique patterns of ED care compared to younger homeless adults. Health care systems need to account for these differences in use of the ED in order to meet the needs of the aging homeless population.

### POST-HOSPITAL MEDICATION RECONCILIATION IN OLDER CHINESE-AMERICAN HOME CARE PATIENTS: CORRELATION, PREVALENCE, AND FACTORS ASSOCIATED WITH POTENTIALLY INAPPROPRIATE MEDICATION AND MEDICATION DISCREPANCY

S.H. Hu<sup>1</sup>, E. Capezuti<sup>1</sup>, M. Boltz<sup>1</sup>, J.B. Foust<sup>2</sup>, 1. *New York University, New York, New York*, 2. *University of Massachusetts Boston, Boston, Massachusetts*

Studies of potential medication problems among older adults have focused on English-speaking populations in a single health care setting or a single potential medication problem. The aims of this study were to examine, in older Chinese-Americans: 1) the prevalence of both potential inappropriate medications (PIMs; 2002 diagnosis-independent Beers Criteria) and medication discrepancies (MDs); 2) the relationship between PIMs and MDs; and 3) the patient and hospitalization characteristics associated with them during the care transitions from hospital discharge to home care. This cross-sectional, retrospective study was conducted with a sample of 82 older Chinese-Americans admitted to a large home care agency following a hospital discharge. Twenty (24.3%) study participants had at least one PIM at hospital discharge. Fifty-one (67.1%) study participants had at least one MD. A positive correlation was found between the occurrence of a PIM and the occurrence of a MD ( $r=.22$ ,  $p=.05$ ), which supports evaluating the appropriateness of medications while reconciling inconsistencies in medication regimens. Logistic regression demonstrated that the number of medications was

the only significant factor associated with the occurrence of a PIM and a MD underscoring the need to address polypharmacy as a multifaceted safety threat. In addition, older age and longer length of hospital stay were associated with the occurrence of a PIM demonstrating the advisability of frequent, consistent medication reviews during the acute care stay and post-acute period. Future research should examine older Chinese-Americans' unique medication management problems, as well as potential barriers for medication reconciliation during care transitions.

#### **TYPES OF POTENTIALLY INAPPROPRIATE MEDICATIONS (PIMS) AND MEDICATION DISCREPANCIES (MDs) IDENTIFIED DURING MEDICATION RECONCILIATION AMONG OLDER**

S.H. Hu<sup>1</sup>, E. Capezuti<sup>1</sup>, M. Boltz<sup>1</sup>, J.B. Foust<sup>2</sup>, 1. *New York University, New York, New York*, 2. *University of Massachusetts Boston, Boston, Massachusetts*

Chinese-Americans are one of the fastest growing populations in the US; however little is known about the types of potential medication problems and potential barriers they experience when managing their medication during care transitions from hospital to home care. This cross-sectional retrospective study was conducted with a sample of older Chinese-Americans admitted to a large, urban home care agency after a hospitalization. Potentially inappropriate medications (PIMs) were identified by using 2002 diagnosis-independent Beers criteria. Medication discrepancies (MDs) were identified by comparing the differences between hospital discharge medication orders and home care admission medication orders. Eighty-two (34.7%) eligible older Chinese-Americans were enrolled; more than 80% of them reported low formal education levels (less than high school) and limited English proficiency. The majority of them (70%) lived with family members. The four most common PIMs are the long-term use of stimulant laxatives, overuse of ferrous sulfate, amiodarone use, and cyproheptadine use. The most common MD was a medication listed on home care admission orders but not listed at hospital discharge medication. Findings indicate that older Chinese-Americans are at risks for PIMs and MDs during care transitions. It is important to reconcile medications for their consistencies and appropriateness for the patient. The consideration of cultural and language support and the role of family members during care transitions should be emphasized in this population.

#### **LANGUAGE AND AGE EQUIVALENCE IN THE PATIENT-REPORTED OUTCOMES INFORMATION SYSTEM (PROMIS®) PHYSICAL FUNCTIONING ITEMS**

S.H. Paz<sup>1</sup>, K. Spritzer<sup>1</sup>, L. Morales<sup>2</sup>, R.D. Hays<sup>1</sup>, 1. *Medicine, UCLA, Los Angeles, California*, 2. *Group Health Research, Seattle, Washington*

**Objective** To evaluate the equivalence of the PROMIS® physical functioning item bank by language of administration (English versus Spanish) and age (50 or older versus younger). **Methods** The PROMIS® wave 1 English-language physical functioning bank consists of 124 items and 114 of these were translated into Spanish. The items were administered to 640 adult Spanish-speaking Latinos. Results Item means ranged from 2.53 (SD=1.36) to 4.62 (SD=0.82). Coefficient alpha was 0.99 and item-rest correlations ranged from 0.41 to 0.89. A one-factor model fit the data well (CFI=0.971, TLI=0.970, and RMSEA=0.052). IRT parameters ranged from "Are you able to run 10 miles?" (lowest slope) to "Are you able to put on a shirt or blouse?" (largest slope); and "How much do physical health problems now limit your usual physical activities?" (smallest category threshold) to "Are you able to run ten miles (16 km)?" (largest category threshold). Fifty of the 114 items were flagged for language DIF and 30 for age DIF based on an R-squared of 0.02 or above criterion. The expected total score was higher for Spanish than English-language respondents, and for those under 50 than for those 50 or older. Limiting the analysis to items without language DIF, revealed no items flagged for age DIF either. Conclusions English versus Spanish-speaking subjects and those 50 or older versus younger,

with the same level of physical function, respond differently to the PROMIS® physical function items. This study yields essential information about the equivalence of the physical functioning items in Spanish versus English as well as older versus younger individuals.

#### **SOCIAL SUPPORT, ACTIVITIES OF DAILY LIVING (ADL), AND DEPRESSION AMONG OLDER CHINESE IMMIGRANTS**

B. Kim<sup>1</sup>, L.B. Maradik Harris<sup>2</sup>, A. Liu<sup>2</sup>, 1. *School of Social Work, University of Hawaii at Manoa, Honolulu, Hawaii*, 2. *UCLA, LA, California*

**BACKGROUND:** Previous studies identified that the interrelation of social support and depression appears to be particularly relevant in older persons suffering impairment in ADLs. A theoretical model that specifies relationships among social support, depression, and ADL impairment components was examined. **METHODS:** Data from 187 Chinese elders, aged 60 years and over and lived in the Los Angeles County were analyzed for this purpose. Depression was measured by the GDS (Geriatric Depression Scale-Chinese Version) and socio-demographic characteristics were measured. Social support was measured by the Lubben Social Network Scale (LSNS). Also, the study used the Katz Index of ADL to measure ADL performance. **RESULTS:** The cross-sectional data were analyzed using covariance structure modeling techniques. Consistent with an initially theorized structural model, the number of close network members seen regularly was associated with perceived adequacy of support. In turn, perceived adequacy of support predicted less depression and less ADL impairment. The number of close network members seen regularly was also directly associated with less ADL impairment. **IMPLICATIONS:** The results of this study indicate the importance of the perceived adequacy of social support for health outcomes among older Chinese immigrants. Also, the study provides substantial empirical support for the design of social support interventions for older Chinese immigrants.

#### **THE INTERRELATIONSHIPS OF HEALTH LITERACY, PATIENT TRUST, AND PATIENT-PROVIDER COMMUNICATION AMONG OLDER ADULTS**

L.C. Gary<sup>1</sup>, R. Weech-Maldonado<sup>1</sup>, M.J. Miller<sup>2</sup>, L. Chen<sup>1</sup>, R.C. Outman<sup>1</sup>, M.N. Ray<sup>1</sup>, H. Coley<sup>1</sup>, K.G. Saag<sup>1</sup>, 1. *University of Alabama at Birmingham, Birmingham, Alabama*, 2. *University of Oklahoma, Tulsa, Oklahoma*

According to the Institute of Medicine, high quality health care should be safe, effective, timely, efficient, equitable and patient-centered care (PCC). One proposed factor in being an empowered patient who participates in PCC is health literacy. Research literature suggests that health literacy is necessary for understanding written medical information and engaging in successful disease management by the patient. In this study, we assess the role of patient health literacy in promoting PCC via communication and patient trust for older adults. Data (N=260) are from the Alabama NSAID Patient Safety Survey, Phase II: Disparities in Risk Awareness and Communication project. Data were collected via telephone survey of adults from 36 primary care practices. The dependent variables were perceived quality of patient-physician communication and patient trust using CAHPS measures. The primary independent variables were two standardized health literacy measures. Control variables included race, gender, and other variables. Generalized linear models were estimated that accounted for clustering of patients within physician practices using SAS 9.2. After multivariable adjustment, patient health literacy was associated with patient trust (B= -5.65; p<.05). Thus, lower health literacy is associated with lower patient trust (reverse coded). Non-Hispanic black race and advanced age (over 75 years) were also significantly associated with patient trust (B=5.46; p<.05 and B=7.01; p<.05). For the communication models, health literacy (confi-

dence completing medical forms) was associated with provider communication ( $B = -6.22$ ;  $p < .10$ ). Our findings on the impact of health literacy on communication and trust are important additions to the aging and health literacy research literature.

### **STUDYING OLDER AFRICAN-AMERICANS' PAIN PERCEPTIONS: THE CREATIVE ART OF A PHILOSOPHICAL FRAMEWORK**

S. Booker, *The Pennsylvania State University, State College, Pennsylvania*

Under-management of pain in African-Americans is well-documented, and growing evidence suggests that lack of knowledge and understanding of cultural and ethnic differences in perceptions of and beliefs about pain has led to disparate quality pain care in African-Americans. Although health literature has documented under-management of pain, nursing research has yet to comprehensively capture the continuum of cultural perceptions of pain or how this influences effective pain assessment and management. With the ever-increasing population of older minority patients, it is paramount that socio-cultural perceptions of pain are explored in order to reduce disparities and public health economic costs. Because older African-Americans describe, react to, cope with, and treat pain differently than other races, studying pain in older African-Americans requires an examination of their cultural history, teachings, and life experiences. A secondary analysis of a systematic literature review performed by the author on African-Americans' perceptions of pain and pain management revealed many theoretical gaps. Many older African-Americans have not been asked key questions into their beliefs of pain and pain management. It is evident that achieving optimal pain management is contingent upon thorough understanding on how older African-Americans perceive and treat the phenomenon of pain. To study the comprehensive realm of older African-Americans' pain perceptions, a philosophical approach to guide future pain science studies is proposed. This poster 1) presents known pain perceptions and beliefs held by African-Americans as identified by the literature review and 2) proposes an innovative philosophical framework for future study integrating aspects of anthropology, epidemiology, pathology, and genealogy.

### **RISK FACTORS OF HEARING LOSS AMONG MEXICAN AMERICANS AGED 65 TO 74 YEARS OLD**

Y. Joo, O. Hong, M.N. Haan, *UCSF, San Francisco, California*

**Introduction:** Hearing impairment with aging can be delayed, if we identify risk factors of hearing loss and provide early intervention. **Purpose:** To determine risk factors of hearing loss among Mexican American elderly population. **Methods:** A cross-sectional secondary data analysis was conducted using selected variables extracted from the large dataset of the Sacramento Area Latino Study on Aging (SALSA) dataset. A total of 476 aged 65-74 years who completed hearing tests were included in the analysis. Hearing measurement was done with pure-tone audiometry at frequencies between 250 Hz and 8000 Hz. Several factors including demographics, medical history, taking ototoxic medication, and occupational exposures were considered as risk factors of hearing loss. **Results:** The mean age of the participants was 70.7 years ( $SD = 2.7$ ) and more of participants were women (57.7%). Prevalence of hearing loss at low frequencies (.5-3kHz) and high frequencies (4-8kHz) were 78.9% and 97%, respectively. Male gender ( $\beta = -6.99$ ,  $p < .05$ ) and stroke ( $\beta = 4.27$ ,  $p = .011$ ) significantly predicted mean hearing thresholds at low frequencies (.5-3kHz), controlling for hypertension, diabetes, age, solvent exposure, noise exposure, history of taking any ototoxic medications. Male gender ( $\beta = -12.74$ ,  $p < .05$ ), diabetes ( $\beta = 3.12$ ,  $p = .043$ ), and age ( $\beta = .948$ ,  $p = .001$ ) significantly predicted mean hear-

ing thresholds at high frequencies (4-8kHz), controlling for other factors. **Conclusion:** Several factors were related to hearing loss. Further study with a large sample size of Mexican Americans is needed to validate the study findings. It is also important to incorporate these factors into interventions to reduce hearing loss.

### **EVALUATING THE EFFICACY OF VISUAL AIDS IN A Hmong HEALTH EDUCATION PROGRAM FOR BREAST AND CERVICAL CANCER SCREENING**

M. Lor, K. Moua, P. Khang, P. Xiong, *Nursing, University of Wisconsin-Madison, Madison, Wisconsin*

**Background:** Low education, low income, and limited English proficiency all contribute to low health literacy. Each of these health literacy risks applies to the Hmong population, particularly older Hmong, putting them at high risk for low health literacy and poorer health outcomes. Not surprisingly, older Hmong women have low rates of breast and cervical cancer screening. **Purpose:** To evaluate health education workshops guided by the Cuidandome model; use of visual aids (photographs, video clips) and hands-on models to promote understanding of the importance of breast and cervical cancer screening among older Hmong. **Method:** A total of six breast ( $n = 3$ ) and cervical ( $n = 3$ ) cancer screening educational workshops were conducted at three Midwestern community centers. Participants included 150 Hmong. Post workshop evaluations were conducted using focus groups and content analysis. **Results:** Healthcare education using visual aids and hands-on models were effective in improving understanding about breast and cervical cancer screening for low-literacy Hmong adults. Participants requested additional workshops and enjoyed learning about screenings. **Conclusion:** The study supports the use of visual aids and hands on models to improve health education for older Hmong and has implications for health education programs with other immigrant groups.

### **INTERDISCIPLINARY HEALTH CARE FACULTY DEVELOPMENT IN HEALTH LITERACY AND ETHNOGERIATRICS**

G. Yeo, M. Grudzen, N. Hikoyeda, M. Tzuang, C. Braddock, S. Berekyei, K. Hooper, *Stanford University School of Medicine, Stanford, California*

To assist health care faculty prepare students to meet the needs of increasingly diverse elders, funded by the Bureau of Health Professions, Stanford Geriatric Education Center trained 34 multiethnic faculty from 10 health-related disciplines in 19 universities from 12 states in an intense program in health literacy and ethnogeriatrics (HLE). In the summers of 2008 through 2010, between 8 and 12 faculty members a year participated in a 34 hour course over five days on the Stanford campus and then applied the knowledge, skills, and attitudes to develop new curriculum and research projects in their own training programs and communities. The eight module core curriculum was presented by a nine member multiethnic interdisciplinary faculty in a train-the-trainer format, supplemented by daily resource sessions and trainee led sessions. Evaluation by trainees included ratings before and after training as well as retrospective ratings after training of their pretraining knowledge, skills, and attitudes. For each of the eight modules, the change in self-rated knowledge, skills, and attitudes from both pre to post training and from retrospective pre to post training were all statistically significant at the  $p < .05$  level. With 5 being the highest, the post test ratings of all modules were over 4. Health Belief Attitudes also showed significant improvement. Mean ratings of usefulness for all modules were over 4.5. Trainee follow-up confirmed new HLE curriculum in 12 training programs, and 8 community-based ethnogeriatric projects.

## A COMMUNITY-ACADEMIC PARTNERSHIP PROGRAM ADDRESSING DISPARITIES IN MOBILITY AND DIABETES

G. Pariser, P. Gillette, K.K. Hager, *Bellarmine University, Louisville, Kentucky*

Current evidence suggests that much of the morbidity secondary to type 2 diabetes (T2DM) can be prevented by engagement in diabetes self-management behaviors, including exercise. Unfortunately, many aging adults with T2DM have co-existing chronic health conditions that affect their mobility and limit their capacity to exercise. The prevalence of co-existing chronic illnesses and mobility impairments is higher in African Americans with diabetes compared to whites; contributing to the complexity of promoting exercise and managing diabetes in this population. Most diabetes self-management education (DSME) programs rely on standardized exercise guidelines and do not include exercise or recommendations addressing participants' mobility and exercise limitations. Active Steps for Diabetes is a DSME and exercise program created to address this problem. It is a collaborative partnership between a city public health department, a university, a community health clinic, and involves various disciplines. Physical therapy, nursing, dietary, and clinical laboratory science faculty, clinicians, and students developed and delivered the program and conducted a clinical trial evaluating its effectiveness. The clinical trial included forty-seven African American subjects (62.6 + 10.5 yrs of age) who completed Active Steps for Diabetes and thirty-six subjects (20 African Americans and 16 Caucasians; 62.0 + 9.7 yrs) who completed a standard DSME program. Active Steps for Diabetes was more effective than the standard DSME program in increasing participants' exercise, cardiovascular fitness, balance and mobility, and improving their blood glucose control. This model program may be an effective method to improve health in medically complex minorities with T2DM.

## NURSING CARE MANAGEMENT OF BOSTON'S, ELDER HOMELESS WOMEN: CURRENT INSIGHTS AND FUTURE PLANS

M. Tanur<sup>1,2</sup>, R. Means<sup>1,3</sup>, J. Seaman<sup>1</sup>, B. Vitale<sup>1</sup>, N. DeFilippis<sup>1</sup>, K. Mills-Dick<sup>4</sup>, 1. *Women of Means, Wellesley, Massachusetts*, 2. *Boston University School of Medicine, Boston, Massachusetts*, 3. *Harvard University School of Medicine, Boston, Massachusetts*, 4. *Boston University School of Social Work, Boston, Massachusetts*

Although Bostonians founded the first Committee to End Elder Homelessness in 1991, homeless elderly women here are still the invisible, the most underprivileged of the underserved. "A risky game of musical chairs" is how some homeless women have described approaching the (re)housing search. Disrespect and red tape are significant barriers for homeless people of both genders seeking medical care. The Aging in Shelter Collaboration (ASC) serves to bridge the gaps between housing advocates, social workers, medical providers, shelter managers, discharge planners, mental health professionals, benefit managers, and (rarely) financial planners. As an integrative program, ASC coordinates the medical needs arising from chronic illness with housing searches and housing stabilization of this target population. With the encouragement of a "conierge" geriatric RN care manager, these marginally housed and previously housed women navigate through two complex systems – health care and urban housing. While this ASC has devised many conduits into sound medical care and some doors into long-term shelter options, the project still uncovers far too many duplications of pivotal services and resulting confusion. Eliminating these redundancies would result in better service to the target population at lower cost. This program has recently established a longitudinal registry which collects survival ADLs (activities of daily living), (re)housing markers, and progress of chronic diseases of participating elders. Given initial program outcomes and markers of success, ASC is embarking on a mixed methods formative evaluation to assess program effectiveness and service utilization, and enhance the transition of participating homeless elders to geriatric services once housed.

## SESSION 1355 (POSTER)

### NUTRITION, OBESITY, EATING DISORDERS & CALORIC RESTRICTION

#### NORMAL WEIGHT OBESITY AND CARDIOMETABOLIC RISK IN THE ELDERLY: DATA FROM NHANES III

J.A. Batsis<sup>1,2,3</sup>, K.R. Sahakyan<sup>4</sup>, V. Somers<sup>4</sup>, F. Lopez-Jimenez<sup>4</sup>, 1. *General Internal Medicine, Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire*, 2. *Dartmouth College, Hanover, New Hampshire*, 3. *Center for Health + Aging, Dartmouth College, Hanover, New Hampshire*, 4. *Mayo Clinic, Rochester, Minnesota*

Background: Current body mass index (BMI) strata likely misrepresent the accuracy of true adiposity in elders. Subjects with normal BMI with elevated body fat may metabolically have higher cardiovascular (CV) and overall mortality risk than previously suspected. Methods: Subjects aged  $\geq 60$  years with a BMI 18.5-25 kg/m<sup>2</sup> with anthropometric and bioelectrical impedance measures from National Health and Nutrition Examination Surveys III (1988-1994) and mortality data linked to the National Death Index were included. Normal weight obesity was classified in two ways: creation of tertiles with the highest %body fat; and using body fat cutoffs of  $>25\%$  in males and  $>35\%$  in females. We compared mortality rates with Cox-proportional hazard models. Base modeling adjusted for age, gender, smoking, race, diabetes, and BMI. Results were weighted using NHANES methodologies. Results: The final sample included 1,528 subjects, mean age 71  $\pm$  0.2 yr, median (IQR) follow-up was 12.9 yr (7.5, 15.3) with 859 deaths (47% CV). Subjects with normal BMI but high %body fat [n=368 (24%)] were classified as normal weight obesity and had higher hypertension rates (61 vs 49%; p<0.001), dyslipidemia (60 vs 45%; p<0.001), but not diabetes (10 vs 10%; p>0.05), than persons with normal BMI/normal body fat. Mean leptin (11 vs. 7 fg/L; p<0.001) and C-reactive protein (0.50 vs 0.40 mg/dL; p=0.02) were higher among those with normal weight obesity. Mortality was higher in normal weight obesity. By tertiles, normal weight obesity had higher risk of CV and overall mortality (HR 1.47 [95% CI 1.47:1.48] and 1.50 [95% CI 1.50:1.51]; both p<0.001). Results were unaltered after adjusting for waist circumference. Using pre-defined cutoffs, normal weight obesity portended a higher CV and overall mortality risk (HR 1.33 [95% CI 1.32:1.33] and 1.25 [95% CI 1.25:1.26]; both p<0.001). Conclusions: Normal weight obesity in the elderly is associated with cardiometabolic dysregulation and is a risk for CV and overall mortality independent of BMI and central distribution of fat. Our results highlight the importance of stratifying elders with normal weight according to fat content.

#### NUTRITIONAL STATUS IN OLDER MEXICAN AMERICANS AGED 75 YEARS AND OLDER

S. Al Snih, R. Samper-Ternent, T. Reistetter, M. Raji, K. Markides, K. Ottenbacher, *Division of Rehabilitation Sciences/Sealy Center on Aging, University of Texas Medical Branch, Galveston, Texas*

Objective: To examine the prevalence and factors associated with malnutrition among older Mexican Americans. Methods: 579 Mexican Americans aged 75 years and older from the Hispanic Established Population for the Epidemiologic Study of the Elderly interviewed in 2008. Measures included: sociodemographic, medical conditions, depressive symptoms, cognitive function, body mass index (BMI), muscle strength, short physical performance battery (SPPB), activities of daily living (ADLs), and the Mini Nutritional Assessment (MNA) Short Form. Results: Mean score of the MNA was 10.8 (SD=2.3). Eleven percent of the participants were classified as malnourished (MNA score < 8), 43.7 % were at risk for malnutrition (MNA score of 8 to < 12), and 45.0 % had normal nutrition status (MNA score  $\geq 12$ ). Multiple regression analysis showed that being female (OR=1.93; 95% CI=1.27-2.95), reporting some or great financial strain (OR=1.49; 95% CI=1.03-2.14), cardiovascular disease (OR=3.37; 95% CI=1.15-9.85), and ADL limi-

tations (OR=1.70; 95% CI=1.04-2.77), were associated with risk of malnutrition. Additionally, participants with high level of education and high performance scores for muscle strength and physical function were less likely to be at risk of malnutrition. Of the six components of the MNA, decline in food intake, weight loss during the last three months, psychological stress, and neuropsychological problems were the items that correlated best with the total MNA score. Conclusions: Risk of malnutrition is prevalent among older Mexican Americans and is higher among women than men. Financial strain, cardiovascular disease, and ADL disability were associated with risk of malnutrition.

### NEUROCOGNITIVE CONSEQUENCES OF GREEN TEA CONSUMPTION: A SYSTEMATIC REVIEW OF THE LITERATURE

J. Konopack, *Department of Health and Physical Education, Monmouth University, West Long Branch, New Jersey*

The protection derived from the consumption of non-oxidized *Camellia sinensis* (i.e., green tea) on cardiovascular disease is now widely recognized, and a growing body of literature further supports green tea consumption as protective against the formation and proliferation of various cancer types. Less well defined, however, is the extent to which green tea consumption by older adults confers any neurocognitive benefit, despite ample anecdotal support. To summarize the brain-specific benefits of green tea consumption relevant to an aging population, the current study involved a systematic review of original research published in English-language peer-reviewed journals between 2007 and 2012. To be considered for inclusion, articles must have been specific to *Camellia sinensis* (i.e., teas excluding herbal tisanes) and must have reported empirical data pertaining to brain structure or cognitive function (e.g., learning, executive control function, neurodegenerative disease, and changes to central nervous system morphology). Results yielded a robust and growing body of evidence for widespread neurocognitive benefits derived from green tea consumption in animal models – frequently attributed to exposure to epigallocatechin-3-gallate (EGCG) – but a paucity of research in humans, which has heretofore been generally limited to epidemiological studies. Implications for successful aging in humans abound but still require empirical support. This study provides a summary of the neurocognitive benefits of green tea consumption and underscores the need for methodologically sound investigations in humans, particularly randomized controlled trials among older adults.

### CHEWING AND SWALLOWING DIFFICULTIES AND THEIR RELATIONSHIP TO DEPRESSION IN RURAL OLDER ADULTS

R.A. Heuberger, T. Mann, *Central Michigan University, Mt. Pleasant, Michigan*

The objective of this study was to investigate the associations of chewing and swallowing dysfunction to nutritional status in depressed versus non-depressed older adults. In this cross-sectional study, a convenience sample of 1065 community-dwelling older adults was recruited in the rural Midwestern United States. Trained interviewers collected information on demographics, daily living, and diet. Classification of depression was determined by diagnosis of depression from chart review. In our sample, 141 were diagnosed with depression, 113 possessed chewing difficulties, and 51 had swallowing complications. Compared to the Dietary Reference Intakes, the study population was deficient in several nutrients. Significant associations were observed between nutrients and the co-morbidities examined. In depressed versus non depressed subjects, protein, carbohydrate, vitamin E, biotin, phosphorous, copper, manganese and fiber were significantly different between groups ( $p < .05$ ). In individuals reporting chewing difficulties, vitamins A and E, manganese and fluoride were significantly different from those without complaints ( $p < .05$ ) and for those with swallowing issues, vitamin K and zinc were significantly different ( $p < .05$ ). These results emphasize the importance of depression and chewing/swallowing difficulties

in modulating nutritional status in older adults. Practitioners working with this population should monitor these co-morbid conditions and suggest increased intakes of appropriate, nutrient dense foods to individuals at risk.

### INFLUENCE OF PROTEIN AND ENERGY INTAKE ON THE PREVALENCE OF SARCOPENIA: AN INVESTIGATION WITHIN THE BERLIN AGING STUDY-II (BASE-II)

J. Nikolov, E. Steinhagen-Thiessen, I. Demuth, M. Heinig, J. Sasse, N. Bucholtz, R. Eckardt, *Charité - Universitätsmedizin Berlin, Geriatrics Research Group, Berlin, Germany*

Introduction: Optimal protein supply evenly distributed over the day, positive energy balance and physical activity are the premise of an effective conservation or rise of skeletal muscles in adults and prevention of sarcopenia. The data were collected within BASE-II and included subjects of an older and younger cohort. Aim of the study was to determine the protein and energy intake, as well as the prevalence of sarcopenia of community-dwelling elderly people. Method: A total of 1002 subjects were analyzed ( $f = 73\%$ ,  $m = 36\%$ ) including 229 in the young cohort (20-35y) and 759 in the old cohort (60-83y). For the diagnosis of sarcopenia we used dual-energy X-ray absorptiometry (DXA) in order to determine the appendicular skeletal muscle mass. Macronutrients and energy intake were determined with the EPIC-FFQ questionnaire. Results: Prevalence of sarcopenia within the older group was 19.6% (females) and 24.6% (men). The BMI of sarcopenic subjects was significantly lower whereas protein intake was significantly higher. Also the energy intake of these subjects was obviously increased. For the skeletal muscle mass index (SMI) no significant difference between younger and older subjects could be observed. However, on average younger subjects took in more protein and energy than older ones. Conclusion: The seniors within this study have insufficient protein and energy intake. Sarcopenic subjects have an even higher intake. This leads to the conclusion that nutritional aspects may not prevent sarcopenia alone. Factors such as physical activity and timing of protein and energy intake should be considered additionally during further progress of the study.

### ASSOCIATION BETWEEN SNACKING AND GAIT SPEED AMONG OLDER AMERICANS

B. Xu<sup>1</sup>, C. Zizza<sup>2</sup>, *1. Peking University, Beijing, China, 2. Auburn University, Auburn, Alabama*

Few studies have studied the relationship between snack patterns and physical performance among older adults. This study examined the associations of snacking with physical performance among adults aged  $\geq 50$  y. Data was from National Health and Nutrition Examination Survey (NHANES) 1999-2002. Participants were classified by snacking frequency (0, 1, 2, 3,  $\geq 4$  snacks/d) and by the percentage of energy from snacking (0% to  $<10\%$ , 10% to  $<20\%$ , 20 to  $<30\%$ , 30% to  $<40\%$ ,  $\geq 40\%$ ). Physical performance was assessed by gait speed over 20-foot and knee extensor power. Multiple regression models controlling for potential confounders were used to assess the associations between snacking and physical performance. After adjusting for age, gender, race/ethnicity, education and smoking status, snacking frequency was positively associated with both gait speed ( $p$  for trend = 0.02) and knee extensor power ( $p$  for trend = 0.05). Those with higher snacking frequency had a faster gait speed ( $p = 0.03$  for both quartile three and quartile four versus quartile one) compared to nonsnackers. Those with HEI-2005 scores in quartile four had a greater knee extensor power compared to nonsnackers ( $p = 0.04$ ). The associations between snacking frequency and physical performance remained after further adjustment for co-morbidities, medication use, cognitive function and BMI. Both snacking frequency and percentage of energy from snacking are positively associated with physical performance among older adults.

## ASSOCIATION OF BODY MASS INDEX WITH QUALITY OF LIFE IN ELDERLY OVER 60

S. Oh<sup>1</sup>, W. Bae<sup>2</sup>, 1. *Seoul National University Hospital Gangnam Center, Seoul, Republic of Korea*, 2. *Seoul National University Bundang Hospital, Seoul, Republic of Korea*

**Background:** As the Korean population ages rapidly, more elderly are faced with health threats. The elderly obese population is also increasing. This study evaluates the relationship between body mass index (BMI) and health-related quality of life (HRQoL) in elderly. **Methods:** A total of 641 elderly over 60 randomly selected from welfare centers, health centers and university-based hospitals completed the questionnaires including the Korean version Medical Outcomes Study short-Form 36-Item Health Survey (SF-36) and social-demographic information. Height and weight were also measured. **Results:** Some scales of SF-36 of were lower in women and older age group. SF-36 scores by BMI quartiles; Q1 (15.4-22.4 kg/m<sup>2</sup>), Q2 (22.4-24.4 kg/m<sup>2</sup>), Q3 (24.4-26.2 kg/m<sup>2</sup>), and Q4 (26.2-39.8 kg/m<sup>2</sup>), showed difference in the physical function (PF) scale ( $P < 0.045$ ). The scores Q1 group and Q4 group were lower than the scores of other groups. **Conclusions:** BMI of elderly people was associated with Health-related quality of life (HRQoL) measured by SF-36.

## COMPARISON OF BODY FAT MEASUREMENTS BY BODY IMPEDANCE ANALYSIS (BIA) AND DUAL ENERGY X-RAY ABSORPTIOMETRY (DEXA) IN SUBJECTS OF THE BERLIN AGING STUDY II (BASE-II)

K. Wirth, D. Spira, V. Acker, N. Bucholtz, E. Steinhagen-Thiessen, R. Eckardt, *Charité Berlin, Berlin, Germany*

Obesity and visceral adiposity have become an increasing problem. In old people body fat is often underestimated because of weight loss due to malnutrition and sarcopenia. BIA and DEXA are popular methods in estimating body composition and are well investigated in middle-aged people but not in the elderly. The aim of the study is to examine the quality of these two methods in a sample of older subjects compared to young adults within the BASE-II-study. A total of 498 subjects were analyzed ( $w=331$ ;  $m=167$ ) including 114 ( $w=67$ ;  $m=47$ ) in the young cohort (22-35 y) and 384 ( $w=264$ ;  $m=120$ ) in the old cohort (62-83 y). BIA measuring was performed by multifrequent tetrapolar Nutriguard M-2000 from Data Input. DEXA was done by using Discovery from Hologic. Besides these two methods of body fat measuring anthropological data (weight, height, body circumferences) were taken. The body fat results measured by BIA and DEXA correlated highly ( $r=0.85$ ,  $p < .001$ ) but the results differ significantly. The discrepancy of the two measurements decreased in women with increasing body fat ( $p < .001$ ). The correlation of body fat measured by BIA or DEXA with BMI was higher in women than in men. Additionally the BIA measured body fat results correlated stronger with BMI and with WC than the DEXA measured body fat results. Neither BIA nor DEXA should be seen as gold standard method in measuring body fat yet because of a great difference in the measured values. Further research as well as age and gender specific reference data are necessary.

## THE RELATIONSHIP BETWEEN BODY WEIGHT AND QUALITY OF LIFE IN OLDER ADULTS WITH MEDICARE SUPPLEMENT INSURANCE

K. Hawkins<sup>1</sup>, F.G. Bottone<sup>1</sup>, S. Musich<sup>1</sup>, R.J. Ozminkowski<sup>1,2</sup>, Y. Cheng<sup>1</sup>, R.J. Migliori<sup>2</sup>, C.S. Yeh<sup>3</sup>, 1. *Analytics and Data Management, OptumInsight, Ann Arbor, Michigan*, 2. *UnitedHealth Group Alliances, Minnetonka, Minnesota*, 3. *AARP Services, Inc., Washington, District of Columbia*

**Research Objective:** To estimate the relative impact that each body mass index (BMI) category has on health-related quality of life. **Study Design:** The Medicare Health Outcomes Survey instrument was used, but renamed the Health Update Survey. **Population Studies:** A mail survey was sent to 60,000 adults with an AARP®-branded Medicare Supplement Insurance (i.e. Medigap) plan provided by UnitedHealthcare

Insurance Company (for New York residents, UnitedHealthcare Insurance Company of New York) in 10 states. **Principle Findings:** Casemix-adjusted comparisons were made between each BMI category versus those with normal BMI. 22,827 (38%) eligible sample members responded to the survey. Of those, 2.2% were underweight, 37.0% were overweight, 18.5% were obese, 1.9% were morbidly obese, 38.5% had a normal BMI. Factors associated with being underweight or overweight were generally consistent with past reports. Quality of life was assessed using the average physical component scores (PCS) and mental component scores (MCS) obtained from the VR-12 health status tool. Respondents' PCS values were 5.01, 0.16, 3.60 and 9.50 points lower on average, respectively, for the underweight, overweight, obese and morbidly obese BMI categories, compared to the normal BMI group. Respondents' MCS values were 3.28, +0.52, 0.32 and 1.39 points lower on average, respectively for the underweight, overweight, obese and morbidly obese BMI categories, compared to the normal weight group. **Conclusions:** The greatest impact on quality of life was on those in the underweight and morbidly obese categories, with the greater negative impacts were on the physical rather than mental aspects of quality of life.

## MALNUTRITION IN A SAMPLE OF COMMUNITY-DWELLING OLDER PENNSYLVANIANS

R. DiMariaGhalili, Y.L. Michael, A.L. Rosso, *Drexel University, Philadelphia, Pennsylvania*

**Objectives:** To evaluate the prevalence of malnutrition among community-dwelling older adults in southeastern Pennsylvania using the Mini Nutritional Assessment-short form (MNA-SF) and to analyze the distribution of nutritional status according to socio-demographic factors and participation in community-based programs. **Methods:** Telephone interviews were conducted using random digit dial with households in five counties in southeastern Pennsylvania. Older adults were over sampled and interviews were conducted in English and Spanish. 2932 adults (949 men and 1983 women) aged 60 years or older (mean age  $71.1 \pm 8.3$  years) were included in analyses. **Results:** 184 (6.3%) participants were malnourished, 1632 (55.6%) at risk, and 1116 (38.1%) normal based on the MNA-SF score. Compared to those with normal nutritional status, malnourished seniors were more likely to live in an urban setting (51.6% v 37.7%) and live below poverty level (14.1% v 3.6%) ( $p < 0.05$ ). 65.6% of malnourished participants reported difficulty with housing costs compared to 23.2% of normal participants ( $p < 0.05$ ). Malnourished older adults were as likely as normal older adults to report use of local senior nutrition programs (9.8% v 7.0%,  $p=0.4$ ). **Conclusions:** Female gender, living in an urban area, and lower socioeconomic status were associated with higher rates of malnutrition among community-dwelling older adults in southeast Pennsylvania. Prevalence of malnutrition was similar to other population-based samples of older adults. Interventions are needed to connect high-risk older adults with nutrition services.

## RELATIONSHIPS BETWEEN MOTIVATION FOR WEIGHT LOSS AND COGNITIVE-BEHAVIORAL INFLUENCES AMONG MIDLIFE AND OLDER RURAL WOMEN ENROLLED IN A WEB-BASED CLINICAL TRIAL FOR WEIGHT LOSS AND WEIGHT MAINTENANCE

P.A. Hageman<sup>1</sup>, J.R. Reed<sup>1</sup>, C. Pullen<sup>1</sup>, L.S. Boeckner<sup>2</sup>, P. Dizon<sup>1</sup>, B.C. Yates<sup>1</sup>, 1. *University of Nebraska Medical Center, Omaha, Nebraska*, 2. *University of Nebraska-Lincoln, Scottsbluff, Nebraska*

Assessing motivation for weight loss may identify those truly ready to make lifestyle changes. This study investigated the motivation for weight loss among rural women who committed to a 30-month web-based weight management clinical trial and examined the relationships between women's weight-loss motivations with 4 behavioral-specific cognitions (perceived benefits and barriers of action, self-efficacy and interpersonal support) supported by Pender's Health Promotion Model.

Baseline data were analyzed from 118 women (40-69 years; BMI 28.5 to 45) enrolled in a community-based randomized clinical trial, the Women Weigh-In for Wellness study. Women completed the Motivation for Weight Loss Scale (Meyer et al 2010), which rates 3 subscales (greater health benefits, appearance to others and appearance to self) from 1-4 with 4 indicating a higher level of motivation. Pearson correlations were calculated between motivational subscales and responses to validated surveys of perceived healthy eating and exercise benefits/barriers to action, self-efficacy, and social support (Sallis et al 1987, 1988; Walker et al 2006). Motivation for weight loss ranked highest for greater health benefits (M=3.7), and lower for improving appearance to self (M=2.9) or to others (M=1.7). Motivation to achieve health benefits was related to perceived benefits of and self-efficacy for healthy eating and exercise (all  $p < .007$ ); whereas the other subscales were related to benefits and barriers to action but not self-efficacy. Interpersonal support was not correlated with any of the weight loss motivational subscales. This information may prove helpful in informing the intervention adherence and outcomes for this population.

## **SESSION 1360 (POSTER)**

### **PAIN AND PAIN MANAGEMENT**

#### **PAIN AND DISRUPTIVE BEHAVIORS IN NURSING HOME RESIDENTS WITH DEMENTIA**

H. Ahn, A. Horgas, *University of Florida, Gainesville, Florida*

Approximately 40 – 80% of nursing home (NH) residents with dementia exhibit disruptive behaviors. Currently, psychoactive medications and physical restraints are the primary treatment modalities, but these treatments are associated with many side effects. Thus, alternative treatment approaches are needed. The purpose of this study was to determine if pain, as a potentially modifiable factor, contributed to disruptive behaviors in NH residents with dementia. Minimum Data Set (MDS) assessments from Florida NH residents (N = 56,577) were used to address this question. Participants had a mean age of 84 years (SD =  $\pm 7$  years), and the majority were female (67.7%), widowed (53.7%), high school graduates or less (72.4%), Caucasian (78.7%), and mildly or moderately cognitively impaired (54.8%). About 1/3 (36.9%) of the sample had pain and 9 – 30% had disruptive behaviors (wandering: 9%; aggression: 24%; and agitation: 30%). Pain was significantly negatively associated with all three disruptive behaviors. However, in the multivariate analyses controlling for cognition, health factors, and demographic variables, pain was negatively related to disruptive behaviors that were locomotion-based (e.g., wandering), but positively related with non-locomotive disruptive behaviors (e.g., aggression and agitation). The negative relationship between pain and wandering may reflect the fact that residents are reluctant to wander or move around when they have pain. In contrast, pain exacerbated aggression and agitation, and may reflect a means of expressing physical discomfort. These results suggest that effective pain management may help to reduce aggressive or agitated behaviors among nursing home residents with dementia, and may improve mobility.

#### **INFLUENCING FACTORS OF PAIN IN THE ELDERLY WOMEN**

Y. Lee<sup>1</sup>, S. Chang<sup>2</sup>, G. Kim<sup>3</sup>, *1. Nursing, Kangwon National University, Chuncheon, Kangwon-do, Republic of Korea, 2. Korea University, Seoul, Republic of Korea, 3. Seoul Women's College of Nursing, Seoul, Republic of Korea*

Purpose : The purpose of this study was to identify the factors that influenced the pain such as pain disability, depression, perceived stress, fatigue and social support in the elderly women. Method: Participants in the study were 208 elderly women at community settings in Korea. The data were collected by personal interviews using questionnaires and were analyzed using Pearson correlation coefficients, t-test, ANOVA,

and stepwise multiple regression with the SPSS/WIN 17.0 were used to analyze the data from survey questionnaires. Result: Pain in the elderly women showed a positive correlation with pain disability ( $r=.59$ ,  $p<.001$ ), depression ( $r=.49$ ,  $p<.001$ ) and fatigue ( $r=.48$ ,  $p<.001$ ), but a negative correlation with social support ( $r=-.28$ ,  $p<.001$ ). In addition, variables that predicted pain were pain disability, fatigue and social support (41.3%), especially pain disability was found to be a significant predictor of pain (34.5%) in the elderly women. Conclusion: The results of this study show that psycho-social factors like fatigue, depression and social support have the relationship and impact on pain in the elderly women. Therefore, it is important to consider psych-social factors as well as the pain itself in order to efficiently control the pain. in the elderly women.

#### **PAIN AND WORKING MEMORY: HOW FACTORS OTHER THAN AGE IMPACT COGNITIVE DECLINE**

J. Katschke, B. Follick, S.S. Ahmadpanah, K. Decollibus, M. Chaker, B.J. Cherry, *California State University, Fullerton, Fullerton, California*

Experienced physical pain is often thought of as only having corporal consequences. Contrary to this idea, research is beginning to explore other negative consequences of experienced pain. One area of interest is working memory, a domain of cognitive functioning responsible for short term storage and processing of information (Becker & Morris, 1999). While a decline in cognitive faculties has been associated with aging, some research suggests that pain might also play a vital role. A previous longitudinal study indicated that semantic and episodic memory performance was related to experienced chronic pain (Soderfjell, Molander, Johansson, Barnekow-bergkvist & Nilsson, 2006). Another study found that individuals experiencing chronic pain performed poorly on tests of processing speed which can be related to cognitive performance (Moriarty et al., 2011). Additional research has shown that pain experienced during performance on working memory tasks can impact encoding (Sanchez, 2011). The goal of this study was to explore the relationship between pain, age, and working memory performance. Participants consisted of younger adults (n =84), healthy older adults (n =48), and older adults diagnosed with fibromyalgia (n =61) who were administered a variety of cognitive assessments and a general health survey. Stepwise regression found that pain was the best predictor of cognitive performance, and once entered, age predicted no additional unique variance. These findings suggest that irrespective of age, higher levels of experienced pain can be indicative of cognitive decline. This identified relationship could provide additional information illustrative of the cognitive decline experienced in many chronic pain disorders.

## **SESSION 1365 (POSTER)**

### **DEATH, DYING, AND END OF LIFE CARE**

#### **HOW WE DIE: MEXICAN AMERICAN HOSPICE STANDPOINTS**

A.M. Gonzales, *Sociology, CSU-San Marcos, San Marcos, California*

There are currently 50 million Latinos in the United States who now comprise 16% of the American Population. Although Hospice care can alleviate suffering, it remains underutilized by Latino populations. Compared to the general American population, Latinos are especially less likely to use hospice despite evidence that they may actually have greater need for services. Compassionate care options are greatly needed, as race and ethnicity have been identified as important factors affecting end-of-life care and dying and how we die is a major public health issue. This ethnographic project is aimed to uncover Mexican American Hospice Standpoints on "How do we die?". The goal of this project is to reveal a richer understanding of the ground level, end-of-life experiences, standpoints, conditions, concerns, and needs of Latino families,

with emphasis on caregivers. I use a systematic participant observation methodology to uncover empirical knowledge centered in the “lived experiences” of Latino/Mexican families. Centering our understanding on the authentic experiences of Mexican families can give us valuable insights for knowing how to: target the needs and concerns of families, increase positive experiences with hospice, and expand future utilization by these and other Latino families.

### **STRATEGIES TO ENHANCE PARTNERSHIPS BETWEEN HOSPICE/PALLIATIVE CARE AND RESIDENTIAL PROVIDERS OF SERVICES TO OLDER PEOPLE WITH INTELLECTUAL DISABILITIES**

A.M. Kirkendall, *Social Work, University of Nevada Las Vegas, Las Vegas, Nevada*

Increasing development of partnerships between providers of service for people with Intellectual disabilities (IDs) and hospice and palliative care are occurring in an effort to respond to the needs of older people with IDs. There is a lack of clarity about how these organizations work together on shared staff roles, organizational philosophies, and policies. To provide effective care at life’s end for people who live in residential facilities an effective partnership between hospice/palliative care services and providers of residential services to people with IDs is essential. Utilizing qualitative methods (e.g. focus groups with providers) the purpose of this study was to identify next steps in building an effective partnership between a hospice and palliative care provider and a provider of services to people with IDs. Observations were made on the following: the intensity of the discussion, willingness of members to disclose information, and future points to follow up on. Codes were organized into the following areas: educational needs for staff, available and desired resources, and potential challenges. The data depicted the following strategies for enhancing the partnership between service providers for older people with IDs and hospice and palliative care specialists: 1) increasing an emphasis on relationship building, and 2) increasing the depth and frequency of educational trainings. Enhancing this partnership is the first step in providing hospice and palliative care to this population. Future research will evaluate the impact of hospice and palliative services on the quality of life for older people with IDs.

### **EXERCISING AUTONOMY AT THE END OF LIFE: DECISION-MAKING IN ASSISTED LIVING**

D. Dobbs<sup>1</sup>, A. Frankowski<sup>2,3</sup>, S. Zimmerman<sup>4,5</sup>, R. Perez<sup>2,3</sup>, M.C. Neme<sup>2,3</sup>, *1. University of South Florida, Tampa, Florida, 2. Center for Aging Studies, Baltimore, Maryland, 3. University of Maryland Baltimore County, Baltimore, Maryland, 4. University of North Carolina, Chapel Hill, North Carolina, 5. Sheps Center for Health Services Research, Chapel Hill, North Carolina*

One of the purported goals of assisted living (AL) is to encourage resident autonomy. The ability for AL residents to exercise choice related to their end of life health and long-term care decisions is central to that goal. This qualitative analysis examines end of life health and long-term decision-making among AL residents participating in either of two multi-year ethnographic studies where the combined samples consist of seven sites and over 600 coded documents. Using Atlas.ti version 6, an open coding strategy was used followed by axial coding to develop themes and subthemes. Four themes related to decision-making emerged from the data: 1) making end-of-life preferences known (e.g., advance care planning with family, completion of advance directives); 2) the decision to use aggressive treatments (e.g., chemotherapy) vs. comfort care (e.g., hospice) at the end of life; 3) proactive vs. crisis mode planning for long-term care transitions; and 4) the lack of autonomy in decision-making (subthemes of which were AL administrators as the decision-makers for who remains in the setting and family members as decision-makers for resident relocation). Although there were some data to indicate residents themselves are involved and planful about their end

of life health care and transitions, the data overwhelming support the fact that many residents and their families resorted to crisis mode planning because of an acute care episode. As the number of people dying in AL increases, these findings can promote proactive decision-making at the end of life.

### **CHRONIC ILLNESS, PALLIATIVE CARE AND PROBLEMATIC NATURE OF DYING IN INSTITUTIONAL SETTINGS**

K.I. Stajduhar<sup>1</sup>, G.H. Doane<sup>2</sup>, D. Bidgood<sup>3</sup>, E. Causton<sup>4</sup>, *1. University of Victoria - School of Nursing & Centre on Aging, Victoria, British Columbia, Canada, 2. University of Victoria - School of Nursing, Victoria, British Columbia, Canada, 3. University of Victoria - Centre on Aging, Victoria, British Columbia, Canada, 4. University of Victoria - Centre on Aging, Victoria, British Columbia, Canada*

Within Canada, and in much of the western world, dying from advancing chronic life-limiting illness is largely an institutional experience. Research has shown that there is much room for improvement in end-of-life care for older adults in acute care and residential settings, and yet after several years of education directed to improving quality end-of-life care, problems persist. We conducted a participatory action research study to gain a better understanding of the contextual and organizational factors that are influencing the provision of end-of-life care in various health care settings. Interviews with 65 health care professionals and intensive field work in acute and residential care revealed that current models of end-of-life care, based on cancer illness trajectories, may not be consistent with what is required to provide quality end-of-life care for those with advancing chronic life-limiting conditions. Reliance on traditional models of hospice palliative care by professionals in acute and residential care settings can create tensions between what is ideal and what can realistically be provided within the context of a generalist practice model. Conflicting perspectives of how and when to provide end-of-life care for this population and within these settings predominate, creating a sense that these settings are the “last best place to die”. Findings suggest that new models of care need to be considered to ensure that quality end-of-life care is provided, regardless of where people are dying in the healthcare system.

### **CHANGING THE CULTURE OF DYING IN LONG TERM CARE: HELPING FAMILIES COPE**

D. Waldrop, N. Kusmaul, *University at Buffalo, Buffalo, New York*

Losing a loved one is a life changing experience in any environment. The family members of nursing home residents often function as continuing caregivers, becoming “hidden patients” who experience reciprocal suffering as a loved one is dying. However, because nursing home care has historically been focused on residents, there is often a lack of recognition of and attention to family caregivers’ needs while a resident is dying. The purpose of this study was to explore caregivers’ views about what was most helpful and to describe what facilitated their coping with a loved one’s death. Caregivers received a letter inviting their study participation, two months after the resident’s death. In-depth interviews were conducted with caregivers from 25 families. Interviews involved open ended questions, were audiotaped with permission, transcribed and entered into Atlas ti software for qualitative data analysis. Transcripts were submitted to both open and systematic coding. A typology of factors emerged including those that helped and hindered coping. Helpful factors were: environmental, physical, medical, and psychosocial interventions. Hindering factors were: end-of-life indecision, routinized management of dying, limited knowledge of symptom management, and lack of awareness of terminality. The findings illuminate the importance of nursing home-based palliative care which focuses on the patient and family as a unit and aims to match care to patient goals. Moreover, they suggest the importance of palliative care in the nursing home culture change movement which focuses on the delivery of person-centered care, embraces flexibility, self-determination and uses the environment to its full potential.



## USING COMFORT CARE ROUNDS TO BUILD CAPACITY IN LONG-TERM CARE: AN EVALUATION

S. Kaasalainen<sup>1</sup>, K. Brazil<sup>1</sup>, M. Kelley<sup>2</sup>, 1. *McMaster University, Hamilton, Ontario, Canada*, 2. *Lakehead University, Thunder Bay, Ontario, Canada*

**Objective:** Comfort Care Rounds (CCRs) were initiated at two LTC homes in Ontario, Canada. CCRs are organized meetings of an interdisciplinary team that are held once a month for one hour in the early afternoon. They are case based and involve a review of the previous month's deaths and/or current residents who are dying with a particular focus on education and peer support for staff. The objective of this study was to conduct a process evaluation of the CCRs with the goal of assessing how they are currently being implemented, perceived outcomes, and barriers and facilitators to their implementation. **Methods:** This study used a qualitative descriptive design. Five focus groups were held with LTC staff (licensed nurses, personal support workers) and 10 interviews with other health care providers and administration. Data were analyzed using thematic content analysis. **Findings:** The overall impression was that the CCRs were helpful, beneficial, and educational with a perceived positive impact on resident care. Participants found the CCRs enhanced cross-disciplinary learning, increased team knowledge about palliative care strategies and resources. The challenges included issues related to taking the time to attend the meetings due to time constraints and difficulty accommodating various schedules. The need for more advertisement of the CCRs and continued support from management were recommended. **Conclusions:** This study highlights an innovative strategy to build capacity within LTC staff to improve the quality of care for residents who are dying. Future work is needed to evaluate the program using a more rigorous design with a focus on resident and family member outcomes.

## THE CULTURAL BIAS AGAINST LESS AGGRESSIVE PALLIATIVE CARE: CONSULTS VS. UNIT ADMISSIONS

L. Waters, C.L. Coogle, L.J. Lyckholm, J.B. Cassel, S.C. Hong, J. Cotter, *Virginia Center on Aging, Virginia Commonwealth University, Richmond, Virginia*

This presentation provides initial results from a study of decedents ( $n = 4327$ ) over a five-year period (January 2006 – August 2011) at a large public urban teaching hospital with a mixed patient population. Decedents from culturally diverse backgrounds (25.9%, 576/2228) were equally likely to be admitted to the Palliative Care Unit as White non-Hispanic decedents (28.2%, 591/2099),  $\chi^2(1) = 2.91$ ,  $p = .09$ . However, they were less likely to receive a palliative care consult (26.7% 595/2228) than White non-Hispanic decedents (30.3%, 637/2099),  $\chi^2(1) = 7.040$ ,  $p = .008$ ). The results of logistic regression analysis indicate that White non-Hispanics were 1.3 times more likely to receive a palliative care consult than decedents from culturally diverse backgrounds (OR = 0.79,  $p = .018$ ). While palliative care admissions are driven by the needs of patients with fewer resources and more complex family dynamics, consults are driven by patient advocacy. These results help illuminate the cultural bias against less aggressive care and suggest a greater need for cultural competence among patients, as well as providers. Access to community resources as a contributing factor to these results will be discussed.

## SESSION 1370 (POSTER)

### FRIENDSHIP, SOCIAL NETWORKS, AND SOCIAL SUPPORT

#### DEVELOPMENT OF A COMMUNITY COMMITMENT SCALE TO PREVENT ELDERLY SOCIAL ISOLATION IN URBAN AREAS

A. Kono<sup>1</sup>, Y. Kanaya<sup>1</sup>, E. Tada<sup>2</sup>, Y. Dai<sup>2</sup>, W. Itoi<sup>2</sup>, 1. *School of Nursing, Osaka City University, Osaka, Japan*, 2. *School of Nursing, Yokohama City University, Yokohama, Kanagawa, Japan*

The aim of the present study was to develop a community commitment scale (CCS) to prevent social isolation of elderly local volunteers

and general residents living in urban areas. A pilot test of 266 Japanese residents conducted to examine face validity identified 24 items, of which 12 items were selected for the CCS, based on a 4-point Likert-type scale. The CCS was developed via self-reported questionnaires to randomly sampled 859 local volunteers and 3484 general residents aged 55 years and above living in the urban areas of Japan. To assess criterion-related validity, data was collected using the Brief Sense of Community Index (BSCI; Peterson 2008) and two single questions on self-efficacy of caring for elderly neighbors. Item analysis, factor analysis, and Cronbach's alpha assessment identified the 8 items, which were classified under the domains "sense of belonging" and "sense of relationships" in the volunteers (cumulative contribution 0.54: alpha 0.75) and the residents (cumulative contribution 0.54: alpha 0.78). The correlation coefficients between the scores of CCS and BSCI were 0.54 for local volunteers and 0.62 for general residents. ANOVA analysis comparing the CCS between the confidence levels of the two types of self-efficacy questions on caring for elderly neighbors showed a large effect size (eta squared, 0.11–0.15) in the volunteers and residents. These results demonstrate the acceptable internal consistency and criterion-related validity of the CCS among the local volunteers and general residents in urban areas, and establish a relationship between community commitment and prevention of elderly social isolation.

## MUTUAL SUPPORT AMONG OLDER NEIGHBORS: DOES WHERE YOU LIVE MAKE A DIFFERENCE?

A.P. Glass, *University of Georgia Institute of Gerontology, Athens, Georgia*

Elder cohousing has recently emerged in the United States as an alternative housing option. Borrowing from the long history of such communities in Europe, elder cohousing communities are self-directed and purposefully designed to promote mutual support. In an effort to evaluate whether living in an elder cohousing community makes a difference in terms of mutual support, respondents in two different elder cohousing (COHO) communities were grouped together as one sample ( $n = 41$ ), and compared to a sample of elders living in a naturally occurring retirement community (NORC) in a large urban area ( $n = 34$ ). Both groups were predominantly female. The COHO sample was significantly younger than the NORC sample (mean ages of 71.8 and 78.2, respectively), and less likely to be widowed and to have children. Seven variables were examined, representing likelihood of giving to, receiving from, and asking for help from neighbors, based on a mutual support model. Significant differences (ranging from  $p = 0.000$  to  $p = 0.022$ ) were demonstrated on six items and on the scale mean scores (11.1 for COHO, 7.4 for NORC), with the COHO sample reporting greater likelihood. Regarding frequency of giving/receiving nine specific types of neighborly help, COHO respondents reported significantly more frequent help, ranging from  $p = 0.000$  for both lending and borrowing, to  $p = 0.047$  for receiving support with a personal problem. Results indicate that living in intentional communities, as represented by the COHO sample, can encourage mutual support. Implications for application and future research will be discussed.

## INTERGENERATIONAL RELATIONS AND LIFE SATISFACTION AMONG THE ELDERLY: A COMPARATIVE STUDY OF EAST ASIAN SOCIETIES

J. Lin, C. Huang, *Human Development and Family Studies, National Taiwan Normal University, Taipei, Taiwan*

Although there is abundant research on life satisfaction among older people, analysis of how social contexts, economic structures, and social policies affect the level of such satisfaction is insufficient, despite the importance of these factors. With a shared cultural background of strong filial piety, this study aimed to compare the changing intergenerational relations and examine the association between intergenerational relations and life satisfaction among the elderly in China, Japan, Korea and Taiwan as rapid populations aging is taken place in the region.

Inspired by the solidarity model, intergenerational relations are dictated by various components: living arrangements, intergenerational support exchange, and intergenerational filial norms. Data were derived from the 2006 East Asian Social Survey. Results show that in four East Asian societies, contemporary intergenerational relations reveal both the continuity and the change aspects. The co-residence between generations is clearly patriarchal and the main flow of intergenerational support remains to be from adult children to parents. The findings also show that the relations with adult children have effect on life satisfaction that depends on the aspect of the intergenerational relationship. Western studies have found that playing the giver's role increases life satisfaction of older people. However, the present study found that being mainly a recipient of support from adult children is related a higher level of life satisfaction among the elderly in East Asia. In addition, although extended family is culturally dominant in East Asia, the effect of co-residence with children on life satisfaction is not found except Korean elderly.

### **REDUCING ISOLATION AND LONELINESS IN VULNERABLE OLDER ADULTS: FINDINGS FROM A FRIENDLY VISITING PROGRAM EVALUATION**

L.A. Martin<sup>1,2</sup>, T.L. Nelson<sup>2</sup>, C. Coyle<sup>1</sup>, *J. Gerontology, Univ Mass Boston, Boston, Massachusetts, 2. FriendshipWorks, Inc., Boston, Massachusetts*

Literature suggests social isolation and loneliness endanger the psychological and physical well-being of older adults. Senior companion or "friendly visiting" programs seek to ease the isolation and loneliness often experienced by elders living in the community. Our evaluation of a Boston-based, volunteer-driven friendly visiting service sought to understand how this program alleviates isolation and loneliness among service recipients. Surveys administered to volunteers (n=66) and recipients (n=37) shed light on who participates in these types of programs and what benefits elders gain from their involvement. Program volunteers are assisting older adults who are living alone (95%), low-income (90%), and disabled (62%). The volunteers' support helps these elders remain independent: volunteers assist elders with errands outside the home (58%), support their medical needs (39%), help with home maintenance (33%), and advocate for elders when necessary (30%). Similar reports from the elders validate our finding that volunteers provide more than companionship to the older adult. The majority of volunteers and elders, however, consider the psychological and emotional benefits of the program to be the most important. Most volunteers (74%) believe the greatest support they provide for recipients is friendship/socialization. Every elderly respondent associated some positive life change to their program involvement. For example, they now have someone in their life they can count on (76%), they feel less lonely (62%), and they feel more connected to the outside world (51%). Overall, the friendly visiting program is relieving loneliness, decreasing social isolation, and enhancing the quality of life for vulnerable, disadvantaged elders.

### **"MEN DON'T TALK": EXAMINING THE DYNAMICS OF MEN'S CORESIDENT RELATIONSHIPS IN ASSISTED LIVING**

Y.P. Paye, C.L. Kemp, M. Ball, M.M. Perkins, *Georgia State University, Atlanta, Georgia*

Women outnumber men in later life, especially in assisted living (AL), where the ratio is three to one. This gender imbalance often leads to the feminization of AL settings and affects men's social experiences, particularly their coresident relationships. AL research consistently demonstrates the significance of these peer connections to resident well-being and suggests that gender is highly influential. Yet few studies have specifically examined men's social experiences in these settings. The present analysis aims to: (1) learn how men experience coresident relationships in AL; and (2) identify the factors shaping these peer relationships. The analysis utilizes qualitative data collected between 2009

and 2010 in two AL settings differing in size, location, fees, and resident characteristic as part of a three-year, mixed-methods, NIA-funded project examining social relationships in AL. Data collection involved participant observation and informal and formal in-depth interviews with residents, care staff, and administrators. Analysis was informed by principles of Grounded Theory Method and shows men's coresident connections to be highly variable. Interactions occurred most with tablemates and activity "buddies", a few of whom were friends. A range of individual- and facility-level factors promoted or constrained relationship development. Men's health, marital status, and gendered beliefs (e.g., "Men don't talk"), for example, structured men's social engagement. At the facility-level, organized activities (e.g., their gendered-nature) and staff members' gendered assumptions (e.g., men prefer to sit together) often influenced men's social lives. Ultimately, coresident relationships are consequential for men in AL and we conclude by offering strategies to improve their social experiences.

### **LIFE SATISFACTION AND SOCIAL SUPPORT FROM MIGRATED AND NON-MIGRATED ADULT CHILDREN IN RURAL CHINA**

J. Sun, A. Mui, *Institute of Gerontology, Renmin University of China, Beijing, China*

According to China's national statistics, there are over 200 million workers migrating from rural to urban areas in China, leaving behind large numbers of aging parents in their rural hometowns. Based on the survey of older parents conducted in Henan and Guizhou provinces of China in 2009 (n = 653), the aim of this study is to explore the differences between support (financial, instrumental and emotional) from adult migrated children and non-migrated children as well as the effect of adult children's support on aging parents' life satisfaction. Findings show that the non-migrated adult children, especially sons and daughters-in-law, play the primary roles as caregivers for their older parents in daily life. Results indicate that life satisfaction of aging parents improved significantly after their adult children's migration from their hometowns although they received a lower level of instrumental and emotional support from these children. Regression results show that higher financial support from migrated children is an important factor in explaining the higher level of life satisfaction of their parents when compared to life satisfaction levels of the aging parents of non-migrated children. The findings indicate that the older Chinese whose adult children have migrated out from rural areas felt more satisfied in life because of their improved financial well-being. As for the aging parents of non-migrated children, their higher level of life satisfaction is associated with higher level of instrumental and emotional supports from their non-migrated children. Implications for life satisfaction research and practice for elders in China will be discussed.

### **COMPARISON OF THE DIFFERENCES IN INTERGENERATIONAL SUPPORT OF MARRIED CHILDREN IN TAIWAN FOR THEIR AGED PARENTS AND PARENTS-IN-LAW**

C. Huang, J. Lin, *Human Development & Family Studies, National Taiwan Normal University, Taipei, Taiwan*

The traditional Chinese family has long been characterized as patrilineal. It means that sons are expected to provide financial support to elderly parents and married daughters should take care of their husbands and families. However, is the relationship of married daughters with their parents changing in an era nowadays in which the educational level of women is increasing, the employment rate is improving and possess more personal resources? This study takes married children as the subject to analyze the difference in their intergenerational support for their aged parents and parents-in-law. This study uses data from the "2007 Panel Study of Family Dynamics". In this study, only married children who have at least one parent and one parent-in-law of 60 years old or more were analyzed (N=666, married sons=379, married daugh-

ters=287). The result of the study shows that in terms of intergenerational financial support flow directions, adult married children are still more likely to offer support to their parents and parents-in-law. More than half of the married adult children provide financial support to their parents and parents-in-law. The study also finds that the similarity factors affect the married sons and daughters in the provision of financial support for their parents and parents-in-law. Generally, the personal resources that a married child possesses are the major factor that affects the determination of giving support to aged parents and parents-in-law.

### **THE SOCIAL RELATIONSHIPS OF AGING MOTHERS OF DAUGHTERS WITH SEVERE MENTAL ILLNESS**

J. Balestrey, L.A. Chadiha, R. Dunkle, B. Ingersoll-Dayton, *University of Michigan, Ann Arbor, Michigan*

Purpose: Supportive social relationships are critical to an aging mother when she faces challenges associated with her own care needs and with assisting an adult child who has severe mental illness. This study explored the supportive relationships among aging mothers of severe mentally ill adult daughters. Design and methods: We used both qualitative and quantitative data obtained in personal interviews with a purposive sample of 22 aging mothers (52-90 years old) assisting severe mentally ill adult daughters. Quantitative methods were used to describe attributes of support network size and composition. Drawing upon Miles and Huberman's (1994) work, we used a single-case and a cross-case content analysis approach to analyze qualitative data on social relationships between mothers and network members. Findings: All aging mothers reported close social relationships with support network members; 18 of 22 mothers reported severe mentally ill adult daughters as network members; networks' size ranged from 2-14 members; kin predominated over non-kin as network members. Mothers reported receiving and giving both emotional and instrumental support to network members; support exchange patterns included mothers giving and receiving network support (bidirectional exchanges) and mothers giving more support than receiving support from network members (reciprocal asymmetrical exchanges). Implications: Findings suggest that interventionists working with aging mothers who assist adult daughters with a severe mental illness should assess for the mothers' supportive social relationships as a resource; interventionists should also attend to the mothers' reciprocal asymmetrical support exchanges with network members because they may engender feelings of network burden.

### **EXPLORING MEANINGS AND EFFECTS OF OLDER KOREAN PARENTS' TEMPORARY VISIT TO THEIR ADULT CHILD AND HIS OR HER FAMILY LIVING IN THE UNITED STATES**

S. Jin, *University of Minnesota, Twin Cities, Falcon Heights, Minnesota*

Studies have consistently shown that an increasing number of older parents are asked to visit their child and child's family living in the U.S. and suffering from psychological stress. However, research that directly explores the meanings and effects of these visits is sparse. Addressing that gap, this study examines the meanings and effects of the visit on improved mental health among older parents, child, and child's family. To investigate the visit's meanings and effects, the qualitative study utilized face-to-face, in-depth interviews with Korean older parent visitors and their families: 12 older parents living in their home country and visiting their child in the U.S. and 11 adult children and 8 adult spouses living in Minnesota. Each interview was digitally audio-recorded and transcribed verbatim in Korean. Grounded theory was employed to analyze the data. Analysis of the interviews revealed two primary meanings of the visit by Korean older parents to their child and child's family: (1) cares for family and (2) extension of the meaning of family. Moreover, the analysis revealed two primary effects of the visit on older parents, child, and child's family: (1) improvement in relationships among parents, child, and child's spouse and (2) increase

in emotional stability. These findings suggest that intervention programs aimed at coping with acculturative stress among immigrant families should consider mobilizing visits of older parents to their families. Further, specialized programs or policies should consider assistance in stays of older parents during their visit.

### **THE GETTING ILLINOIS LOW INCOME SENIORS AND PEOPLE WITH DISABILITIES ONLINE SUSTAINABLE BROADBAND DEMONSTRATION PROJECT: EVALUATION FINDINGS**

J.R. Ciesla, P. Yao, S.F. Spear, A. Yusiphov, *School of Nursing and Health Studies, Northern Illinois University, DeKalb, Illinois*

It is generally accepted that computer and Internet use have great potential to enhance access to important information and reduce social isolation among older adults. The digital divide is particularly deep and wide among low income, less well-educated, and minority seniors. The purpose of this research is to present the findings of an evaluation of a National Telecommunication and Information Agency (NTIA) Sustainable Broadband Adoption (SBA) Broadband Technology Opportunity Project (BTOP). The project targeted approximately 3,000 Northern Illinois residents in a network of 23 low-income multi-family senior housing facilities. The goal was to get the residents engaged in regular and sustained computer and Internet use. The project provided the residents with a comprehensive program for computer engagement which included: individualized computer training, permanent access to subsidized computers, technical support, and free Internet access. The project was evaluated by independent university-based researchers. A broad set of measures were put in place to track project outcomes. This research presents the pre-post changes in several of those outcomes including: computer skills, interest in Internet applications, frequency of Internet use and social isolation as measured by the Lubben Social Network Scale (LSNS). Findings include increases in a wide-range of skills and interests (via standardized Wilcoxon coefficients ranging from 2.07-5.13;  $p \leq .05$ ), increased computer use frequency, and an increase in LSNS scores (24.9 percent,  $t=80.18$ ;  $p=.000$ ).

### **LIVING ALONE IN KOREA: THE EFFECT OF SOCIAL SUPPORT ON ALCOHOL CONSUMPTION AND DEPRESSION**

S. Kim<sup>1</sup>, H. Jun<sup>1</sup>, J.I. Wassel<sup>2</sup>, *1. Yonsei University, Seoul, Republic of Korea, 2. The University of North Carolina Greensboro, Greensboro, North Carolina*

As a super-ageing society, Korea faces challenges with increasing number of Korea elders who reside alone. Changes in Korean culture have resulted in producing a new high-risk group, the elderly Korean as the sole household member. Specifically, Korean elders living alone tend to have fewer social supports and higher levels of depression. Reduced level of social support may lead to alcohol consumption to relieve depressive symptoms and combat feelings of isolation. However, the long-term relationship of social support, depression, and alcohol use by Korean elderly residing alone is not well understood. This study examines the effect of social support on Korean elder's alcohol use and depression using longitudinal data from Korean Welfare Panel Study, 2006-2009 (N=649 single household adults, aged 65+). Using parallel process Latent Growth Model, we find that elderly Koreans, living alone with higher levels of tangible support reported higher initial levels of depression, but across time decreased alcohol use. However, elderly Koreans living alone with strong social networks (size) were found to have lower initial levels of depression and across the 4-year period steeper decreases in depression. The findings support the necessity to understand the influence of social support for elderly Koreans residing alone in a super-ageing society that is experiencing rapidly changing social and family norms. This study will offer the potential to identify elderly Koreans who are at risk and in the development

of preventive measures against alcohol abuse, and thus improve social resources for older Koreans who live alone.

### THE IMPACT OF FAMILY NETWORK ON MENTAL HEALTH AMONG ELDERLY WIDOWS IN TAIWANESE

C. Chen, J. Lin, *National Taiwan Normal University, Taipei, Taiwan*

In the past few decades, Taiwan had experienced steadily declining fertility and increased longevity expectation. Social relations affect the ability of individual to age well, and western researchers have proposed a number of explanations for how social network helps elderly widows cope with bereavement. However; just like most Chinese; Taiwanese who hold the idea “Chinese Familism “ prioritizing family over the social relationships is especially noticeable. Therefore, this paper examines the impact of family network in mental health among the elderly widows in Taiwan. The data come from the longitudinal Survey of Health and Living Status of the Elderly in Taiwan. The analysis is based on 371 widows who have at least one child, were in their first to third year of widowhood and aged 60 or above at the time of their first interview. Findings of the study indicate: 1. Using multiple dimensions of network in a latent transition analysis, family network among the elderly widows comprise four distinct patterns: daughters-dependend family network, relatives-connected family network, son-dependend family network, and family-detached family network. 2. The four family networks among the elderly widows are quite stable pre- and post-bereavement. 3. Depressive symptoms were found more among the elderly widows in the family-detached family network or son-dependend family network than in the relatives-connected family network. Results suggest that the connection of relatives is one mechanism through which family network types affect mental health. Suggestions have also been given to compare earlier findings in Western and Taiwanese families.

## SESSION 1375 (POSTER)

### HEALTH CARE AND THE ELDERLY

#### SHORT-TERM SELF-RATED HEALTH CHANGES AND MORTALITY AMONG THE OLDEST-OLD

E.M. Vogelsang, *Center of Demography and Ecology, University of Wisconsin Madison, Madison, Wisconsin*

Existing research that controls for or examines associations between self-rated health (SRH) and mortality often operationalizes SRH as a simple two- or five-category indicator of general health status. This may be problematic since there are strong theoretical reasons to believe that both observed and perceived SRH changes may help explain or modify associations between SRH and death. For example, elderly who report “poor” health and have experienced or report a health decline may be at a higher risk of mortality than those experiencing more consistent morbidity. This study examines whether two measures of short-term SRH change have relationships with elderly mortality. I estimate mortality using Gompertz proportional hazard models and data from the oldest-old portion of the Health and Retirement Study over 13 years. I found that a retrospectively reported decline in health independently increased the hazard of mortality. I also found that those who reported “excellent”, “very good”, or “good” self-rated health and displayed a SRH improvement since the prior wave had a greater hazard of dying than those in the same categories that did not improve. Lastly, this study indicates that elderly reporting “poor” health and also showing a SRH deterioration had a greater hazard of death than those that were consistently “poor”. These findings imply that omitting measures of SRH change may result in spurious associations between SRH and mortality. In addition, the results indicate that seniors with more volatile health may be at a greater risk of death than those whose health remains relatively stable.

### EXAMINING PAIN AND MENTAL DURESS AMONG OLDER ADULTS IN PRISON: INTERDISCIPLINARY INFORMED RESPONSES

M.E. Morrissey<sup>1</sup>, T.M. Maschi<sup>1</sup>, K. Morgen<sup>2</sup>, *1. Fordham Graduate School of Social Service, West Harrison, New York, 2. Centenary College, Hackettstown, New Jersey*

Background: The literature on aging prisoners has documented serious physical and mental health problems among this population. However, a largely overlooked area is aging prisoners’ experiences of multidimensional pain and mental duress, and what role if any coping resources play in mitigating them. Therefore, the purpose of this study was to build on the existing literature examining the relationship between pain, coping resources, and mental duress from life course, social ecological and public health perspectives among a sample of older adult prisoners. Methods and Findings: This study used a cross-sectional correlational design and anonymous mailed survey administered to a sample of 632 New Jersey state prisoners aged 50 and older. Path analysis was used to determine the relationship between pain (# pain days per past month), coping resources (Coping Resources Inventory), and mental duress (Brief Symptom Inventory-Global Severity Index). The hypothesized path model (with all parameters freely estimating) adequately fit the data, ( $\chi^2=20.75, df=4, p=.00, CFI=.98, RMSEA=.08(.05-.12)$ ). Pain significantly influenced coping resources ( $\beta=-0.44, p<.001$ ) indicating an inverse relationship between pain and coping resources, and coping resources significantly influenced mental duress ( $\beta=-0.80, p<.001$ ) indicating an inverse relationship between coping resources and mental duress. Implications. The complex physical and mental health needs of older prisoners present unique challenges that demand public health strategies that will reduce pain levels, and prevent and relieve types of pain that lead to persistent suffering among older prisoners. Interdisciplinary, informed responses will help to improve access to critical assessment and intervention services for these most vulnerable older adults.

### DETERMINANTS OF THE AVAILABILITY OF SOCIAL SUPPORT FROM FAMILY, NEIGHBORS, AND FRIENDS AMONG OLDER PATIENTS

J. Ha<sup>1</sup>, G.W. Hougham<sup>2</sup>, K. Cagney<sup>2</sup>, D. Meltzer<sup>2</sup>, *1. Seoul National University, Seoul, Republic of Korea, 2. University of Chicago, Chicago, Illinois*

Objectives: Gerontologists have long been interested in the ways that the composition of social network changes as people age. One of the key propositions of socioemotional selectivity theory is that as people age, they tend to focus on closer relationship to fulfill their emotional needs. However, little is known about the determinants of the availability of social support from different sources among older adults suffering from health problems. This study examined the effects of age, gender, race, and previous history of hospitalization on the availability of support from family, neighbors, and friends. Methods: Analyses are based on a sample of 137 older patients (aged 65+) admitted to an academic medical center hospital. A 9-item version of Lubben’s Social Network Scale was developed and used to assess the availability of support from different sources. Results: Preliminary results suggest that old-old respondents report marginally lower levels of available support from family and significantly higher levels of support from neighbors than young-old respondents, although total levels of support are not markedly different by age. White respondents reported significantly higher levels of support from friends than other racial minorities. Conclusions: Findings suggest that neighbors may be more salient than other sources of support among the oldest-old patients, possibly indicating a “support substitution” process is operative. In light of well-documented older adults’ preferences for aging in place, this finding may have relevance when designing new community-based support programs for older adults.

## BEING A STANDARDIZED TEST ADMINISTRATOR IN AN ACUTE GERIATRIC SETTING

K. Krohne<sup>1</sup>, S. Torres<sup>2,1</sup>, ÅSHILD. Slettebø<sup>3,1</sup>, A. Bergland<sup>1</sup>, 1. *Oslo and Akershus University College of Applied Sciences, Oslo, Norway*, 2. *Uppsala University, Uppsala, Sweden*, 3. *University of Agder, Grimstad, Norway*

In assessing geriatric patients' functional status, health care professionals use a number of standardized tests. The validity and diagnostics of such tests have been subjected to comprehensive research, but qualitative research illuminating the perspective of the standardized test administrator is lacking at present. The administering of a standardized test may influence test results – results which may have an impact on the level of care provided to the older patient. The objective of this study was to explore the experiences of occupational therapists and physiotherapists administering standardized tests. Drawing on seven months of fieldwork and observations of 26 test situations, interviews were performed with 14 physiotherapists and occupational therapists administering standardized tests on two acute geriatric hospital wards in Norway. Interview data were analysed with Systematic Text Condensation and supported with theory on relational competence. The analysis illustrates (i) how physiotherapists and occupational therapists decide which patients to test, (ii) what strategies they use for promoting a sense of security in the test situation, (iii) how patient stress is avoided, and (iv) how the patient's test performance is contextualized after the test. Our findings suggest that the test situation generates a tension between what standardization demands and what individualization requires. In handling this tension the health care professionals use their relational competence to reach and maintain individualization. This study illustrates how individualized adjustments are implemented. We suggest that these findings should be explored in future research because it has implications for the delivery of high-quality and user-friendly geriatric care.

## UNINSURANCE AMONG PRERETIREMENT ASIAN AMERICANS: IDENTIFYING THE ROLE OF SOCIAL AND CULTURAL CONTRIBUTORS

D. Nguyen<sup>1</sup>, S. Choi<sup>2</sup>, S. Park<sup>1</sup>, 1. *New York University, New York, New York*, 2. *University of Tennessee, Knoxville, Tennessee*

**Study Aim:** The United States demographic profile is changing rapidly due: an aging society, and the growth of racial/ethnic minority populations. Social policies ensure near universal insurance coverage for Americans over 65, but the pre-retirement age cohort is susceptible to gaps in coverage. This is especially true for Asian American pre-retirees who are constrained by social and cultural forces, yet are underrepresented in the empirical literature. This study investigates the effects of Asian ethnicity and type of employment on the insurance status among pre-retirement Asian Americans. **Methods:** Data from the 2007 California Health Interview Survey (CHIS) on Chinese, Filipino, Korean, and Vietnamese, aged 50-64 were analyzed. Any period of uninsurance in the previous year was used as the outcome variable in the weighted logistic regression models, while Asian ethnicity, employment type, and percent life in the U.S. were key independent variables. **Results:** This study found that ethnicity, employment type, and length of residence in the U.S. are significantly associated with being uninsured among pre-retirement Asian Americans. Separate logistic regression model specific to employment type (unemployed, self-employed, employed by public/private firms) revealed a moderating relationship between ethnicity and employment type. Even though Koreans were more likely to be uninsured across employment domains, the difference was greatest among people who were employed at public/private sectors. **Conclusion:** Intergroup variations and the differential effects of time in the United States on insurance status have broad implications within an evolving health care environment. Implications for addressing health disparities and social stratification are discussed.

## BENEFICIARY-CENTERED ASSIGNMENT FOR DUALY ELIGIBLE MEDICARE BENEFICIARIES ENROLLING IN PART D PRESCRIPTION DRUG PLANS: IMPACT AND IMPLICATIONS

C.E. Bishop, C. Thomas, *Heller School for Social Policy and Management, Brandeis University, Waltham, Massachusetts*

Health outcomes for older adults dually eligible for both Medicare and Medicaid can depend on the match between their prescription drug needs and the formularies of the low-income subsidy (LIS) Part D prescription drug plans they enroll in. Alone of all the states, Maine dual beneficiaries are initially assigned to Part D LIS plans based on the prescription drugs they are taking. Like all duals, they may then choose to switch plans. We analyzed Medicare Part D enrollment data, beneficiary characteristics including diagnoses derived from claims data, and outcomes measured using claims for the New England States. We compared plan of initial enrollment, enrollment after plans moved above benchmark, switching behavior and hospitalization outcomes for dually eligible beneficiaries in Maine and New Hampshire, where the same LIS plans are offered. Beneficiaries with lipid disorders, depression, hypertension and arthritis were differentially enrolled in certain LIS plans as Part D began, and were less likely to switch out of them over the course of the first year. Maine duals were more likely to switch when their plan lost benchmark status. New Hampshire beneficiaries also sorted themselves differentially into plans according to diagnoses, so the impact of beneficiary-centered assignment may be marginal. Implications for health status including hospitalization are difficult to observe over a relatively short time frame.

## PATIENT KNOWLEDGE OF PATIENT CENTERED MEDICATION LABEL AMONG OLDER ADULTS

S. Hong, *Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, Tennessee*

**Objectives:** Inadequate knowledge of medication use leads to inappropriate medication use that greatly compromises quality of life among older adults. This study aims to determine the extent of patient knowledge concerning patient-centered contents of medication labels (PCCML) and whether the level of patient knowledge is associated with health outcomes. **Methods:** A survey was administered to members of 6 senior centers in Memphis, TN. Surveys from older adults (65 or older) who were taking at least one medication were included in the current analyses (N=287). Patient knowledge of PCCML was measured on a set of 4 Likert-type scale items. Quality of life was measured using EQ-5D and Visual Analogue Scale (EQ-VAS). **Results:** Study participants scored on average 16.20 (SD=3.41) for knowledge of PCCMLs. Patient knowledge of PCCML was associated with age ( $r = -0.146$ ,  $P=0.012$ ), race/ethnicity ( $F=4.40$ ,  $P=0.013$ ), education ( $r=0.198$ ,  $P=0.001$ ), and household income ( $r=0.153$ ,  $P=0.015$ ). Study participants had an average EQ-5D score of 0.821 (SD=0.162) and EQ VAS score of 77.80 (SD=15.07). One unit increase in patient knowledge resulted in 0.62 unit increase in quality of life ( $P=0.017$ ) in terms of EQ-VAS score after adjusting for the impact of other variables. **Conclusion:** Patient knowledge of medication use was associated with quality of life among older adults. New standardized labels should be designed to emphasize the patient-centered label content. Further, providers of medication therapy management should ensure that older adults have a complete knowledge of the patient-centered medication label information.

## PREDICTORS AND OUTCOMES FOR REHOSPITALIZATIONS TO THE SAME OR DIFFERENT HOSPITALS

H. Kim, *Seoul National University, Seoul, Republic of Korea*

This study examined the impacts of patient, hospital, and community factors on and outcomes of rehospitalizations to a different facility. Using the 2006 California State Inpatient Dataset, we identified 509,775 patients aged 50 or older who had been discharged alive from

acute care hospitals between April and September 2006, and examined their rehospitalizations within 1 month of their index discharge. We categorized patients by whether or not they were rehospitalized at the same hospital from which they had been discharged. Descriptive statistics and multi-level, multivariate logistic regressions models were used. Among a total of 509,775 patients discharged alive from their index hospitalization, 13.6% (n=69,220) were rehospitalized, 22.1% of whom comprise the different-hospital-readmission group (n=15,180). Compared to the patients rehospitalized at the same facility, those rehospitalized to a different facility were more likely to be non-white and low-income patients; and the hospitals of their index admissions were more likely to be profit hospitals and those located in communities with fewer primary care providers. The different-hospital-readmission group was more likely to have in-hospital death and another readmission within 1 month of the first readmission. This study shows that index-hospital and community as well as patient characteristics affect rehospitalization to a different facility, which was associated with negative patient outcomes. Rehospitalization to a different facility may imply more fragmented care than rehospitalization to the same facility, about which further research is needed.

### **CHRONIC DISEASE AND DISABILITY: LONGITUDINAL ANALYSIS OF MCBS DATA**

H.B. Degenholtz, S.E. Hardy, Y. Kang, *University of Pittsburgh, Pittsburgh, Pennsylvania*

The impact of population aging will be felt by society in the increased number of elderly with chronic disease and physical disability. While recent policy changes that emphasize Accountable Care Organizations and Patient-Centered Medical Homes hold out the promise of improving the management of chronic disease, the impetus of these programs is mainly to prevent expensive hospitalizations. Although a worthy goal, the link between chronic disease and disablement holds important promise for reducing the demand for long-term care services and supports. Previous studies have examined the association between various chronic conditions and disablement in terms of basic and instrumental activities of daily living. We sought to examine whether people with chronic disease in a given year have a higher burden of disability during the following calendar year. In addition to IADL and ADL, we constructed a measure of general difficulty in walking, bending and lifting that has been found to be predictive of higher health care expenditures and mortality. Our data are from the Medicare Current Beneficiary Study, a nationally representative longitudinal panel survey conducted by the Centers for Medicare and Medicaid Services. Analysis of data from the Cost and Use files from years 2005 and 2006 revealed a higher burden of disability among elderly Medicare Beneficiaries who had chronic kidney disease, chronic obstructive lung disease, diabetes, and depression. We conclude that efforts to improve chronic disease management may prevent or delay disability.

### **SESSION 1380 (POSTER)**

#### **HEALTH PROMOTION**

#### **THE RE-AIM ASSESSMENT OF A TRANSLATIONAL PROGRAM OF SQUARE-STEPPING EXERCISE BY VOLUNTEERS**

R. Shigematsu<sup>1</sup>, T. Okura<sup>2</sup>, M. Nakagaichi<sup>3</sup>, *1. Faculty of Education, Mie University, Tsu, Mie, Japan, 2. University of Tsukuba, Tsukuba, Ibaraki, Japan, 3. Nagasaki University, Nagasaki, Nagasaki, Japan*

There are very few researches trying to translate an exercise intervention program developed in the laboratory setting into a community setting. We had developed a new exercise program named Square-Stepping Exercise (SSE) for elderly persons. The aim of this study was to translate SSE in a community setting and to evaluate its external validity. Study participants were 101 (experimental group: EG) and 27 (cross-

validation group: CG) SSE leaders living in Shima and Tsu cities (Japan), respectively. EG had a two-year experience or more in providing SSE for community elderly dwellings. In contrast, CG had only a one-year experience. Questionnaire was provided each participant and they reported their volunteer activities performed in a previous year. Among 1,646 (Shima city) and 864 (Tsu city) elderly dwellings who had been provided SSE, 90.2% (Shima) and 99.9% (Tsu) of them could perform the SSE program (P = 0.09). The major SSE efficacies were "fitness improvement," "communication," and "brain cognition" in both groups. The adoption in a setting level was considered 100%. About the adoption in an agent level, many groups consisting elderly dwellings accepted SSE (90.0% vs. 95.5%, P = 0.99). Nineteen long-term SSE classes were held in Shima city and 3 classes in Tsu city. Participants in the classes got much efficacy such as "fitness improvement," "brain cognition", and "fall prevention." It could be implicated that SSE and its efficacies are robustness and high translatability and provide significant public health impact in a community setting.

#### **TRENDS IN THE CANADIAN INDEX OF WELLBEING FOR OLDER ADULTS FROM 1994 TO 2010**

B. Smale, *Leisure Studies, University of Waterloo, Waterloo, Ontario, Canada*

The Canadian Index of Wellbeing (CIW) provides unique insights into the quality of life of Canadians, both overall and in eight specific domains that matter to wellbeing: our standard of living, the quality of our environment, our health, our, the way we use our time, the vitality of our communities, our participation in the democratic process, and our leisure and culture. Unlike GDP which only measures economic progress, the CIW is designed to measure and compare wellbeing across a wide spectrum of life domains and for a variety of subgroups within the population, including older adults. The purpose of this paper is to report on trends in the wellbeing of older adults in Canada between 1994 and 2010, and compare them to national trends to identify gaps and illustrative patterns. Following a comprehensive review of literature on the relationships between aspects of each domain and wellbeing, a conceptual framework was developed to guide selection of valid and reliable indicators reflecting the degree to which each contributed to Canadians' wellbeing. Drawing on over 15 years of national survey data, trends in each domain and in overall wellbeing were tracked to illustrate where Canadians 65 years of age and older are making progress or falling behind. These trends were then compared to national trends in wellbeing. Results indicate how the CIW can assist in the development of social policies that ensure older citizens have equal access to opportunities and experiences that enrich and contribute to their health and wellbeing.

#### **NUTRITIONAL STATUS OF CARE-DEPENDENT PEOPLE WITH DEMENTIA IN SHARED-HOUSING ARRANGEMENTS - RESULTS FROM A ONE-YEAR FOLLOW-UP STUDY IN GERMANY**

S. Meyer, J. Grä s ke, A. Worch, K. Wolf-Ostermann, *Alice Salomon University of Applied Science, Berlin, Germany*

Objectives: People in elderly care and/or people with dementia often have a high risk of malnutrition. They can no longer use the cutlery or often forget to eat. The concept of shared-housing arrangements (SHA) addresses this dilemma. The nursing concept is organized around doing household tasks like preparing meals together. But there is a lack on findings concerning a possible positive impact on residents' nutritional status. Methods: In a longitudinal study with a one year follow-up the nutritional status as well as health outcomes of residents of SHA were evaluated. Standardized face-to-face interviews were conducted concerning the nutritional status (BMI, MUST and MNA), activities of daily living (Extended Barthel Index), cognitive impairment (MMSE), and quality of life (ADRQL) as well as other socio-demographic characteristics of 104 residents from 36 SHA in Berlin/Germany. Results: Res-

idents are mostly female (73.1%) and have an average age of 79.0 years. The majority has a dementia syndrome (87.0%) and shows a low to moderate cognitive functioning (mean MMSE 11.5) According to MNA, 16.4% have an adequate nutritional status, 14.5% are malnourished and 69.1% show a risk of malnutrition. According to MUST, 2.4% of all residents have a high risk, 9.6% a medium risk and 88.0% a low risk of malnutrition. Nutritional status, cognitive impairment and activities of daily living from the residents decrease within one year. Conclusion: The prevalence of malnutrition in SHA is slightly lower than in traditional residential care facilities. Nevertheless a constant supervision of residents nutritional status is essential.

### **BODYWEIGHT, LIFESTYLE BEHAVIORS, TYPE 2 DIABETES AND HEART DISEASE AMONG FOREIGN BORN OLDER ADULT VIETNAMESE AMERICANS**

T. Nguyen, T. Tran, N.A. Allen, K.T. Chan, H. Lee, *Boston College, Chestnut Hill, Massachusetts*

**Objective.** This study used data from the 2009 California Health Interview Survey (CHIS) to examine the associations of bodyweight, lifestyles, and demographic variables with self-reported type 2 diabetes and self-reported heart disease among foreign-born adult Vietnamese aged 50 and older. **Method.** The 2009 CHIS consisted of 709 foreign-born older adult Vietnamese Americans aged 50 to 85. Logistic regression analysis via Stata 12.0 was performed to examine the associations of the selected variables with type 2 diabetes and heart disease. Two-way interaction effects were examined with alcohol consumption, vegetable consumption, psychological distress, poverty, and length of living in the US with type 2 diabetes and heart disease. **Results.** Analysis revealed that 13% of respondents had type 2 diabetes and 11% had heart disease. Body Mass Index (BMI)  $\geq 24$ , age  $\geq 65$  and female gender were significantly associated with type 2 diabetes. The interaction effect of alcohol consumption and psychological distress with type 2 diabetes was also significant. Finally, the interaction of vegetable consumption, poverty, and length of living in the US were observed to have significant associations with heart disease. **Conclusion.** The results highlight the impact of BMI, age, sex, alcohol consumption, vegetable consumption, psychological distress, poverty and length of on type 2 diabetes and heart disease among older Vietnamese Americans. Future research can target the development of culturally-specific interventions for this population.

### **MID-LIFE AND OLDER AFRICAN AMERICAN "HEALTH CHAMPIONS": AN IDENTIFICATION PROCESS**

J. Lemacks<sup>1</sup>, P.A. Ralston<sup>1</sup>, I. Young-Clark<sup>1</sup>, C. Coccia<sup>3</sup>, J. Ilich-Ernst<sup>1</sup>, K.K. Wickrama<sup>2</sup>, C.M. Harris<sup>4</sup>, C.W. O'Neal<sup>2</sup>, *1. Center on Better Health and Life for Underserved Populations, Florida State University, Tallahassee, Florida, 2. University of Georgia, Athens, Georgia, 3. Texas A&M University, Kingsville, Kingsville, Texas, 4. Florida A&M University, Tallahassee, Florida*

Midlife and older African Americans (AA) have the highest prevalence for cardiovascular disease (CVD) which can be modified with lifestyle changes including improving diet, increasing physical activity (PA) and decreasing stress. Although there is a wealth of literature on community-based approaches to improve health in AAs, sustainability of health programs and adherence to health behavior change are ongoing issues. Health Champions (HCs) or participants who enter (StartChamps) or achieve (ChangeChamps) desired behavioral and clinical outcomes could serve as health models and advocates within community-based settings. The purpose of this pilot study was to identify HCs in a study examining the effectiveness of a church-based intervention to reduce CVD risk in mid-life and older AAs. The sample included 72 participants (including 28 in clinical subsample) who completed at least one of two data collection phases (baseline/6 months). HCs were selected using a systematic methodology. Selection criteria included at least 30 minutes/day of PA and top percentiles for fruit/veg-

etable servings  $\geq 3$  (25th percentile), stress score  $\geq 20$  (50th percentile), and low/medium dietary fat perception (25th percentile) or fat habit score  $\geq 0.8$  (25th percentile). Of the 72 participants, 7 met selection criteria at baseline (StartChamps) and 11 others met criteria at 6 months (ChangeChamps). Six HCs from the clinical subsample were used to cross reference behavioral data with Framingham Risk Scores. This study highlights a process to identify mid-life and older AAs with desired behavioral and clinical outcomes. Implications for future research and use of HCs in intervention development will be provided. Funded by NIH Award 5R24MD002807.

### **AWARENESS ABOUT HIV/AIDS AMONG OLDER AFRICAN-AMERICAN MALES**

O. Macklin, C. Corley, *School of Social Work, California State University Los Angeles, Los Angeles, California*

This study examined male African-American older adults' perceptions of HIV/AIDS and their susceptibility. It further identified their lack of awareness of HIV/AIDS prevention services that may be exacerbating the pandemic. A qualitative study of 27 men in Los Angeles primarily over the age of 45, who reported being in committed relationships, was conducted in 2010. Results indicate that the participants are generally aware of what HIV/AIDS is and how it is transmitted. Participants largely were able to identify high-risk groups as LGBTs, substance users, and younger people. Yet most were not getting tested for HIV/AIDS, did not practice "safe sex", and felt being excluded from one of the high risk groups mentioned previously reduced their risk of contracting it. Additionally, being religious and in a committed relationship were also factors which influenced participants' perceptions about their reduced vulnerability. Implications for education and sensitivity to diversity are addressed.

### **A VIRTUOUS CYCLE OF HEALTH MAINTENANCE AND RESILIENCE OF LOW INCOME ASIAN FEMALE OLDER ADULTS: FOCUSING ON THE TAILORED HEALTH MAINTENANCE PROGRAM PARTICIPANTS**

B. Hwang, *Social Welfare, Pusan National University, Busan, Republic of Korea*

Ageism, sexism, and poverty have continued to be three big challenges to Asian old women, particularly those who depend their living expenses on their adult children. And the concept of active aging or the behavior of pursuing good health status is neither feasible nor sustainable to many Asian poor old women. The purpose of this study is to explore what factors enable those people to pursue to improve their health status under the negative social cultural economic circumstances, and to expand the theory and concept of active aging, which reflects both the cultural and gender issues. 300 "Tailored Health Maintenance program" participants and 200 non-participants were surveyed and those data were analyzed based on Propensity Score Matching analysis (PSM). In-depth interview with 10 participants was also conducted to enquire into the details. The findings are as follows: firstly, those with high level of resilience, particularly with strong motivation part, tend to pursue to maintain their health, secondly, group support among participants reinforces the behavior of health maintenance; lastly, the program participants tend to address more actively not only their health needs but also social and economic needs.

### **THE EFFECTS OF RELIGION ON MORTALITY AMONG OLDER ADULTS IN WIDOWHOOD**

H. Kim, *College of Social Work, Florida State University, Tallahassee, Florida*

<Purpose> Recent studies showed that religiousness could decrease negative effects of widowhood on the well-being of older adults. Available studies, however, rarely consider the interaction effects between religion and widowhood on older adults' health. Therefore, this study

examines the effects of religion on mortality among older adults in widowhood, especially focusing on the interaction effects of religion. <Methods> This study used the HRS RAND dataset. The study sample was limited to 9,956 older adults age 65 and over who provided available information. Mortality is a dependent variable. Widowhood was measured by marital status. Religion was measured by religious participation and importance. Models controlled for demographic and socioeconomic factors. The binary logistic regression analysis was performed. <Results> The odds ratio of widowhood was 1.97, that is, the widowed older adults tend to be 1.97 times more likely to die than the married older adults. Older adults who were more often participated in religious services had lower risk of mortality (odds ratio .862). Older adults who considered religion more important had higher risk of mortality (odds ratio 1.17). The moderating effects of participation in religious services between widowhood and mortality were significant. Female respondents with higher levels of health status had lower risk of mortality. <Implications> The significant interaction effects between widowhood and religion could suggest that the widowed elderly can more effectively lower their risk of death through religious activities than married ones. This also implies that geriatric care and church-based social services need to focus more on widowed older adults.

## SESSION 1385 (POSTER)

### HOUSING AND TRANSPORTATION

#### PROVIDING LEADERSHIP IN THE NONPROFIT SECTOR WHILE BUILDING COMMUNITY CAPACITY IN RURAL SETTINGS: THE BENNETT VILLAGE EXPERIENCE

B.M. Elias, *Family and Community Social Services, University of Guelph/Humber, Caledon, Ontario, Canada*

The changing nature of volunteerism is having a dramatic impact on the non profit sector. It is generally understood that communities are strengthened when volunteers give time and money to organizations. Many nonprofits are struggling to attract highly skilled board members to maximize social impact. This leadership challenge will only become more acute in the coming years. (Tierney, T. 2010) Bennett Village Board members have a vision to expand services for an older and increasingly frail population and this paper will explore how they approached capacity building in their rural community. Methods Quantitative and qualitative methods were adopted by the Board of Directors who carried out an environmental scan, literature review, and numerous site visits to learn about promising programs. Highlights will be shared with conference participants along with a communications package that includes: questions for interviews and focus groups, consent forms and a facilitator's guide for the community consultations. Interviews with various stakeholders and six focus groups were conducted, data collected and analysed. Social accounting methods will be explained to calculate the economic value of the volunteer time committed. (Mook, L. & Quarter, J. 2004) Findings This paper shows how capacity is enhanced by the contribution of about 8,000 volunteer hours as a social output or about \$160,000 towards the design of an integrated service model. Conclusion The relevance of this research relates to the ongoing training and support necessary for Boards to lead the non profit sector.

#### AN ANALYSIS OF STAKEHOLDER PERCEPTIONS OF OLDER ADULT IMPAIRED DRIVING IN RURAL COMMUNITIES

D.C. Wihry, L.W. Kaye, J. Crittenden, *University of Maine, Orono, Maine*

Access to transportation is critical in supporting mobility and quality of life in older adults. In rural areas where transit options for older adults are limited, it is particularly important to explore community-driven solutions to address the issue of safe driving among older adults.

This presentation examines perceptions of a convenience sample of community members (N=30) on the issue of impaired driving gained through focus groups and surveys conducted in a rural county in the state of Maine: a state that is 9th in the nation in percentage of drivers over the age of 65 and 4th in the nation in percentage of fatalities involving 65+ drivers. Among key findings, respondents primarily perceived impaired driving as resulting from physical impairments (46%), chemically induced impairments (43%), cognitive impairments (29%), and unsafe behaviors (14%). Respondents perceived desired methods of intervention for impaired drivers centering on increased vision, hearing, and cognitive screening as well as written and road testing for older drivers (52%). Respondents assigned responsibility for addressing impaired driving among older adults to government (74%), health care workers (52%), as well as friends, family and neighbors (56%). Research will highlight respondent recommendations for particular targeted interventions, as well as preferred forms of stakeholder involvement, education, and supports for older drivers. Recommendations for stakeholder-driven solutions for addressing older adult impaired driving in rural areas will also be synthesized from a national comparative analysis of existing qualitative and quantitative research on the topic.

#### FATAL ACCIDENTS DESCRIBED BY AGE, GENDER, AND PHYSICAL ENVIRONMENTS IN CALIFORNIA, 2010

C. Lee, E. Dugan, *University of Massachusetts Boston, Boston, Massachusetts*

Background: Older drivers tend to be safe drivers, however when in a crash the risk for serious injury or death is elevated. The purpose of this study is to determine what individuals' characteristics (i.e., gender and age) and physical environments (i.e., road type) are related to fatal car accidents among older people in California (CA), 2010. Methods: The Fatality Analysis Reporting System (FARS) dataset, administered by National Highway Traffic Safety Administration (NHTSA), was used to analyze fatal accidents in CA, 2010. Fatal accidents involving older people age 65 and older was selected. Descriptive statistics were conducted to identify the frequency of fatal accidents. Results: There were 415 fatal accidents among older people and 531 older people involved those fatal accidents in CA, 2010. From those fatal accidents, there were 378 (71.2%) drivers and 153 (28.8%) non-drivers. Older male drivers (70.6%) involved much greater fatal accidents than older female drivers. Older drivers (65 to 74) were involved in a greater number of fatal accidents than other age groups (75 to 84; 85+) (51.6%, 35.7%, and 12.7% respectively). About 60.6% of fatal accidents happened on major highways or state highways. Also, the majority (96%) of fatal accidents occurred at an intersection. Discussion: Results showed that older male drivers are more likely than older women to be involved in fatal accidents and most fatal accidents occurred at intersections. Interestingly, fatal accidents appear to happen more on major highways than local streets in CA. Further research is needed.

#### MESO- AND MACRO-LEVEL SOCIAL PREDICTORS OF DRIVING BEHAVIOR AMONG OLDER ADULTS

K. Barton, E. Dugan, *Gerontology Department, McCormack Graduate School of Policy and Global Studies, University of Massachusetts Boston, Boston, Massachusetts*

Older drivers take more trips and drive more miles than previous cohorts of older adults, estimated to drastically increase in the coming years. Although older drivers, on average, are safe drivers, fatal crash rates increase starting at age 75—substantially increasing after age 80 (per mile traveled). Several sociodemographic and mental and physical health variables have been identified as predictors of altered driving behavior among older adults; however, fewer studies have comprehensively explored social factors that may influence driving behavior. The purpose of this paper is to explore the impact of both meso- and macro- level social factors on driving behavior—guided by the Ecological Model. This study uses 2006 data from the Health and Retirement



ment Study (HRS)—a longitudinal, nationally representative survey conducted biannually. The analytic sample included N=3909 adults (55.9% female) age 65 or older (M=74.1). Current driving behavior was defined as whether respondents had driven in the past month. Logistic regression analyses revealed that—controlling for selected sociodemographic and mental and physical health variables—greater neighborhood physical disorder (i.e. vandalism/graffiti, rubbish/litter, crime, vacant/deserted houses) predicted increased likelihood of current driving activity (OR=1.12, p=.02). Additionally, social integration (degree of embeddedness in social networks) was significantly related to driving activity, where attending meetings or programs of groups/organizations two or three times per month (compared to never) was associated with an increased likelihood of recent driving behavior (OR=1.53, p=.05). Findings from this research can be used to better understand ways to promote continued safe driving or cessation from unsafe driving.

### THE DESIGN OF A GRAPHIC REPRESENTATION OF BUS ROUTE INFORMATION

W. Chen, S. Chang, *Department of Transportation Management, Tamkang University, New Taipei, Taiwan*

The bus information sign at a bus stop is a basic and important means for providing bus users with necessary transportation information (e.g., bus route information). If bus route information at a bus stop is insufficient, bus passengers may have problems finding the bus route(s) and bus stop(s) required to reach their destination(s). In contrast, if too much information is provided in a disorganized manner, bus users will have difficulty selecting the correct bus route among many confusing options. A well-designed multi-route bus map is therefore an important factor in helping users navigate the transportation system. In this study we presented and evaluated multi-route bus information in different design formats. Because older adults often rely on buses for transportation, and they may have age-related physical limitations, their feedback in relation to the newly-designed route information and information services was considered. Several design suggestions for a multi-route bus map were generated on the basis of the survey and test results.

### UNDERSTANDING THE FACTORS THAT IMPACT THE PLANNING AND DEVELOPMENT OF SUSTAINABLE HOUSING AND COMMUNITIES FOR OUR AGING SOCIETY

A. DeLaTorre, *Institute on Aging, Portland State University, Portland, Oregon*

This poster will detail the findings from a case study in Portland, Oregon that sought to understand how and why various factors impacted the planning and development of sustainable, affordable housing for older adults. The findings are based on primary data collected for a dissertation that included 31 key-informant interviews with experts in fields connected to the planning and development of housing for older adults. A framework for sustainable development for an aging society will be presented, which includes: (1) connecting appropriate housing, transportation and land uses; (2) expanding green building practices to include variations across age and ability; (3) focusing on social equity; (4) creating long-term economic strategies; (5) valuing community assets throughout the life course; and (6) fostering access to community and health services. This framework will be used to explore policies that affect the planning and development of sustainable housing and the communities to which they are inextricably linked. More specifically, policies and practices at the federal (e.g., Low Income Housing Tax Credit program), regional (e.g., growth strategies, transportation systems), and local levels (e.g., zoning, tax abatement programs) will be detailed to provide participants with a better understanding of the myriad tools and barriers that exist in creating sustainable housing and communities for older adults. In addition to a review of pertinent policies currently in place, policy rec-

ommendations will be detailed for improving their outcomes in a manner that will contribute to the creation of sustainable communities for an aging society.

### DRIVING EXPERTS ADDRESS EXPANDING ACCESS THROUGH PATHWAYS TO OLDER DRIVER REHABILITATION SERVICES: MEETING RESULTS AND IMPLICATIONS

A. Dickerson<sup>1</sup>, E. Schold-Davis<sup>2</sup>, *1. Occupational Therapy, East Carolina University, Greenville, North Carolina, 2. American Occupational Therapy Association, Bethesda, Maryland*

When you consider the stakeholders who directly address the issue of older drivers, the stakeholders can be grouped into four categories according to their essential function: consumers who are older drivers and families; researchers who provide the research evidence, entities that make decisions about licensing (state licensing), and practitioners who do expert evaluation and recommendations. A consensus meeting of driving experts was convened in March 2012 with the goal of identifying gaps in service and expanding access to services for consumers by addressing the gaps in the “practitioner” category. The priority of the meeting was to develop criteria for referral to specialists to serve as guidance for program development, specifically identifying general practice occupational therapists that can provide services in the IADL of driving and community mobility in general rehabilitation, hospital, or other clinical settings. The specific objective is to develop pathways assuring a continuum of service for clients across diverse settings. This session will 1) outline the results of the meeting, 2) discuss the implications for other stakeholders and consumers, and 3) highlight needed research and implementation projects. Terminology was identified as a barrier as a consensus of terminology is critical for stakeholders to understand the types and level of services offered, required, or provided by the diverse driver rehabilitation program models. Consensus statements about client diagnostic categories were established as well as screening and assessment tool use and interpretation. Driving simulation and education for practitioners was also addressed. The consensus statements will be shared for use by practitioners in building services and programs.

### A DAY OR A PHASE: MOVING EXPERIENCES OF OLDER ADULTS

T. Pery, *University of Michigan, Ann Arbor, Michigan*

Scholars have long argued that moving for older adults takes many forms (Rowles, 1983; Litwak and Longino, 1987). This study of older adults, their family members and supportive professionals highlights the experiences of older adults and their network as they embark on relocation from their homes located in the mid-western United States. To complete this project, I conducted interviews, participant observation of the moving process (packing, garage sales, moving day, adjustment) and document review with over 35 older adults, members of their kin and supportive professionals in three stages: pre-move planning, move in-process, and post-move adjustment. Given the varied patterns of moving witnessed in this project including moving first and selling later, selling first and moving later, and moving into interim housing. Interim housing arose, when despite all the anxiety about the housing market, some study participants sold faster than expected. This paper examines the experiences of moving in terms of how older adults patterned their moves using case studies to highlight the complexity of the moving process. These varied moving experiences impacted the emotional, physical and financial concerns of older adults. By concluding with the methodological challenges of studying relocation as a process, this paper argues for re-examination of research design for the relocation literature.

## LONG TERM CARE; SESSION 1

**MANAGEMENT OF SEXUALITY IN RESIDENTIAL CARE SETTINGS: AN OMBUDSMEN'S PERSPECTIVE**

L.J. Cornelison, G. Doll, S. Gfeller, *Center on Aging, Kansas State University, Manhattan, Kansas*

**Purpose:** This study investigates how sexual expression is managed in residential care settings (i.e. nursing homes, assisted living facilities, and personal care homes) based on cases that require intervention from long-term care ombudsmen. Though sexuality and intimacy are universal human needs, residential care settings are less than supportive of the expression of these needs. The lack of policies governing sexual expression in these settings is frequently mentioned in the literature and there is little information available on how situations are managed when they do occur. This study addresses these missing elements, through an unexplored perspective of resident advocates, the ombudsmen. **Design and Methods:** Thirty-one in-depth phone interviews were conducted with long-term care ombudsmen in six states. For comparison, three direct care staff from a continuing care retirement community (CCRC) were interviewed. A thematic analysis was performed on the interview transcripts. **Results:** Cases requiring Ombudsmen intervention involved conflict between opposing forces. The roots of the conflicting forces clustered around five themes; risk, risk associated with dementing illnesses, limited knowledge, lack of privacy, and values. Comparative interviews revealed parallel results. The theoretical frameworks of the total institution, paternalism, and ageism were utilized to interpret the results. **Implications:** The results underscore the importance of providing staff guidance when the expression of sexuality within residential care settings is complicated by conflicting forces. Guidance may come in the form of more information, workforce training, interdisciplinary development of standardized ethical decision-making guidelines for use in applied settings, and written policies.

**PARTICIPANT-DIRECTED SERVICES WITH AWC FMS: KEY OPERATIONS, QUALITY ASSURANCE AND LIABILITY ISSUES**

S.A. Flanagan, *Westchester Consulting Group, Washington, DC, District of Columbia*

Participant-directed services (PDS) implemented using the joint employer, Agency with Choice (AwC) Financial Management Services (FMS) model represents a major paradigm shift in the delivery of home and community-based long-term care services (HBC-LTC). The model transfers decision-making and managerial authority from professionals to individuals and their families while providing them with employer supports that can extend to the worker. PDS using AwC FMS has been reported in 23 states and in conjunction with 56 PDS programs (Selkow, 2011) and can be beneficial for elders who wish to self-direct their HCB-LTC services. This study addressed the key operations, quality assurance and liability issues related to implementing PDS using AwC FMS and the experiences of 13 state PDS programs in eight states and nine AwC FMS organizations. Analysis included a review of state PDS program rules and Medicaid waivers, Federal and state wage and hour rules, the Family Medical Leave Act of 1993, Title VII of the Civil Rights Act of 1964, Americans with Disability Act of 1990, Immigration and Reform Act of 1985, Occupational Safety and Health Act of 1970, Employee Retirement Income Security Act of 1974, Affordable Care Act of 2010, state workers' compensation laws and related legal cases; and conducting telephone interviews with state PDS program and AwC FMS organization staff in 13 states. Key findings were summarized and promising practices and recommendations were identified/made.

**THE DEPICTION OF NURSING HOMES IN THE NATIONAL MEDIA: TONE OF COVERAGE AND ITS CORRELATES**

E.A. Miller<sup>1</sup>, D. Tyler<sup>2</sup>, V. Mor<sup>2</sup>, 1. *Gerontology, Univ Mass Boston, Boston, Massachusetts*, 2. *Brown University, Providence, Rhode Island*

This study characterizes the tone of nursing home coverage in the national media. Keyword searches of the LexusNexus database were used to identify 1,704 articles published in four national newspapers—The New York Times, The Washington Post, Chicago Tribune, and The Los Angeles Times—from 1999 to 2008. Article content was abstracted and multinomial logit used to examine the correlates of tone—positive and negative versus neutral. Most articles were negative (45.1%) or neutral (37.0%) in tone; comparatively few were positive (9.6%) or mixed (9.3%). Positive and negative articles were more than ten times more likely than neutral articles to be an editorial, column, or letter (Odds Ratios (OR)=14.1,  $p<.001$ ; OR=11.6,  $p<.001$ ). Negative articles were three-quarters more likely to be on the front page and two-thirds more likely to focus on industry actors (OR=1.73,  $p<.05$ ; OR=1.69,  $p<.01$ ). Positive articles were ten times more likely to be about community actors and two and three-quarters likely to be about local issues (OR=10.3,  $p<.001$ ; OR=2.8,  $p<.001$ ). Positive articles were considerably more likely to be about quality (OR=19.3,  $p<.01$ ); negative articles about negligence/fraud and natural disasters (OR=8.0,  $p<.001$ ; OR=5.9,  $p<.001$ ). This study supports widespread anecdotal claims that coverage of the nursing home sector is rarely positive, most often negative and, at a minimum, neutral. It also suggests that impact of negative reporting may be reinforced by other aspects of the articles reported. This includes a disproportionate focus on industry interests and prominent display on front pages and in opinion pieces.

**MAPPING A PARTICIPATORY CULTURE CHANGE PROCESS IN DEMENTIA CARE**

S. Dupuis<sup>1</sup>, C. McAiney<sup>2</sup>, J. Carson<sup>1</sup>, L. De Witt<sup>3</sup>, J. Gillies<sup>1</sup>, L. Meschino<sup>1</sup>, J. Ploeg<sup>2</sup>, Z. Rafferty<sup>1</sup>, 1. *Murray Alzheimer Research and Education Program, University of Waterloo, Waterloo, Ontario, Canada*, 2. *McMaster University, Hamilton, Ontario, Canada*, 3. *University of Windsor, Windsor, Ontario, Canada*

The Partnerships in Dementia Care (PiDC) Alliance is a collaborative research initiative in Canada that brings together over 50 individuals and organisations working in dementia and long-term care (LTC) to improve the dementia care experience for all in those settings. The purposes of the Alliance are to: (1) facilitate sustainable culture change where all voices in LTC settings, including residents/clients, family members and staff, are heard and included in decision-making; (2) use a participatory action research and appreciative inquiry approach to identify existing strengths and aspirations and use those strengths to achieve desired goals; and (3) ultimately, enhance the care experience of residents/clients, family members, and staff. To this end, Alliance researchers have been working with Culture Change Coalitions (CCC), made up of persons with dementia, family members, and staff across a range of positions, in four different LTC settings and systematically documenting the culture change process within those settings. The purpose of this paper is to provide a detailed description and analysis of our culture change process thus far, identifying the speed bumps experienced and the ramps to opportunities that helped us in maneuvering over, or around, the speed bumps. All CCCs faced personal (e.g., competing demands, assumptions), social (e.g., power dynamics, changes in group structure), and systemic (e.g., competing CCC and organizational priorities, regulations and policies) speed bumps. Regularly connecting and committing, valuing diverse voices, creating safe spaces, maintaining open communication, and conducting critical reflection and

dialogue supported us in addressing and overcoming speed bumps along the journey.

### **SENSE OF CONTROL IN ASSISTED LIVING: INFLUENCES OF SOCIAL RELATIONSHIPS, RESIDENTIAL CONTEXT, AND HEALTH**

S.W. Burge, D. Street, *Sociology, University of Oklahoma, Norman, Oklahoma*

Having a sense of control over one's life is an important social-psychological resource that helps individuals navigate life's adversities. Research shows that individuals with a greater sense of control over their lives reap numerous benefits, including better educational and career outcomes, enhanced physical health and superior subjective wellbeing. As important as sense of control is for adult outcomes, research has also shown that the sense of control over one's life tends to diminish in old age, partly because later life is often accompanied by physical frailty and functional limitation. While sense of control may decline with age, its benefits do not. Individuals who maintain a sense of control in their elder years continue to have better mental and physical health outcomes than counterparts with a lower sense of control. We investigate elders' sense of control in the context of assisted living (AL), an increasingly important residential setting for older individuals. Although the transition to AL may be associated with a loss of control for some, elders who maintain their sense of control likely have better adjustment to new residential settings. Using data from the Florida Study of Assisted Living, we examine how residents' internal and external social relationships, the AL residential context, and objective health conditions shape AL residents' sense of control. We find that social relationships are strongly associated with residents' sense of control. In particular, residents who maintain strong external ties with family and develop new ties with co-residents tend to feel more in control of their lives.

### **EXAMINING MEDICAID HOME- AND COMMUNITY-BASED LONG-TERM CARE SERVICES IN THE AGE OF OLMSTEAD**

G. Boyer, *UNC, Chapel Hill, North Carolina*

Demand for long-term care (LTC) will continue to grow as the American population ages. The Patient Protection and Affordable Care Act of 2010 and the 1999 U.S. Supreme Court *Olmstead vs. L.C.* ruling spur inquiry regarding home- and community-based Medicaid long-term care services (HCBS). This study examines the political, socio-demographic, policy, and supply influences on Home Health, 1915(c) waiver, Personal Care Services, and total Medicaid HCBS. Years 1996-2008 were used to study HCBS expenditures per capita, while years 1999-2007 were used to study recipients per capita and expenditures per recipient. State-level trend analyses using fixed effects regressions provide interesting results. Democratic governors have a positive relationship with most HCBS programs, while more Democratic legislatures have a mixed relationship. A more liberal state ideology tends to have a positive relationship with spending per recipient, but negative relationships with spending per capita. Larger Hispanic populations are linked to more home health recipients per capita but less home health spending per recipient. Larger African American populations tend to have a positive relationship with HCBS. More urban states and more Medicare home health users per capita tend to have positive relationships with HCBS programs. Nursing home supply, average Medicaid reimbursement rates, and state home health certificate of need tend to be negative and the most robust predictors of HCBS. While several factors are associated with HCBS growth, the most robust are supply factors, indicating a need to further examine individual and person-specific drivers of HCBS as states pursue LTC rebalancing efforts.

### **WHAT DETERMINES AN OLDER PERSON'S MOVE INTO SHELTERED ACCOMMODATION AND RESIDENTIAL CARE?**

M. Evandrou<sup>1,2,3</sup>, J.C. Falkingham<sup>1,2,3</sup>, O. Maslovskaya<sup>3</sup>, A. Vlachantoni<sup>1,2,3</sup>, *1. Centre for Research on Ageing, University of Southampton, Southampton, United Kingdom, 2. ESRC Centre for Population Change, University of Southampton, Southampton, United Kingdom, 3. EPSRC The Care Life Cycle, University of Southampton, Southampton, United Kingdom*

The UK's population is ageing, and understanding the dynamics of living arrangements in later life and the implications for the provision and funding of appropriate housing and long-term care is critical given the current economic climate which can have an adverse impact on state support for older people. This paper investigates the dynamics of living arrangements amongst people aged 65 years old and over between 1991 and 2008, focussing on the two key housing and care pathways in later life: moving into sheltered accommodation and moving into residential care. The empirical research examines the rates of moving into sheltered accommodation and institutional care and investigates the determinants and probabilities of these transitions in the UK. The paper employs all 18 waves of the British Household Panel Survey (1991-2008) and uses a discrete-time logistic regression model in order to model the probability of entering sheltered accommodation and residential care. After reading this poster, participants will be able to associate specific factors with each of the two transitions in later life. For example age, health and marital status are significant determinants of a move into residential care, while the move into sheltered accommodation is also associated with housing tenure and education. After reading this poster, participants will be able to discuss the prevalence of each the two kinds of transition at different stages of the latter part of the life course, and to understand the crucial implications for the design of social care provision for older people in the future.

### **WHAT DETERMINES THE RECEIPT OF FORMAL PAID, FORMAL STATE OR INFORMAL SOCIAL SUPPORT IN LATER LIFE?**

A. Vlachantoni<sup>1,2,3</sup>, J.C. Falkingham<sup>2,1,3</sup>, M. Evandrou<sup>1,2,3</sup>, R. Shaw<sup>3</sup>, *1. Centre for Research on Ageing, University of Southampton, Southampton, United Kingdom, 2. ESRC Centre for Population Change, University of Southampton, Southampton, United Kingdom, 3. EPSRC The Care Life Cycle, University of Southampton, Southampton, United Kingdom*

In the current economic circumstances and political climate, older people may be increasingly dependent on their own social and financial resources in order to obtain care and assistance with daily activities. However, the support received in later life may consist of a mixture between formal paid, formal state and informal support, and understanding the determinants of receiving support from different sources is an essential part of policy-making for the future. This paper draws from data from the English Longitudinal Study of Ageing (ELSA) in order to investigate the key determinants of receiving support from different sources. After reading this poster, participants will be able to distinguish between the determinants of receiving formal paid, formal state or informal support, which include demographic factors and living arrangements; measures of health, including disability and disease; socio-economic measures, including education and income; technological assistance and home adaptations. The results show that the strongest determinants of receipt of both informal and paid for support are health and demographic characteristics, while health is more strongly associated with informal care and demographic factors are most strongly associated with the receipt of paid for support. Finally, this poster also facilitates participants to understand the policy implications of the results for the design of social care, and to contextualise these results in patterns of population ageing.

## EVALUATION BY CLIENTS AND CASE MANAGERS ON CHANGES OF QOL INDICATORS IN THE FRAIL ELDERLY DURING ONE-YEAR CASE MANAGEMENT

M. Shirasawa<sup>1</sup>, S. Yoshie<sup>2</sup>, D. Hata<sup>3</sup>, H. Shiraki<sup>4</sup>, K. Yamada<sup>5</sup>, Y. Takasuna<sup>6</sup>, A. Yonezawa<sup>7</sup>, K. Masuda<sup>8</sup>, 1. *J.F.Oberlin University, Nabari, Mie, Japan*, 2. *Tokyo university, Bunkyo, Tokyo, Japan*, 3. *Japan Science Technology Agency, Chiyodaku, Tokyo, Japan*, 4. *Fuji Care Corporation, Kitakyuusu, Fukuoka, Japan*, 5. *Maebashi-shi Comprehensive Community Support Center, Maebashi, Gunma, Japan*, 6. *Minamiku Visiting Nurse Center, Yokohama, Kanagawa, Japan*, 7. *NTT Data Institute of Management Consulting, Chiyodaku, Tokyo, Japan*, 8. *Waseda University, Tokorozawa, Saitama, Japan*

A research panel attempted to clarify changes of QOL evaluation indicators in the frail elderly between 6 months and 1 and half year after beginning case management, where the elderly were paired with case managers with over 5-years experience. This study analyzed the answers obtained from 201 clients and 199 case managers who answered both times. QOL evaluation indicators for case management included 13 terms relating to physical (ADL, health problems, meals, bathing, toileting, household affairs), psychological (dementia care, motivation for living, communication, social participation), and social (family care burden, living environment, economic situation) aspects. Changes after 1 year were analyzed using a nonparametric test, and terms with a  $P < .05$  were considered to be significant. Results from clients showed a significant decrease in ADL, meals, toileting, dementia care, motivation for living, communication, social participation, family care burden, and living environment, while health problems, bathing, household affairs, and economic situation remained stable. At the same time, with care managers, ADL, meals, bathing, toileting, motivation for living, and family care burden were significantly decreased, while health problems, household affairs, dementia care, communication, social participation, living environment, and economic situation remained stable. Thus, although results differed for some terms, many in the physical aspect category decreased between 6 months and 1 and half year after beginning case management; however, psycho-social aspects tended to maintain their previous state. It is considered that psychological and social aspects are important as evaluation indicators for case management of the frail elderly.

## AN UPDATED PROFILE OF THE DIRECT CARE WORKFORCE IN THE UNITED STATES: WHAT HAS CHANGED SINCE 2000?

C.M. Kelly<sup>1</sup>, J. Deichert<sup>2</sup>, L. Holley<sup>2</sup>, K. Kosloski<sup>2</sup>, 1. *Gerontology, University of Nebraska, Lincoln, Nebraska*, 2. *University of Nebraska at Omaha, Omaha, Nebraska*

Purpose: The goal of our study was to track changes in the direct care workforce between 2000 and 2010 by generating profiles of workers in several settings (i.e., nursing homes, home health agencies), with a special focus on home care workers. Design and Methods: Data were taken from the Public Use Microdata Sample (PUMS) from the 2010 American Community Survey (ACS) and compared to profiles presented by Montgomery, et al. (2005). Variable coding in ACS data allows for a more detailed identification of direct care workers than that which is available from other data sources (e.g., Bureau of Labor Statistics). On the basis of our current sample of 2010 ACS data, we find continued growth across a direct care workforce that now totals over 3.06 million, particularly among home care workers (who at nearly 1.42 million now represent the largest segment within this workforce). Home care workers are unique in several ways within the direct care workforce. Among demographic trends of note, home care workers are more likely to be female, Hispanic, non-native born, and more likely to be 65 years of age and older. We further report that, during the past decade, several changes across the entire direct care workforce (including home care workers) have occurred. Specifically, in 2010 greater proportions of direct care workers were younger than 25, male, Hispanic, non-native

born, and college-educated. Other changes since 2000 were unique to home care workers. For example, increases during the past decade in direct care workers who work full-time and for a for-profit employer have been greatest among home care workers. Implications: Given the increased use of home care as an alternative to institutional care, it is increasingly important to understand its unique workforce, particularly with efforts to recruit, retain, and ensure the quality of these workers already underway (Kelly, et al., 2012). The current study facilitates continued development of these efforts.

## VETERANS HOME AND COMMUNITY-BASED SERVICES: LESSONS LEARNED FROM A SUSTAINABILITY STUDY

E.K. Mahoney<sup>1</sup>, D. Schoeps<sup>3</sup>, D. Kayala<sup>2</sup>, N. Foxe<sup>2</sup>, P. O'Keefe<sup>2</sup>, K.J. Mahoney<sup>2</sup>, 1. *Boston College, Connell School of Nursing, Chestnut Hill, Massachusetts*, 2. *Boston College, Graduate School of Social Work, National Resource Center for Participant-Directed Services, Chestnut Hill, Massachusetts*, 3. *Veterans Health Administration, Washington, DC, District of Columbia*

The primary purpose of this mixed methods evaluation was to review three years of national experience with the Veteran-Directed Home and Community-Based Services (VDHCBS) program in order to inform sustainability and future planning for rebalancing long term care options for Veterans. A second purpose was to identify proximal outcomes and benchmarks valued by stakeholders that could be linked to VDHCBS program components now and to longer term quality and cost outcomes in the future. Sources of data included a survey of Veterans Administration Coordinators of VDHCBS programs ( $n=27$ ), VA/Minnesota Long-Term Care Assessments, service plans and invoices for Veterans enrolled in VDHCBS ( $n=247$ ) and traditional home care ( $n=260$ ). Data were analyzed quantitatively to describe and compare case mix, cost and types of services and goods invoiced between the groups and to assess outcomes of VDHCBS reported by Coordinators. Qualitative description was used to identify themes in Coordinators' experiences and perceptions about the VDHCBS program, the Veterans enrolled and services they receive, outcomes attributable to the program and how, and to further inform quantitative findings. While the self-directed population generally had higher acuity than the comparison group and were nursing home eligible, the vast majority of Coordinators perceived VDHCBS to significantly improve the ability of Veterans to have their needs met, remain at home, be satisfied, and access services. The use of cash allowances and trends for growth and long term system rebalancing will also be covered.

## CHANGES IN CAREGIVER BURDEN AFTER THE IMPLEMENTATION OF THE LONG-TERM CARE INSURANCE SYSTEM IN JAPAN

Y. Sugihara<sup>1</sup>, H. Sugisawa<sup>2</sup>, Y. Nakatani<sup>3</sup>, M. Shimmei<sup>1</sup>, H. Kodama<sup>1</sup>, Y. Watanabe<sup>4</sup>, 1. *Human Care Research Team, Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*, 2. *J.F.Oberlin University, Tokyo, Japan*, 3. *Japan Women's University, Tokyo, Japan*, 4. *Musashino University, Tokyo, Japan*

The Japanese government started the public long-term care insurance (LTCI) system in 2000, and major reforms were undertaken in 2006. This study examined, first, possible effects of the implementation and the consecutive reform on the caregivers' burden and second, possible reasons for an increase in psychological burden even after the implementation of the system. Five repeated cross-sectional surveys were conducted in 1996, 1998, 2002 and 2010 with a probability sample of community-dwelling caregivers of frail elderly people living in a suburb of Tokyo metropolis. Data were analyzed in two steps. First, we analyzed changes in service use and caregiver burden by using GLM. Second, we examined whether the increase in caregivers' psychological burden over time might be explained by (1) decreases in informal support network, (2) increases in social/economic problems, and (3) increases in demand level for service use, by using Structural Equation

Modeling. The results showed that the utilization of in-home care services increased after the implementation of the LTCI. However, their utilization decreased, or remained unchanged after the reform. In terms of caregiver burden, psychological burden increased over time even after the implementation of the LTCI. The increase in psychological burden was explained partly by increases in social/economic problems and increases in demand level for service use. These results suggest that the levels of existing service benefits are insufficient to improve caregivers' psychological burden. In addition, deteriorating economic conditions and discrepancies between demands and real service use among caregivers may impose psychological strain on caregivers.

#### **TAKING CAREER DEVELOPMENT TO THE NEXT LEVEL: EVALUATING THE GERIATRIC NURSING ASSISTANT CAREER LADDER PROGRAM**

R. Meador, *Gerontology Institute, Ithaca College, Ithaca, New York*

For some time now, nursing homes have been staggering under the high cost of turnover, especially among CNAs. Career development programs for CNAs have been proven to improve staff turnover and reduce burnout. Therefore, a greater understanding of how to implement innovative career development programs like career ladders in nursing homes and other long-term care institutions is needed. This presentation will report the results of an evaluation that documents the outcomes resulting from the successful adoption of a career ladder program for certified nursing assistants in 77 participating long-term care facilities. The Geriatric Nursing Assistant Career Development (GNACD) program provides a model for redesign of the system for advancement of front-line nursing assistants working in the field of long term care by creating clearly defined pathways and rewards for advancement within the CNA vocation. The GNACD was implemented across New York State in 77 long-term care facilities over a three-year period, during which 340 CNAs participated in the program. This poster presentation will provide participants with timely information from the evaluation that documented specific outcomes that occurred in the participating facilities as they undertook implementation of this staff development innovation in their nursing homes. In addition, qualitative data from GNACD graduates tell the story of how participation in the program enhanced their career paths and, in turn, improved their perception of the quality of care in their facilities.

### **SESSION 1395 (SYMPOSIUM)**

#### **GSA-SFRBM JOINT SYMPOSIUM: OXIDATIVE STRESS FOR THE NON-BIOLOGIST**

Chair: *K.J. Davies, University of Southern California, Los Angeles, California*

Co-Chair: *K.J. Davies, University of Southern California, Los Angeles, California*

Since its original articulation by Denham Harman in the 1950s, the free radical or oxidative stress theory of aging has been one of the most cogent explanations for aging at the molecular and cellular levels. The theory proposes that free radicals formed endogenously from normal metabolic processes have a role in aging as a result of increases in oxidative damage to macromolecules. The imbalance between oxidative stress and cellular macromolecules designed to reduce oxidative stress leads to an accumulation of damage in a variety of cells and tissues with age resulting in a loss of cellular function and the genesis of the aging phenotype. This joint symposium sponsored by GSA and the Society for Free Radical Biology and Medicine reviews the causes of oxidative stress and the implications of increased oxidative stress for cellular and tissue function. The session is designed to provide a basic underpinning for the oxidative stress theory of aging and review data that support or refute this hypothesis.

#### **IS THE FREE RADICAL (OXIDATIVE STRESS) THEORY OF AGING DEAD?**

A. Richardson, *1. Barshop Institute for Longevity and Aging Studies, University of Texas at San Antonio and the Audie Murphy VA Center, San Antonio, Texas, 2. Barshop Institute for Longevity and Aging Studies, University of Texas Health Science Center at San Antonio, San Antonio, Texas*

Currently, the Oxidative Stress (or Free Radical) Theory of Aging is the most popular explanation of how aging occurs at the molecular level. Because the gold standard for determining whether aging is altered is lifespan, investigators have studied the effect of altering oxidative stress/damage on lifespan. In an exhaustive study, my laboratory showed that under- or overexpressing a large number and wide variety of genes coding for antioxidant enzymes had no effect on lifespan. However, when these transgenic/knockout mice are tested using models that develop various types of age-related pathology, they show alteration in progression/severity of pathology as predicted by the oxidative stress theory; increased oxidative stress accelerates pathology and reduced oxidative stress retards pathology. These contradictory observations suggest that (1) oxidative stress plays a limited, if any, role in aging but a major role in healthspan or (2) the role oxidative stress plays in aging depends on the environment.

#### **OXIDATIVE DAMAGE: CELLULAR DAMAGE RESPONSES LINK AGING, AGE-RELATED DISEASE, AND INFLAMMATION**

J. Campisi, *1. Buck Institute for Research on Aging, Novato, California, 2. Lawrence Berkeley National Laboratory, Berkeley, California*

Oxidative stress damages cellular constituents, including DNA, thereby putting cells, tissues and organisms at risk for developing aging phenotypes and age-related pathology. Two important cellular damage responses are apoptosis and cellular senescence – both of which are crucial for preventing the development of cancer. Apoptosis, also known as programmed cell death, is an orderly program by which cells die in a manner that is designed to prevent inflammation. Cellular senescence, by contrast, permanently prevents cells from dividing. Senescent cells do not die; rather, they remain alive, metabolically active and secrete numerous pro-inflammatory mediators, a property known as the senescence-associated secretory phenotype (SASP). The most highly conserved feature of the SASP – among different cell types and between mouse and human species – is its pro-inflammatory nature. Because inflammation causes or contributes to virtually every major age-related disease, the SASP of senescent cells might link damage response to a basic aging process that drives age-associated pathology and limits longevity.

#### **FREE RADICALS, ANTIOXIDANTS, AND CHRONIC DISEASE**

M.G. Traber, *Oregon State University, Corvallis, Oregon*

The body generates free radicals as by-products during the conversion of food to energy. When exposed to oxygen, these free radicals can form various reactive species, which damage proteins, carbohydrates, DNA, and fats. To protect itself, the body uses a variety of mechanisms, involving enzymes, signaling pathways, and small molecules. As we learn more about radicals, damage and defense mechanisms, it has become clear that it is an over-simplification to expect that oxidative stress can be balanced by antioxidants. There are elaborate regulatory mechanisms that keep cellular and organ systems under close control; there are repair mechanisms to remove damage, signaling pathways that are dependent upon nuances in oxidant tone, as well as dietary factors that modulate chronic disease risk. Thus, a high intake of fruits and vegetables is associated with decreased risk, while a high saturated fat diet increases risk. Consuming large numbers of phytochemicals and

antioxidants, up-regulates the body's detoxifying systems and potentiates the ability to defend against radicals. Antioxidant supplements, however, are not the same as a consistent consumption of a plant-rich diet. Remarkably, we are just beginning to understand the roles of antioxidant vitamins, E and C. Vitamin C is necessary for a variety of enzymatic reactions, but vitamin E is apparently necessary to protect critical sites, such as the brain and the artery wall. After attending this talk, participants will be able to define what are free radicals and antioxidants. They will be able to cite good dietary habits to decrease risk of chronic diseases.

#### ADAPTATION TO OXIDATIVE STRESS IN AGING

K.J. Davies, 1. *Davis School of Gerontology, University of Southern California, Los Angeles, California*, 2. *Division of Molecular & Computational Biology, Department of Biological Sciences of the Dornsife College of Letters, Arts & Sciences, the University of Southern California, Los Angeles, California*

Environmental levels of free radicals and related oxidants change frequently, as does their production by metabolic and inflammatory processes. To cope with varying stress, cells, whole organisms, even human beings, must modulate their levels of defense and repair systems. Thus, after cells or organisms are exposed to mild oxidative stress they undergo a two-stage response consisting of immediate enzyme activations, followed by altered levels and patterns of gene expression. Levels of key antioxidant, and damage removal and repair enzymes are upregulated. These responses significantly increase the stress-resistance of cells or organisms. If the stress abates, both the adaptations and increased stress-resistance will be transient. If the stress becomes chronic, however, or if it is repeated too frequently, adaptive responses begin to fail. New evidence suggests that such adaptive responses decline with chronic disease, age and senescence. It is proposed that deteriorating adaptive responses may actually contribute to the aging phenotype.

### SESSION 1400 (PAPER)

#### BASIC SCIENCE AND CLINICAL STUDIES OF MILD COGNITIVE IMPAIRMENT

##### IMPACT OF TESTOSTERONE ON THE MIDDLE-AGED CENTRAL NERVOUS SYSTEM: EFFECTS ON COGNITION AND BRAIN STRUCTURE

M.S. Panizzon<sup>1</sup>, R.L. Hauger<sup>1,2</sup>, C.E. Franz<sup>1</sup>, K.C. Jacobson<sup>3</sup>, M. Grant<sup>4</sup>, S.P. Mendoza<sup>5</sup>, M.J. Lyons<sup>4</sup>, W.S. Kremen<sup>1,2</sup>, 1. *Psychiatry, University of California San Diego, La Jolla, California*, 2. *San Diego VA Health Care System, San Diego, California*, 3. *University of Chicago, Chicago, Illinois*, 4. *Boston University, Boston, Massachusetts*, 5. *University of California Davis, Davis, California*

Brain regions such as the hippocampus, the prefrontal cortex, and the white matter possess large concentrations of androgen receptors, making them sensitive to the effects of the hormone testosterone. These brain regions are integral to cognitive and brain aging; thus, individual differences in testosterone level are likely relevant to the processes that contribute to age-related changes in cognition and brain in men. We examined the effects of testosterone on cognition and brain structure in a sample of middle-aged male twins. Data were collected as part of the ongoing Vietnam Era Twin Study of Aging (VETSA). The average age of participants was 55.9 years (range: 51 to 60). Testosterone levels were obtained via 15 saliva samples collected on 3 non-consecutive days. A detailed cognitive assessment covering multiple domains of functioning was performed for all participants. A subset of the sample also underwent structural MRI scans. Significant positive effects of testosterone were observed for verbal ability, episodic memory, and processing speed. Results remained significant after controlling for age 20 general cognitive ability and multiple health-related covariates. Within the brain,

significant effects were observed between testosterone and hippocampal volume. Although there was no direct effect on the size of the hippocampus, the heritability of hippocampal volume varied substantially as a function of testosterone. That is, when testosterone levels were higher, variation in hippocampal volume was determined more by genetic influences. Combined with testosterone's well-known decline with age, these results support the role of testosterone as a valuable biomarker for cognitive and brain aging.

#### EFFECT OF ANTIHYPERTENSIVE THERAPY ON THE BRAIN IN EXECUTIVE MILD COGNITIVE IMPAIRMENT: A DOUBLE-BLIND RANDOMIZED CLINICAL TRIAL

I. Hajjar<sup>1</sup>, M. Hart<sup>2</sup>, Y. Chen<sup>1</sup>, W. Mack<sup>1</sup>, W. Milberg<sup>3</sup>, H. Chui<sup>1</sup>, L. Lipsitz<sup>3,2</sup>, 1. *University of Southern California, Los Angeles, California*, 2. *Institute for Aging Research, Hebrew Senior Life, Boston, Massachusetts*, 3. *Harvard Medical School, Boston, Massachusetts*

Background: Hypertension is frequently associated with executive function decline, commonly termed executive mild cognitive impairment, and both are associated with cerebral blood flow changes. However, the effect of antihypertensive therapy on executive function is unknown. Methods: We conducted a double-blind randomized clinical trial of candesartan, lisinopril, or hydrochlorothiazide in hypertensive individuals with executive dysfunction (N=53, mean age=71 years; 64% white and 28% African Americans; 58% women) with outcomes being executive function and cerebral hemodynamics. Executive function (Trail Making Test, parts A and B), memory (Hopkins Verbal Learning Test-Revised), and attention (forward and backward digit span) were assessed at baseline, 6 and 12 months as well as cerebral blood flow velocity (Transcranial Doppler ultrasonography in the middle cerebral artery during rest, hypercapnia, and hypocapnia). Linear mixed models were used to compare the change in outcomes. Results: The candesartan group had the greatest improvement in executive function (Trail Making Test, part B improved by 17.1 seconds vs HCTZ improved by 4.2 seconds and lisinopril worsened by 14.4 seconds,  $p=0.008$ ). Similar finding was noted for the adjusted Trail Making Test (Part B-A;  $p=0.012$ ) and the Hopkins Verbal Learning Test recognition subtest ( $p=0.034$ ). The candesartan group showed increased blood flow velocity that was significant in the subgroup with low baseline velocity ( $n=23$ ;  $p=0.04$ ). Vasoreactivity to CO<sub>2</sub> declined in the HCTZ ( $p=0.06$ ) and lisinopril ( $p=0.0006$ ) groups but not in the candesartan group ( $p=0.14$ ). Conclusion: This first study suggests that angiotensin receptor blockers may have superior effects on the brain in executive mild cognitive impairment.

#### THE RELATIONSHIP OF MULTIMORBIDITY WITH SUBJECTIVE AND OBJECTIVE COGNITIVE IMPAIRMENT: A POPULATION-BASED TWIN STUDY

B. Caracciolo<sup>1</sup>, M. Gatz<sup>2,4</sup>, W. Xu<sup>1</sup>, A. Marengoni<sup>3</sup>, N.L. Pedersen<sup>4,2</sup>, L. Fratiglioni<sup>1</sup>, 1. *Aging Research Center, NVS, Karolinska Institutet, Stockholm, Sweden*, 2. *Department of Psychology, University of Southern California, Los Angeles, California*, 3. *Department of Medical and Surgery Sciences, University of Brescia, Brescia, Italy*, 4. *Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden*

Objectives: To examine the association of common chronic disease and multimorbidity with subjective cognitive impairment (SCI) and cognitive impairment no-dementia (CIND), and to explore the contribution of genetic background and shared familial environment to these associations. Methods: The study included 11,379 dementia-free community-dwellers from the nation-wide Swedish Twin Registry, who were aged  $\geq 65$  at the time of HARMONY survey (1998-2001). SCI was defined as subjective complaint of cognitive change without objective cognitive impairment, and CIND was ascertained according to the standard definition. Chronic diseases were classified based on international criteria, and multimorbidity was assessed as the co-occurrence of at least

two chronic diseases in the same individual. Results: In unmatched, fully-adjusted regression models, musculoskeletal, respiratory, and urological diseases were significantly associated with increased odds ratios (ORs) of both SCI and CIND. Circulatory and gastrointestinal disorders were related to SCI, while endocrine diseases were associated with CIND. The adjusted ORs of multimorbidity were 2.1 [95% Confidence Intervals (95% CI): 1.8-2.3] for SCI and 1.5 for CIND (95% CI: 1.3-1.8). There was a significant dose-dependent relationship between number of chronic diseases and ORs for SCI but not for CIND. In co-twin control analyses, the chronic diseases-SCI association remained significant but the association with CIND was no longer statistically significant. Conclusions: Chronic diseases are associated with both SCI and CIND and the association is stronger when there is multimorbidity. Genetic and shared environmental factors may partially explain the association of CIND but not that of SCI with chronic diseases.

### **INCREASED EXPRESSION OF NMDA RECEPTOR GLUN2B SUBUNIT WITHIN CNS REGIONS ENHANCES MEMORY IN AGED MICE**

K. Magnusson<sup>1</sup>, B. Brim<sup>1</sup>, R. Haskell<sup>2</sup>, R.S. Awedikian<sup>3</sup>, M. Ellinwood<sup>3</sup>, L. Jin<sup>1</sup>, 1. *Oregon State University, Corvallis, Oregon*, 2. *ViraQuest, Inc., North Liberty, Iowa*, 3. *Iowa State University, Ames, Iowa*

The GluN2B subunit of the N-methyl-D-aspartate (NMDA) receptor shows age-related declines in expression across the frontal cortex and within the hippocampus. This decline is strongly correlated to the memory declines observed in aging. However, a subset of these aged mice express higher levels of the GluN2B subunit within the hippocampus than their aged counterparts and exhibit worse long-term spatial memory. This study was designed to determine if increasing the expression of the GluN2B subunit in the frontal lobe or the hippocampus would improve or further impair memory in aged mice. Both young (3 month-old) and aged (22-26 month-old) C57BL/6 mice were injected bilaterally with either the GluN2B vector, containing cDNA specific for the GluN2B subunit and enhanced Green Fluorescent Protein (eGFP); a control vector, containing only eGFP cDNA; or vehicle alone. Mice were tested for their performance in spatial long- and delayed short-term memory, cognitive flexibility and associative memory tasks using the Morris water maze. Aged mice, with increased GluN2B subunit expression within their frontal lobe or hippocampus, exhibited improved long-term spatial memory, comparable to young mice. However, memory was rescued at different learning phases; early for hippocampal GluN2B subunit enrichment and later for the frontal lobe. A higher concentration of the GluN2B antagonist, Ro 25-6981, was required to impair long-term spatial memory in aged mice with enhanced GluN2B expression, as compared to aged controls. These results suggest that therapies that increase the expression of the GluN2B subunit within the aged brain could rescue memory loss in aged individuals.

### **INCREASED CNS NGR1 SIGNALING AS A POTENTIAL MECHANISM OF AGE-RELATED COGNITIVE DECLINE**

H. VanGuilder Starkey<sup>1</sup>, D. Masser<sup>1</sup>, J.A. Farley<sup>2</sup>, W.E. Sonntag<sup>2</sup>, W. Freeman<sup>1</sup>, 1. *Pharmacology, Penn State College of Medicine, Hershey, Pennsylvania*, 2. *University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

With advancing age, the CNS undergoes numerous physiological and biochemical changes that, in more than half of the population, culminate in cognitive deficits. Spatial learning and memory is commonly, and often severely, impaired with advancing age. Using the F344xBN rat model of human aging, we have previously demonstrated hippocampus-wide upregulation of the myelin-associated inhibitors (MAIs) MAG, OMgp and Nogo-A, and their common receptor, NgR1, specifically in cognitively impaired rats compared to their cognitively intact, age-matched counterparts and mature adults. MAI/NgR1 action suppresses synaptic plasticity in CNS injury models, and antagonism of NgR1 signaling is associated with improved cognitive function. The

goal of our current work is to determine whether hippocampal induction of NgR1 and its ligands results in increased downstream signaling, and ultimately, in decreased plasticity-associated mechanisms of spatial learning and memory in aged rats with inferior Morris water maze performance. We have identified cognitive decline-specific protein-level upregulation of co-receptors critical for NgR1 signal transduction, including p75NTR, TROY, and LINGO-1. Hippocampal induction of downstream signaling effectors (e.g., RhoA) was also observed, while proteins associated with activity-dependent synaptic plasticity (CaMKII $\alpha$ , PSD-95, NMDA receptor subunit 2A) were significantly decreased. Additionally, expression of MAI/NgR1 signaling pathway components correlated with water maze performance, with higher protein levels associated with inferior spatial learning and memory. Interestingly, expression PirB, an alternate MAI receptor, was increased with advanced aging but was not associated with cognitive function. These data suggest that NgR1 signaling contributes to deficits of hippocampal synaptic plasticity that may underlie age-related cognitive decline.

### **SESSION 1405 (SYMPOSIUM)**

#### **CHARTING NEW FRONTIERS IN FUNCTION AND AGING: A MULTI-DISCIPLINARY PERSPECTIVE**

Chair: *K.S. Hall, Geriatric Research, Education, and Clinical Center, Veterans Affairs Medical Center, Durham, North Carolina, Duke University, Durham, North Carolina*

Co-Chair: *C.A. Mingo, University of North Carolina, Chapel Hill, North Carolina*

Discussant: *K.E. Whitfield, Duke University, Durham, North Carolina*

This Presidential Symposium, sponsored by The Emerging Scholars and Professional Organization (ESPO), is designed to bring a multi-disciplinary perspective to the topic of function in aging and aged adults. Function has evolved to encompass a variety of outcomes spanning physiological, psychosocial, and environmental domains. Although broadly conceived, function and its various components have implications for quality of life, functional independence, social engagement, and healthcare utilization/costs. In keeping with the meeting theme of 'Charting New Frontiers,' ESPO members representing the four sections of GSA will present their research examining various facets of function. Topics to be highlighted include a pharmacological approach to muscle atrophy, trajectories of stress and associated determinants in older Taiwanese adults, wisdom development and successful aging, sexual interest and health outcomes, and the complex interplay between dementia diagnosis and level of institutional care. Closing discussion will consider future directions stemming from the research presented as well as other emerging frontiers in the areas of function and aging.

#### **TRAJECTORIES OF PERCEIVED STRESS AND EXPERIENCED STRESSORS AMONG OLDER ADULTS**

S. Vasunilashorn<sup>1</sup>, S.M. Lynch<sup>1</sup>, D. Gleit<sup>2</sup>, M. Weinstein<sup>2</sup>, N. Goldman<sup>1</sup>, 1. *Population Studies, Princeton University, Princeton, New Jersey*, 2. *Georgetown University, Washington, District of Columbia*

Models of the stress process incorporate both environmental demands experienced by individuals (stressors) and the appraisal of these life events (perceptions). Although some studies have measured both of these components of the stress process, little is known about the extent to which experience and perceptions are related, especially in later life. Using growth models applied to data from three waves of the Survey of Living Status of the Elderly in Taiwan, we: 1) examine change in experienced stressors and perceived stress across several domains; and 2) investigate whether change in experienced stressors influence change in perceived stress. Our results indicate that (1) incidence of some types of stressors increases over time, while incidence for others decreases, (2) perceived stress tends to increase across time for all domains, and (3) there is no relationship between change in experienced stressors and perceived stress over time.

## THE IMPACT OF SEXUAL INTEREST ON HEALTH OUTCOMES IN OLDER ADULTS

C. Sharpe, S.S. Reynolds, *USF School of Aging Studies, University of South Florida, Tampa, Florida*

The literature on sexuality in older adults suggests that a healthy sex life is an important component of successful aging, including maintenance of physical health. In this cross-sectional study of 3800 men and women age 39-85, we use the US National Health Measurement Study to examine the effect of sexual interest on older adults' health. Health outcomes include arthritis, back pain, coronary heart disease, depression, diabetes, and sleep disorders. Independent variables include sexual interest, socio-demographics, medications and self-reported health and disability factors. Logistic regression results indicate that low sexual interest is associated with increased risk of back pain, coronary heart disease, depression, and sleep disorders, but not arthritis or diabetes. The most consistent other factors were fatigue, black race, medications, and ADL impairment. Further research on other measures of sexual desire, activity, and satisfaction are needed to fully understand the importance of sexuality for older adults' health.

## LONG-TERM ADMINISTRATION OF LOSARTAN INDUCES AN ENDURANCE EXERCISE PHENOTYPE IN MICE WITH SARCOPENIA

T.N. Burks<sup>1</sup>, E. Andres-Mateos<sup>1</sup>, R. Marx<sup>1</sup>, C.W. Ward<sup>2</sup>, J.D. Walston<sup>1</sup>, R.D. Cohn<sup>1</sup>, *1. Johns Hopkins University School of Medicine, Baltimore, Maryland, 2. University of Maryland School of Nursing, Baltimore, Maryland*

Sarcopenia, the critical loss of muscle mass and function due to the physiological process of aging, contributes to disability and mortality in older adults. The molecular mechanisms underlying sarcopenia are poorly understood, but recent evidence suggests that increased transforming growth factor- $\beta$  (TGF- $\beta$ ) signaling contributes to the muscle phenotype. We therefore evaluated whether antagonism of TGF- $\beta$  signaling via losartan, an angiotensin II type I (ATI) receptor antagonist commonly used to treat hypertension, has a beneficial impact on sarcopenia. Long-term administration of losartan caused an increased resistance to fatigue in sarcopenic muscle by inducing an endurance exercise phenotype. Losartan induced PGC-1 $\alpha$  expression and caused a fiber type conversion toward type 1 "slow" fibers. Recent evidence suggests that a low aerobic/endurance exercise capacity is a predictor for increased morbidity and mortality in older adults. Thus, losartan, an FDA-approved drug, may prove to have clinical benefits for older adults by enhancing their endurance capacity.

## DO YOU WANT TO AGE SUCCESSFULLY OR WISELY? A SOCIOLOGICAL APPROACH IN A SEARCH FOR THE UNIVERSAL ROOTS OF POSITIVE HUMAN DEVELOPMENT

H. Oh, *University of Florida, Gainesville, Florida*

What is wise aging? How and to what extent can wisdom add a new level of understanding to successful aging? The purpose of this study was to examine (1) how wisdom is perceived in different cultures, (2) what contributes/deters the cultivation of wisdom over the life course, and (3) how important wisdom is in aging well. In-depth interviews and survey data (n=600) collected from six countries (the U.S., Canada, Ukraine, Serbia, India, and China) were used. A mixed-method design adopted nonparametric, content, and social network analyses for quantitative configuration and qualitative confirmation. The results showed that culture played a significant role in wisdom understandings and a triadic tie among wisdom components was a best fit in wisdom development across cultures. A higher wisdom score group had higher life satisfaction with greater appreciation of perspective-taking and learning from others and experiences as prerequisites for wisdom development than the lower group.

## IMPACT OF NURSING HOME PROFIT STATUS ON PERCENTAGE OF RESIDENTS WITH DEMENTIA AND QUALITY OF CARE

K. Hansen, S. Hendrix-Buxton, H. Meng, K. Hyer, *School of Aging Studies, University of South Florida, Tampa, Florida*

This study examined whether profit status of nursing homes predicted the number of residents with dementia, and whether these residents were admitted into facilities with higher numbers of deficiency citations. We analyzed nursing homes in 2008 (N = 14,554) using the Online Survey Certification and Reporting (OSCAR) data, conducting a linear regression to measure impact of profit status. Covariates included total deficiencies per facility, facility chain membership, reimbursement by Medicaid and Medicare, and percentage of residents by facility with behavioral symptoms. Correlations of variables and covariates were significant ( $p < .001$ ), and linear regressions evaluated predictive contributions of each covariate. Results showed a 2.4% and 1.3% decrease in the proportion of residents with dementia according to for-profit status and chain membership, respectively. Residents with dementia were admitted to facilities with higher quality of care (measured by fewer deficiencies), and to those with greater percentages of residents with behavioral symptoms.

## SESSION 1410 (SYMPOSIUM)

### CLINICAL, RESEARCH, AND SERVICE WITH DIVERSE ELDERLY: WHAT STUDENTS SHOULD KNOW

Chair: *J.M. Dzierzewski, Clinical & Health Psychology, University of Florida, Gainesville, Florida*

Co-Chair: *J.J. Gregg, West Virginia University, Morgantown, West Virginia*

Discussant: *D. Gallagher-Thompson, Stanford University School of Medicine, Stanford, California*

The growing Gerontological explosion, along with the diversity among adults, makes it imperative that doctoral students are provided with training in clinical, research, and service work with diverse elders. Increased diversity of the aging population reflects the increased proportion and longevity of ethnic and racial minorities, the migration of elders to rural retirement areas augmenting those growing older in place, increased visibility and acceptance of sexual minority elders, and the significance of disabilities among the elderly. Along with general trends for America's population, minority populations are living longer, getting older, and becoming more racially diverse. Their rates of growth are expected to exceed those of Caucasians over the next 50 years. Additionally, the number of lesbian/gay/bisexual/transgender (LGBT) and disabled older adults is increasing. Trend data suggests that disabilities increase with age and people are living longer, the number of individuals with activity, work or functional limitations is increasing. The statistics regarding the diversity within the aging population all suggest a need to provide information to emerging scholars and clinicians about geropsychology competencies and resources to work with diverse elders in clinical, research, and service capacities. This symposium is geared toward doctoral students in geropsychology and early-career geropsychologists. National leaders in psychology and aging will describe the diversity within the aging population and provide information regarding geropsychology competencies and resources that doctoral students can use to prepare themselves for clinical, research, and educational activities with diverse elders including LGBT, rural, ethnic minority, and disabled seniors.

### COMMUNITY ENGAGEMENT WITH URBAN AFRICAN AMERICAN ELDERLY

P.A. Lichtenberg, *Wayne State University, Detroit, Michigan*

Older African Americans, like many ethnic minorities, suffer greater morbidities and earlier mortality than do older European Americans. Health disparities in older African Americans are found across health



conditions and preventive health behaviors. The links between mental and physical health are strong in older African Americans. The University of Michigan and Wayne State University, through an NIA minority aging center, have created the Healthier Black Elders (HBE) Center to help reduce health disparities through education and outreach. Issues such as depression, memory problems, pain control have been highlighted along with those of cancer screening, and chronic disease self-management. Each year, nearly 1500 older African Americans have been involved with HBE. The methods used to establish the credibility of HBE and outcomes among black elders related to trust and satisfaction will be discussed, as will general lessons that can be generalized to clinical, research, and service work with diverse ethnic elders.

#### **CLINICAL, RESEARCH, AND SERVICE WITH DIVERSE ELDERS: UNDERSTANDING DISABILITY**

J. Reinhardt, *Research Institute on Aging, Jewish Home Lifecare, New York, New York*

With advancing old age comes the increased likelihood of chronic, co-morbid physical and psychological illnesses and accompanying levels of disability. A challenge for geropsychologists is to understand and distinguish normal aging from disease to facilitate assessment and treatment that will promote improved health and functioning for older adults. This presentation will identify and discuss issues around dealing with disability and functional impairment in varied settings including the community (independent living, homecare) and institutional settings (assisted living, skilled nursing facility, subacute rehabilitation). Topics include understanding: issues around diagnosis and prognosis and trajectories of disease and disability; palliative and end of life care with a focus on advance directives and symptom management (pain, depression); working as part of an interdisciplinary team; knowing when and how to work with families; and being aware of differences in rates of disease and disability in late life by racial and ethnic status, and socioeconomic status variables.

#### **LESBIAN, GAY, BISEXUAL, AND TRANSGENDER AGING CONCERNS**

D. Kimmel, *Independent Practice, Hancock, Maine*

Recognition of same-sex relationships and of lesbian, gay, bisexual, and transgender adults has grown dramatically in recent years. Much of the focus has been on older persons, many in long-term relationships who lack the standard protections of marriage such as spousal social security or health care coverage. Older bisexual and transgender adults, persons aging with HIV, and gay and lesbian adults aging alone have generally received less media attention. All of these groups are themselves diverse with regard to each of the characteristics of aged populations. A few organizations and resources are available for providing gerontology services regarding these special concerns in many urban areas and some are developing in rural states. This presentation will focus on the unique aspects of aging and service needs for these sexual and gender minority populations. It will also discuss the importance of including gerontological competence in courses focused on sexual and gender diversity.

#### **CLINICAL GEROPSYCHOLOGY WITH RURAL OLDER ADULTS: CHALLENGES AND INNOVATIONS**

N.D. Dautovich, K. Douglas, *Psychology, University of Alabama, Tuscaloosa, Alabama*

Despite recognition at the federal level of the unique physical and mental health needs of rural Americans, older adults living in rural settings continue to be underserved. The needs of older adults are becoming ever more salient, as the proportion of older adults in rural settings increases due to the outward migration of younger adults and the inward migration of retiring older adults. Many barriers to treating rural older adults exist including: a dearth of trained personnel, high personnel turnover, transportation issues, literacy, stigma, reduced anonymity, and

poverty. In addition, barriers to involving older rural adults in research also exist. The objective of this presentation is to review factors specific to the treatment and involvement of rural older adults in research. Skills from the competencies of the Pikes Peak Model of Geropsychology will be emphasized. Innovative approaches from treatment and research conducted in rural Alabama will also be presented.

### **SESSION 1415 (SYMPOSIUM)**

#### **COUNT US IN: LESBIAN, GAY, BISEXUAL AND TRANSGENDER OLDER ADULTS IN SURVEY RESEARCH**

Chair: M. Brown, *School of Social Work, Syracuse University, Syracuse, New York*

Co-Chair: B.R. Grossman, *San Jose State University, San Jose, California*

Lesbian, gay, bisexual, and transgender older adults have unique experiences and specific cultural needs. In many national surveys of health in later life, there is a missed opportunity to collect data on gender identity and/or sexual orientation. In this symposium, Rainbow Research group members will address this gap by exploring original studies of LGBT older adults' experiences of religiosity and unmet service needs, and by examining how respondents with a history of same-sex relationships remain under-analyzed in one of the few surveys that captures this data. Brennan-Ing, Seidel, Larson, and Karpiak will present original data from a survey of older LGBT adults on unmet service needs and implications for LGBT and mainstream senior service providers. Porter and Oala will present data from the Trans Metropolitan Life Survey, a survey of 289 transgender older adults, on the topics of religious affiliation and participation and their relationship to successful aging. The remaining papers are based on the National Social Life, Health, and Aging Project, a 2004 national survey of 3005 older adults, 4% of whom reported at least one same-sex relationship during their lifetime. Grossman will present a content analysis of how the data on respondents with a history of same-sex relationships has been treated across the universe of publications produced on the NSHAP data. Brown will present a secondary analysis of the data exploring disparities among respondents with and without a history of same-sex relationships in terms of feelings of loneliness and isolation, self-esteem, and physical and mental health.

#### **UNEARTHING DIFFERENCE IN THE NSHAP SEXUAL HISTORY DATA**

M. Brown<sup>1</sup>, B.R. Grossman<sup>2</sup>, 1. *School of Social Work, Syracuse University, Syracuse, New York*, 2. *San Jose State University, San Jose, California*

The 2004 National Social Life, Health, and Aging Project (NSHAP) collected data from 3005 adults aged 57 to 85 on sexual behaviors, physical and mental health, and social networks. Although only a small proportion of respondents (about 4%) report any history of same-sex sexual relationships, the NSHAP is one of the few national datasets that enable us to compare these older adults to their heterosexual peers in terms of social support and physical and mental health. To date, very little has been published comparing NSHAP respondents based on reported sexual histories. Preliminary analyses reveal relationships between mental and physical health in this sample. Respondents with a history of only same-sex relationships are more likely to report lacking companionship and feeling isolated. Women are more likely to report poor self-esteem and physical and mental health, and these negative effects increase when controlling for same-sex relationship history.

## RELIGIOUS AFFILIATION & SUCCESSFUL AGING AMONG TRANSGENDER OLDER ADULTS

K. Porter, C.R. Oala, *UMASS Boston, Boston, Massachusetts*

Religion may enhance successful aging by reducing stress, improving well-being, and augmenting social engagement. Transgender-identified persons show higher levels of religiosity than their lesbian, gay or bisexual counterparts. Yet, little is known about the religious affiliation and successful aging association in transgender older adults. Generally, successful aging is grossly under-researched in the lesbian, gay, bisexual, and transgender (LGBT) populations. This exploratory study (based on the Trans Metropolitan Life Survey of 289 transgender adults age 51+) describes the demographics and religious affiliations of the sample. The majority (73.4%) self-report aging successfully, although 29.4% are disabled. Ninety-three percent are out about their gender identity; however, only 22.8% are out at their religious organization. Four logit models were run; religious affiliation did not significantly predict successful aging, although income and social support did. Transgender respondents showed greater participation in LGBT-affirming religions (conceptual model to be presented) than the normative sex and gender population.

## FALLING THROUGH THE CRACKS: UNMET NEED FOR SERVICES AMONG LGBT OLDER ADULTS

M. Brennan-Ing<sup>1,2</sup>, L. Seidel<sup>1</sup>, B. Larson<sup>3</sup>, S.E. Karpiak<sup>1,2</sup>, *1. Center on HIV and Aging, AIDS Community Research Initiative of America, New York, New York, 2. New York University College of Nursing, New York, New York, 3. Center on Halsted, Chicago, Illinois*

Research on service needs among older adults rarely addresses the special circumstances of LGBT individuals, such as their reliance on friend-centered social networks or the experience of discrimination from providers. Limited existing data suggests that older LGBT adults underutilize health and social services that are important in maintaining independence and quality of life. The present study explored unmet need for services in this population using a qualitative, grounded-theory approach. Data were obtained from 211 LGBT adults age 50 and older. Seventy-one percent identified as male, 24% as female, and 5% as transgender/intersex. One-third was Black and 62% were Caucasian. Content analysis revealed unmet needs for basic supports, namely housing, economic security (e.g., employment, financial assistance), and help with entitlements. Barriers included poor referrals and lack of timely follow-up. Limited opportunities for socialization were expressed, particularly among older lesbians. Implications for both LGBT and mainstream senior service providers will be discussed.

## WHAT CAN THE NSHAP TELL US ABOUT LESBIAN, GAY, BISEXUAL, AND TRANSGENDER AGING (AND VICE VERSA)?

B.R. Grossman<sup>1</sup>, M. Brown<sup>2</sup>, *1. San Jose State University, San Jose, California, 2. Syracuse University, Syracuse, New York*

The National Social Life, Health, and Aging Project (NSHAP) is the only nationally representative dataset on the sexual behaviors and practices of older adults in the U.S. Although this dataset includes information on respondents' lifelong history of sexual and social relationships, research on the sample reporting a history of same-sex relationships has been minimal. We will present the results of a content analysis of how the data on respondents with a history of same-sex relationships has been treated or ignored across the universe of publications produced on the NSHAP data. Our analysis highlights a series of missed opportunities to explore the differences between those with a history of same-sex relationship and those without, as well as the ways in which the literature on LGBT aging has the potential to inform the NSHAP and other national survey projects to gather data that will lead to meaningful comparative analyses.

## SESSION 1420 (SYMPOSIUM)

### EMOTION REGULATION AND AGING: DIVERSE METHODS FOR STUDYING REGULATORY PROCESSES AND OUTCOMES

Chair: *D. Isaacowitz, Northeastern University, Boston, Massachusetts*  
Discussant: *S.T. Charles, University of California at Irvine, Irvine, California*

Emotion regulation is a hot topic in the study of socioemotional aging, though many studies that are framed as involving emotion regulation do not have direct measures of affect or its regulation (see Isaacowitz & Blanchard-Fields, 2012). A basic criteria, then, for studies of emotion regulation in the context of aging is that they feature some direct assessment of regulatory processes and regulatory outcomes. This symposium features four papers, with diverse methodologies, that nonetheless directly investigate emotion-regulatory processes and outcomes in the context of aging. Isaacowitz and colleagues consider age differences in how different cognitive reappraisal strategies lead to attentional processes and self-reported affective outcomes among individuals viewing negative videos. Hoppmann and colleagues consider how goal problems relate to cortisol and self-reported mood, and how this varies not only by age but also for discrete emotional experiences. Riediger et al. consider how different goals lead younger and older adults to choose to listen to different musical pieces in support of affect regulation. Cheng and Grün investigate age differences in regulating emotions in the face of social rejection by another person. Finally, discussant Susan Charles will consider strengths and weaknesses of these approaches and will connect them to different conceptual frameworks for the study of aging and emotion regulation.

### AGING AND DIFFERENT FORMS OF REAPPRAISAL: EFFECTS ON EYE FIXATION AND MOOD

D. Isaacowitz<sup>1</sup>, C. Platzek<sup>2</sup>, J. Harris<sup>1</sup>, *1. Northeastern University, Boston, Massachusetts, 2. Brandeis University, Waltham, Massachusetts*

Attentional deployment and reappraisal are considered distinct emotion regulation strategies. Numerous studies have found that older adults use attentional deployment as a strategy, though questions remain about age and reappraisal: different age patterns have emerged for different forms of reappraisal. Moreover, recent studies with younger adults have found that reappraisal may sometimes be associated with more attention toward negative stimuli. We used a within-subjects design to assess the fixations and mood responses of younger (N=23) and older (N=20) adults as they viewed emotional images while instructed to view freely, positively reappraise, and use detached reappraisal. Both reappraisal conditions led to better self-reported mood than just viewing; this did not vary by age. While older adults looked less at negative overall, both age groups looked more at the negative aspects in positive reappraisal than the other conditions. This suggests that positive looking and positive reappraisal are distinct regulatory strategies across age.

### TUNING YOURSELF IN: MUSIC PREFERENCE, INTERPERSONAL GOALS, AND AFFECT REGULATION FROM YOUTH TO OLD AGE

M. Riediger, C. Wrzus, S. Frisch, *Max Planck Research Group "Affect Across the Lifespan", Max Planck Institute for Human Development, Berlin, Germany*

Age differences in affect regulation are a popular research topic. Evidence regarding age differences in what people do to regulate their affect, and in how effective they are in this respect, however, is scarce. To investigate these questions, we developed a paradigm that records affect-regulatory behavior with regard to people's listening choices for music varying in valence and arousal. Using this paradigm, we investigated the prediction that age differences in affect regulation are associated with differences in interpersonal goals. Adolescent, young, middle-aged,

and older adult participants (N = 150) expected to discuss a difference of opinion with a stranger. Interpersonal goals for the discussion were experimentally varied (activation of affiliation versus separation goals, control group) before participants completed the music-browsing task. Results support the idea that people are occasionally strategic in seeking affective states that are instrumental for their goals, and that this contributes to age differences in affect regulation.

### **DAILY GOAL-RELATED PROBLEMS ARE ASSOCIATED WITH DIFFERENT EMOTIONAL EXPERIENCES AND PHYSIOLOGICAL STRESS ACROSS THE ADULT LIFESPAN**

C.A. Hoppmann<sup>1</sup>, L. Slade<sup>1</sup>, S. Scott<sup>2</sup>, F. Blanchard-Fields<sup>3</sup>, 1. *Univ. of British Columbia, Vancouver, British Columbia, Canada*, 2. *Penn State, State College, Pennsylvania*, 3. *Georgia Institute of Technology, Atlanta, Georgia*

Daily problems are particularly stressful if they curtail progress on goals. We examined if older adults would show reduced negative emotions (sadness, anger) and physiological arousal (cortisol) when encountering goal-related problems. Data are based on 10-day time-sampling information from a lifespan sample (18-81 years). Participants rated their current emotional experiences 5 times daily and provided concurrent saliva samples for cortisol estimation. Findings show that, indeed, older adults reported less sadness on days when they experienced goal-related problems than young adults. However, this effect did not extend to anger. Importantly, daily anger was more powerful in eliciting high cortisol outputs than daily sadness across the lifespan. Hence, older adults seem to be advantaged when it comes to regulating low arousal negative emotions such as sadness but they are just as vulnerable to anger experiences as younger adults. Importantly, anger may have downstream consequences for physiological stress and increase disease risk.

### **AGE DIFFERENCES IN EMOTIONAL REACTIONS TO SOCIAL REJECTION**

Y. Cheng, D. Grün, *Department of Psychology, NC State University, Raleigh, North Carolina*

Social rejection is a common aspect of social interaction demanding emotion regulation skills of the rejected person. In the present study, we investigated age differences in emotional reactions to social rejection in a laboratory experiment. Young and older adults were given positive (acceptance condition) or negative feedback (rejection condition) by a confederate during an online interview. Interviews were videotaped and participants' facial expressions were coded. In addition, participants completed self-reported affect measures before and after the interview. Although older adults were generally in a more positive mood than younger adults, older adults seem to be more negatively influenced by the social rejection than younger adults. The results largely support the idea that older adults' emotion regulation skills are more challenged by actual rejection.

## **SESSION 1425 (SYMPOSIUM)**

### **EMPOWERING PROFESSIONALS, PROVIDERS, AND COMMUNITIES TO REDUCE FALLS**

Chair: *M. Kullman, Archstone Foundation, Los Angeles, California*  
Discussant: *D. Rose, California State University, Fullerton, Fullerton, California*

This symposium will analyze continuing efforts by the Fall Prevention Center of Excellence (FPCE) and its partners to develop evidence-based programs that increase the capacity of professionals, providers, and communities to reduce falls among older adults. It will present findings from: 1) a continuing education in-service (Pills & Spills) for direct care workers on medical and environmental fall risks; 2) FP Connect, a pilot project to develop tools that enable Emergency Medical Services and fire personnel to identify environmental risk factors; 3) the compilation and application of falls "hotspot" data that pin-

point local areas with high rates of falls among older adults; 4) a systematic review that provides recommendations to successfully implement exercise programs in medical settings; and 5) a pilot program to increase mobility and balance awareness at affordable senior communities. FPCE is a collaboration of the University of Southern California's Andrus Gerontology Center, the Center for Successful Aging at California State University, Fullerton; with partners; the VA Greater Los Angeles Healthcare System Geriatric Research, Education and Clinical Center and David Geffen School of Medicine at UCLA; the USC School of Pharmacy; and the California Department of Public Health.

### **PILLS & SPILLS: THE ROLE OF DIRECT CARE WORKERS IN REDUCING FALLS**

B. Williams<sup>2</sup>, A. Quyen Do Nguyen<sup>1</sup>, 1. *Gerontology, University of Southern California, Los Angeles, California*, 2. *University of Southern California, School of Pharmacy, Los Angeles, California*

Pills & Spills, funded by The SCAN Foundation, is a case-based, interactive continuing education program developed to help direct care workers in nursing homes and older adults' homes reduce falls through medication and environmental interventions. Six 1-hour in-service sessions include video segments of didactic material and corresponding case studies. The curriculum was developed to be "plug-and-play" on a standard DVD player, with accompanying Facilitator's Guide, pre- and post-tests, and evaluation instruments. With 3 pilot sites, 3 focus groups with 22 direct care workers and 6 interviews with staff were conducted to determine curricular needs, presentation format, and content. Eighty-five participants completed the entire series. This presentation will discuss the curriculum development including needs assessment, learning objectives, content production, and evaluation of format and content. Findings on how the in-services contributed to changes in knowledge, both overall and in specific content areas will also be discussed.

### **DEVELOPING AN EMS ASSESSMENT TOOL: THE FP CONNECT PROJECT**

G. Misiasek, P. Beck, *Gerontology, University of Southern California, Los Angeles, California*

Emergency Medical Services (EMS) personnel are often the first to arrive at the scene of a fall. FP Connect, funded by the Archstone Foundation, aims to enhance the capacity of Los Angeles EMS/fire personnel to address fall risks and reduce repeat falls. This presentation will describe findings from 6 'ride alongs' in the cities of Los Angeles, West Hollywood, and Inglewood and 4 pre- and post-focus groups with EMS/fire personnel used to inform the development of assessments and the dissemination of Fall Prevention (FP) material. Fall "hotspots" in LA County were utilized to maximize the impact of the intervention for those who need it most. Using a mixed-methods approach, the presentation will critically review the outcomes of the home assessment and dissemination of FP information. Next steps to facilitate the adoption of FP Connect in EMS operations throughout LA will also be discussed.

### **USING FALLS DATA TO TARGET LIMITED RESOURCES: PUBLIC HEALTH AND FALL HOTSPOTS**

E. Nabors, J. Pynoos, *Gerontology, University of Southern California, Los Angeles, California*

Coalitions can be an effective strategy in Fall Prevention (FP), identifying local needs and building community capacity to address them. The Fall Prevention Coalition – LA (FPC-LA), with 35 members from public, private, and non-profit organizations, reduces fall risk among older adults through education, advocacy, and community action. To help local agencies and organizations direct available FP resources to areas with the highest fall rates, the LA County Public Health Department compiled fall "hotspots" by mapping fall non-fatal hospitalization and fall death rates per 100,000 population among adults age 65 and over for each zip code in LA County. Tables were created to highlight

the 20 zip codes and service planning areas with the highest fall death and fall hospitalization rates. The presentation will include an analysis of how hotspots were compiled and applied to community settings to direct new projects, and opportunities for use in other communities.

### **A QUALITATIVE REVIEW OF EXERCISE PROGRAMS TO REDUCE FALLS IN OLDER ADULTS**

V. Shier, *Pardee RAND Graduate School, Santa Monica, California*

Systematic reviews demonstrate that exercise programs are effective in reducing falls in community-dwelling elders. However, how best to implement an exercise program in a medical setting remains unclear. Two reviewers screened 114 full text articles of randomized, controlled trials (RCTs) to prevent falls. We identified related articles providing insight into each included RCT by searching the references in, and articles citing, the RCT. Two reviewers independently abstracted data from the twenty-seven reviewed RCTs and their related articles. Data on participant adherence, attitudes, and implementation successes, difficulties, and facilitators were coded using qualitative data analysis software to identify cross-cutting themes. We combined qualitative data with descriptive data on program characteristics (e.g., exercise intensity, setting, target population) to better understand factors for successful implementation of exercise programs. Preliminary results suggest that program facilitators include involvement of health practitioners in the recruitment process, supervision of exercise, opportunity for social interaction, and convenience.

### **MOBILITY AND BALANCE AWARENESS: SUSTAINABLE WELLNESS PROGRAMS FOR AFFORDABLE SENIOR COMMUNITIES**

S. Castle, 1. *VA Greater Los Angeles GRECC, Los Angeles, California*, 2. *University of California, Los Angeles School of Medicine, Los Angeles, California*

Mobility and Balance Awareness for Affordable Senior Communities, pilot funded by The Be.Group Foundation, Good Family Foundation and Pasadena Foundation combines staff training, a community awareness health fair with a targeted combination of a 12 week exercise intervention (with fidelity checks/pre-post assessment) and medical workshops (with guided choices) on treatable risk factors. Training Resident Service Coordinators in the exercise intervention and residents' use of tools to monitor/interact with primary care providers on relevant health parameters/medication use supports sustainability. The first community program (n=12) showed a mean 50% improvement in FAB- SF scores, and an 80% increase from usual to maximal gait velocity in thirty foot walk measures, 6/7 workshop participants said they benefited from discussion of medications, 4/7 said they made an appointment to check vision and 3/7 took in med/BP logs to review with physician. Implementation lessons, including communities with a significant number of ESL residents, will be discussed.

## **SESSION 1430 (SYMPOSIUM)**

### **LIFECOURSE INFLUENCES ON LATER LIFE HEALTH: WHAT ADDITIONAL INSIGHTS ARE GAINED FROM USING BIOMARKERS?**

Chair: *E. Grundy, Centre for Population Studies, London School of Hygiene & Tropical Medicine, London, United Kingdom, University of Cambridge, Cambridge, United Kingdom*

Discussant: *D.J. Deeg, Free University of Amsterdam, Amsterdam, Netherlands*

The objective of this session is to demonstrate how use of data on biomarkers may advance our understanding of life course influences on later life health. Use of biomarkers offers opportunities for extending our understanding for several reasons. Firstly data on biological indicators are less susceptible to subjective reporting factors. Secondly, use of data on biological indicators may allow identification of differ-

entials in health relevant outcomes at an earlier stage of the life course than measures based on reporting of clinical conditions or disability with important potential value for public health. Thirdly, and most importantly, biomarker data may be used to elucidate the pathways whereby life course events and circumstances are manifested in later life health advantage and disadvantage. The papers included illustrate these approaches using longitudinal data from studies of English, Australian and Swedish populations. Ploubidis et al examine different hypotheses about effects of socio-economic position at various life stages on later life health contrasting results using fibrinogen level and a physical health indicator. Read et al examine how a composite measure of allostatic load is associated with individuals' earlier fertility histories and the extent to which this mediates and predicts subsequent health status and disability. Using data from a Swedish twin study, Pedersen et al investigate the extent to which psychosocial stress modifies the relationship between telomere length and cognitive decline. Anstey and Cherbuin also focus on cognitive ageing and find that three functional biomarkers predict decline in memory and processing speed in two Australian cohorts.

### **LIFELONG SOCIO ECONOMIC POSITION AND BIOMARKERS OF LATER LIFE HEALTH: A FORMAL COMPARISON OF THE CRITICAL PERIOD, ACCUMULATION AND CHAINS OF RISK HYPOTHESES**

G.B. Ploubidis, E. Grundy, L. Benova, B.L. DeStavola, *Department of Population Studies, London School of Hygiene and Tropical Medicine, London, United Kingdom*

The relative contribution of early and mid or later life socio-economic position to later life health is not fully understood and there are alternative hypotheses about the importance of different pathways. In this paper we use data from the English Longitudinal Study of Ageing to investigate the influences of life course socio-economic pathways to later life health, employing methods described in the causal mediation literature. We use two outcome measures, a latent summary of physical health derived from observer measured and self reported indicators and a biomarker – fibrinogen. We found that the effect of early life SEP (measured at age 10) is associated with physical health and fibrinogen levels at least 65 years later. However, a more complicated pattern of associations than implied by previous findings was observed with some age group specific effects and no clear superiority of the accumulation hypothesis in explaining later life health inequalities.

### **FERTILITY HISTORY, ALLOSTATIC LOAD AND HEALTH IN OLD AGE**

S. Read<sup>1</sup>, E. Grundy<sup>1,2</sup>, 1. *London School of Hygiene and Tropical Medicine, London, United Kingdom*, 2. *University of Cambridge, Cambridge, United Kingdom*

An increasing number of studies indicate associations between fertility histories and later life health but the underlying mechanisms are poorly understood. This paper examines whether allostatic load, a multistep dysregulation state resulting from accumulated physiological 'wear and tear', mediates the association between parenthood history (number of natural children, timing of maternity/paternity, and parenthood of foster, step or adopted children) and later indicators of health. We use a longitudinal sample of English men and women (n = 5611) aged 50+. In women, a higher number of children, and having experienced an early birth were associated with higher allostatic load and later poorer health. Childlessness in women and having adopted child in men and women was associated with allostatic load, but not later health. The path models suggested that allostatic load mediates the association between fertility history and health in women, but in men the associations are mediated by other factors.

## PSYCHOSOCIAL STRESS, TELOMERE LENGTH AND COGNITIVE DECLINE

N.L. Pedersen<sup>1,2</sup>, L. Gerritsen<sup>1</sup>, C.A. Reynolds<sup>3</sup>, *1. Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden, 2. University of Southern California, Los Angeles, California, 3. UC Riverside, Riverside, California*

Exposure to psychosocial stress has consistently been associated with cognitive decline. Telomere shortening is considered a marker of biological aging and has previously been shown to be affected by psychosocial stress. We investigated whether psychological stress modifies the relation between telomere length and cognitive decline in a cohort of elderly twins. We found that psychosocial stress modifies the relation between telomere length and cognitive decline. Participants with shorter telomere length and psychosocial stress start with lower memory functioning. However with increasing age, psychosocial stress predicts less memory decline and shorter telomeres predict steeper memory decline. For perceptual speed, shorter telomeres predicts steeper decline only in participants with psychosocial stress.

## LONGITUDINAL CHANGE IN FUNCTIONAL BIOMARKERS CORRELATES WITH COGNITIVE DECLINE IN MID- AND LATE-LIFE

K.J. Anstey, N. Cherbuin, *Centre for Research on Ageing, Health and Wellbeing, The Australian National University, Canberra, Australian Capital Territory, Australia*

We tested the hypothesis that cognitive ageing correlates with functional biomarkers from mid to late adulthood using longitudinal data from the PATH Through Life Project. Cohorts aged 40-44 and 60-64 were followed for 8 years and were assessed on grip strength, forced expiratory volume (FEV) and visual acuity as well as measures of memory and processing speed on three occasions, 4 years apart. Linear mixed models with random effects were used to evaluate the association of change in biomarkers and cognitive decline. We found that the three functional biomarkers predicted decline in memory and processing speed (fixed effects were significant) in both cohorts. Additionally, random effects of the three biomarkers were significant in the 40s for memory and speed. In the 60s cohort, decline in the the three biomarkers was associated with decline in speed. Decline in FEV and vision were associated with decline in memory.

## SESSION 1435 (SYMPOSIUM)

### PARADIGM SHIFTS IN THE EPIDEMIOLOGY OF AGING: ADDING NATURE TO NURTURE

Chair: *L. Barry, UConn Center on Aging, Farmington, Connecticut*  
Co-Chair: *D.K. Miller, Indiana University, Indianapolis, Indiana*  
Discussant: *K. Yaffe, University of California San Francisco School of Medicine, San Francisco, California*

Our symposium highlights current epidemiologic research that evaluates the inter-relationship between “nature” (physiologic/biologic) and “nurture” (social-behavioral/environmental) factors and explores their effects on cognitive function, physical function, and mortality in older persons. Nature and nurture effects on cognitive function are addressed using three different approaches. Dr. Watts presents findings regarding the relationship between metabolic syndrome, assessed using risk factors such as hypertension and dyslipidemia, and change in cognitive performance in persons with mild Alzheimer’s disease (cases) as compared with healthy controls. Dr. Rosano’s research defines brain resilience using repeated brain magnetic resonance imaging of participants in the Cardiovascular Health Study and in the Health, Aging, and Body Composition Study. She shares her findings indicating that faster processing speed lowers risk of dementia over time in persons with small vessel disease. Using data from the Chicago Health and Aging Project, Dr. Mendes de Leon discusses how the relationship between APOE e4 and age-related cognitive decline differs according to perceived neigh-

borhood social conditions (i.e., social disorder). Dr. Kositsawat uses data from the National Health and Nutrition Examination Survey and evaluates the potentially synergistic effects of Vitamin D deficiency and C-reactive protein on slow gait speed, an important frailty indicator. Finally, Dr. Melzer shares findings from the Health and Retirement Study regarding the association between parental age and offspring disease and mortality risk. The discussion will focus on the necessity (or not) of shifting the paradigm of epidemiologic research in aging towards the inter-relationship between nature and nurture variables to explain health outcomes.

## METABOLIC SYNDROME AND COGNITIVE DECLINE IN OLDER ADULTS WITH AND WITHOUT ALZHEIMER’S DISEASE

A. Watts<sup>1</sup>, N. Loskutova<sup>2</sup>, D.K. Johnson<sup>1</sup>, J.M. Burns<sup>2</sup>, *1. Lifespan Institute, University of Kansas, Lawrence, Kansas, 2. University of Kansas Medical Center, Lawrence, Kansas*

Metabolic Syndrome (MetS) is a cluster of risk factors (i.e., abdominal obesity, hypertension, dyslipidemia, glucose/insulin dysregulation) that is associated with cardiovascular disease, diabetes, and dementia. We assessed the effect of MetS on cognitive decline over two years in 58 cases of mild Alzheimer’s disease (AD) and 64 healthy older adult controls in the Brain Aging Project. Using structural equation modeling, we estimated the effect of MetS on change in verbal memory, working memory, and mental status. In healthy controls, MetS did not significantly predict change in cognitive performance. In the AD group, lower BMI at baseline predicted greater declines on verbal memory and working memory, while higher waist circumference predicted poorer verbal memory performance. Higher blood pressure predicted poorer working memory performance. The dysregulation of these biological systems is highly influenced by lifestyle factors including diet and exercise. Thus, research is increasingly focused on prevention including modifiable lifestyle risk factors for cognitive decline and dementia.

## BRAIN RESILIENCE AND RISK OF NEGATIVE HEALTH OUTCOMES

C. Rosano<sup>1</sup>, A.B. Newman<sup>1</sup>, J.M. Guralnik<sup>2</sup>, L.H. Kuller<sup>1</sup>, H. Aizenstein<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. University of Maryland School of Medicine, Baltimore, Maryland*

One hypothesis to explain why older people remain high functioning late in life is that they have a greater “brain reserve”. However, brain reserve has not been objectively quantified, as it has mostly relied on gross measures of whole-brain abnormalities that are largely non-specific manifestation of brain aging. Additionally, the determinants of brain reserve have not been characterized systematically in relation to objective measures of brain integrity. We define brain reserve using objective quantitative measures based on brain magnetic resonance imaging in participants from the Cardiovascular Health Study and the Health, Aging and Body Composition Study. Preliminary results indicate that faster processing speed predicts lower risk of mortality and dementia risks over a long period among those with small vessel disease (SVD). Between-group differences in various factors did not explain this apparent “resilience.” These findings urge exploration of mechanisms underlying faster processing speed in very old adults with SVD.

## SLOW GAIT SPEED AND POTENTIAL SYNERGISM OF INFLAMMATION AND VITAMIN D DEFICIENCY

J. Kositsawat, L. Barry, G.A. Kuchel, *Center on Aging, UConn Health Center, Farmington, Connecticut*

High IL-6 and low IGF-1 contribute synergistically to disability (Cappola et al 2003). We explored whether such risk factor synergisms are generalizable to other mutually-inhibitory risk factor pathways. While chronic inflammatory states contribute to and are worsened by vitamin D deficiency, the relationship between these known risk factors and slow gait speed (GS < 0.8 m/sec) remains unknown. Among

1,826 community-dwelling participants age  $\geq 50$  years in the National Health and Nutrition Examination Study (NHANES 2001-2002), having high CRP ( $> 0.2$  mg/dL) and vitamin D deficiency ( $< 20$  ng/mL), as compared with having neither risk factor, was associated with slow gait speed (OR 2.40; 95%CI, 1.28-4.49;  $p=0.006$ ). The likelihood of having slow gait speed increased among those with either, but not both, risk factors, yet this finding was non-significant (OR 1.53; 95%CI, 0.86-2.71;  $p=0.15$ ). Such risk factor synergisms may deserve consideration in future interventions to prevent frailty and mobility disability.

### **SOCIAL DISORDER, APOE-E4 GENOTYPE, AND CHANGE IN COGNITIVE FUNCTION AMONG OLDER ADULTS**

J.D. Boardman<sup>1</sup>, L.L. Barnes<sup>2</sup>, R.S. Wilson<sup>2</sup>, D.A. Evans<sup>2</sup>, C. Mendes De Leon<sup>3</sup>, 1. *University of Colorado Boulder, Boulder, Colorado*, 2. *Rush University Medical Branch, Chicago, Illinois*, 3. *University of Michigan, Ann Arbor, Michigan*

This study examines whether neighborhood social conditions modify the association between APOE e4 genotype and age-related cognitive decline. Data came from a longitudinal study of older adults (age 65+), the Chicago Health and Aging Project (n=1730), living in an urban area of 20 adjacent census tracts. We constructed a summary measure of neighborhood social disorder based on census tract-level averages of perceived neighborhood social conditions. In a multilevel analysis controlling for age, sex, race, and other covariates, the e4 allele and social disorder were significantly ( $p<.001$ ) associated with cognitive decline. There was a significant APOE e4 by disorder interaction ( $p<.01$ ), indicating a stronger effect of the e4 allele on cognitive decline among older adults in neighborhoods with less disorder.

### **MIDDLE-AGED OFFSPRING OF LONG LIVED PARENTS IN HRS**

D. Melzer<sup>1</sup>, A. Dutta<sup>1</sup>, W. Henley<sup>1</sup>, K. Langa<sup>2</sup>, R.B. Wallace<sup>3</sup>, J. Robine<sup>4</sup>, 1. *Epidemiology and Public Health, University of Exeter, Exeter, United Kingdom*, 2. *University of Michigan, Ann Arbor, Michigan*, 3. *University of Iowa, Iowa City, Iowa*, 4. *INSERM, Montpellier, France*

Background The children of long-lived parents live longer. We aimed to examine parental attained age associations with offspring disease and risk in middle aged groups in a prospective study. Methods Health and Retirement Study offspring of longer-lived parents (OLLPs) had parents attaining  $>90$  or one attaining 75-89. Offspring of shorter-lived parents (OSLPs) had parents attaining  $<75$  or one 75-89. We included offspring aged 51-61 years (n=7332) at baseline and followed-up for 16 years. Full adjustment included smoking, wealth, income, education, and BMI. Results OLLPs continued to experience lower incidence of heart disease (hazard ratio: 0.69, 95% CI: 0.56-0.84) and stroke (0.75, 0.61-0.90) and mortality from all causes (0.55, 0.44-0.68); but not cancer (0.88, 0.72-1.07) and arthritis (1.1, 0.97-1.28) during follow-up. Adjustment for 'classical' risk factors had little effect. Conclusions Parental attained age is associated with better cardiovascular disease and lower mortality, with a relatively small mediation by environmental advantages.

## **SESSION 1440 (SYMPOSIUM)**

### **PATTERNS AND SIGNIFICANCE OF SIBLING RELATIONSHIPS IN ADULTHOOD**

Chair: J. Suito, *Purdue University, West Lafayette, Indiana*

Co-Chair: M.M. Gilligan, *Purdue University, West Lafayette, Indiana*

Discussant: D. Carr, *Rutgers University, New Brunswick, New Jersey*

The sibling relationship has the potential to be one of the most enduring and consequential in individuals' lives. Yet remarkably little is known about sibling relations in adulthood, particularly regarding factors predicting relationship quality and the consequences of this tie for social and psychological well-being. In this symposium, we hope to shed new

light on these processes by exploring four related research questions. In the first paper, Gilligan, Suito and Pillemer use data from the second wave of the Within-Family Differences Study to explore the effects of tension in sibling relationships in midlife on positive and negative dimensions of psychological well-being. The second and third papers explore the ways in which parents' differential treatment of their offspring (PDT) affect sibling well-being and relationship quality. Jensen, Whiteman, and Fingerman examine the consequences of PDT in early adulthood on depressive symptoms, life satisfaction, and sibling intimacy; Suito, Gilligan, and Pillemer investigate whether the detrimental effects of maternal favoritism on well-being and sibling relations are cumulative, as well as whether they vary by the specific patterns of differentiation. Last, Bedford and Avioli provide a review of the literature on twins, with a focus on the social advantages of monozygotic (identical) relationships compared to dizygotic (fraternal) and nontwin sibling relationships. Deborah Carr and the other panelists will discuss how the collective findings shed light on the role of sibling relations on social and psychological well-being in adulthood, and the implications of these patterns for theory and practice.

### **SIBLING TENSION AND PSYCHOLOGICAL WELL-BEING IN ADULTHOOD**

M. Gilligan<sup>1</sup>, J. Suito<sup>1</sup>, S. Kim<sup>1</sup>, K. Pillemer<sup>2</sup>, 1. *Purdue University, West Lafayette, Indiana*, 2. *Cornell University, Ithaca, New York*

Theory and research have highlighted the importance of kin relations on well-being. However, despite the fact that the sibling relationship may be one of the most enduring kin relations across the life course, limited attention has been directed toward understanding the consequences of this tie on well-being in adulthood. In this paper, we use two-wave panel data collected from 514 adult children nested within 240 families to examine how tension with siblings affects depressive symptoms. Clustered regression analyses revealed that individuals experiencing greater sibling tension at T2 reported higher depressive symptoms, controlling on depressive symptoms and relationship quality reported seven years earlier. These findings highlight the importance of the quality of relationships with siblings on individuals' well being, and call for an increased emphasis on understanding the consequences of this understudied kin relationship in contemporary society.

### **THE IMPLICATIONS OF MATERNAL AND PATERNAL DIFFERENTIAL TREATMENT IN YOUNG ADULTHOOD**

A.C. Jensen<sup>1</sup>, S.D. Whiteman<sup>1</sup>, K. Fingerman<sup>2</sup>, 1. *Purdue University, West Lafayette, Indiana*, 2. *University of Texas, Austin, Texas*

Parents' differential treatment (PDT) of offspring has been studied extensively in childhood, adolescence, and even middle adulthood. Despite connections with individual and relational functioning across developmental periods, few studies have considered the implications of PDT in young adulthood. The present study addressed this gap utilizing data from young adult siblings from 151 families (N = 302, Mean age = 23.90, SD = 5.02). Participants reported on support received from mothers and fathers, their relationships with siblings, and their individual mental health. Using multi-level modeling, analyses examined the correlates of PDT from both mothers and fathers. Maternal and paternal differential treatment were consistently linked to young adults' depressive symptoms, life satisfaction, and sibling intimacy; however, the implications often varied as a function parent gender as well as the gender composition of the sibling dyad. Overall, results suggest that both maternal and paternal PDT are salient family processes in young adulthood.

### **EFFECTS OF PERCEIVED MATERNAL FAVORITISM ON WELL-BEING AND SIBLING RELATIONS IN MIDLIFE: DOES STABILITY OF PERCEPTIONS MATTER?**

J. Suito<sup>1</sup>, M.M. Gilligan<sup>1</sup>, K. Pillemer<sup>2</sup>, 1. *Purdue University, West Lafayette, Indiana*, 2. *Cornell University, Ithaca, New York*

Perceived parental favoritism has been found to predict depressive symptoms and sibling conflict in childhood and adulthood. In this paper,

we explore whether the detrimental effects of mothers' favoritism are stronger when they are cumulative, or whether favoritism at any single point has consequences. We address this question using data collected from 483 adult children at two points seven years apart. Clustered regression analyses revealed no greater effects of a history of favoritism than current favoritism on either depressive symptoms or sibling tension. Further, effects of current differential treatment were specific to which child was favored. Depressive symptoms were higher when children perceived themselves as their mothers' primary confidants; however, there were no effects of favoritism regarding emotional closeness. For daughters, but not sons, tension with siblings was higher when respondents were perceived as mothers' preferred confidants and when mothers were emotionally closer to other offspring.

#### **NEW FRONTIERS IN SIBLING RELATIONSHIPS: CHALLENGES FROM TWIN RESEARCH**

V.H. Bedford<sup>1</sup>, P.S. Avioli<sup>2</sup>, 1. *University of Indianapolis, Indianapolis, Indiana*, 2. *Kean University, Union, New Jersey*

Twins have been essentially excluded from sibling research with a few recent exceptions (e.g., Tancredy & Fraley, 2006), despite the fact that twins are siblings. As a result, little is known in adult sibling research about relationships between twins and, consequently, the knowledge base about siblings in general has been truncated. Recently, however, twins (and multiple-births generally) have become more visible, both from media attention and a dramatic increase in number due to both to the popularity of fertility treatments and the older ages at which women are bearing children (Segal, 2011). The present study addresses this omission in two ways. First, it reviews the twin literature, mostly found in behavioral genetics, comparing MZ and DZ twins. Next, it explores the social advantages of MZ relationships relative to DZ and nontwins, and what seems to account for these differences. Recommendations are made for applications of these advantages to other relationships.

#### **SESSION 1445 (SYMPOSIUM)**

##### **PERSONALIZING CANCER SCREENING FOR THE OLDER ADULT**

Chair: *E.S. Breslau, National Cancer Institute, Bethesda, Maryland*  
Co-Chair: *S. Sheinfeld Gorin, Columbia University, New York, New York*

Discussant: *M.A. Schonberg, Beth Israel Deaconess Medical Center, Boston, Massachusetts*

Cancer is the second leading cause of deaths in the US among those aged 65 and older. Yet, considerable uncertainty exists about the use of cancer screening tests in older people. Because cancer screening efficacy varies by age and organ site, the decision to screen older individuals should be personalized, that is, based on the evidence for positive outcomes, individual health status and genetic profile, the specific benefits and harms of the test, patient preferences, rather than solely the age of the patient. The aims of this symposium are to: (1) describe frameworks for personalizing cancer screening; (2) explore the evidence for personalizing cancer screening; (3) explore decision making approaches, and (4) discuss implementation strategies for personalized cancer screening in practice. Louise Walter will propose a framework for decision-making that is personalized to the older adult by weighing quantitative information, such as risk of cancer death and likelihood of beneficial and adverse screening outcomes, as well as qualitative factors, such as individual patients' values and preferences. Maren Scheuner will examine the limited evidence for personalizing cancer screening in genetics and genomics. Ellen M. Peters will share the findings from studies of decision-making among older adults to personalizing cancer care. Sherri Sheinfeld Gorin will describe implementation approaches, including academic detailing and practice facilitation, to disseminate the evidence for personalized medicine to clinical practices serving older adults. In addition to summarizing the points raised by the presenters, Mara A.

Schonberg, discussant, will also propose recommendations for future research in this area.

##### **APPLICATION OF GENOMIC MEDICINE IN SCREENING DECISIONS FOR OLDER ADULTS**

E.S. Breslau<sup>1</sup>, M.T. Scheuner<sup>2</sup>, 1. *Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, Maryland*, 2. *Rand Corporation, Santa Monica, California*

Genomic medicine is used across the cancer care continuum, from genetic tests that convey information about cancer risk to the use of targeted treatments for individuals who are diagnosed with cancer. This presentation focuses on the application of genetic information in cancer screening for older adults, including risk assessment that may suggest an inherited cancer syndrome and optimal screening frequency and modalities. First, the history of genomic discoveries will be reviewed along with a framework for the evaluation of genetic testing applications. Then, the clinical implications of genetic information will be discussed, including how providers and older patients communicate about and use genetics in screening decisions.

##### **DECISION MAKING AMONG OLDER ADULTS**

E.S. Breslau<sup>1</sup>, E.M. Peters<sup>2</sup>, 1. *Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, Maryland*, 2. *Ohio State University, Columbus, Ohio*

Although research indicates that provider recommendation is a key factor in a patient's decision to be screened for cancer, a shared decision making process is important. The ethical ideal is to encourage patients to make health decisions that are consistent with their desires and preferences. More contemporary generations approaching older age may prefer such an active role in their health management. It is critical that we understand persons of differing older ages make health decisions so we can prepare for these interactions. This presentation will explore such topics as information-processing models, emotional goals, and related components of decision making in older adults.

##### **IMPLEMENTING PERSONALIZED MEDICINE IN PRIMARY CARE**

E.S. Breslau<sup>1</sup>, S. Sheinfeld Gorin<sup>2</sup>, 1. *Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, Maryland*, 2. *Columbia University, New York, New York*

Implementing personalized medicine for cancer screening among older adults requires practice redesign. Two redesign approaches—Academic Detailing (AD), and Practice Facilitation (PF)—have been empirically tested. Across 13 studies, AD, involving a brief and focused intervention, has demonstrated change in physician breast, colorectal, and cervical cancer screening behaviors over time. PF, through capacity enhancement, has increased the adoption of evidence-based guidelines in intervention practices three-fold over controls, raising the rates of preventive services, according to a review and 2010 National Demonstration Project. We will apply AD and PF approaches to implementing personalized medicine among primary care practices serving older adults.

##### **FRAMEWORK FOR SCREENING DECISION MAKING**

E.S. Breslau<sup>1</sup>, L.C. Walter<sup>2</sup>, 1. *Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, Maryland*, 2. *University of California, San Francisco, California*

The complexity of screening decisions necessitates a framework for designing a screening approach that will minimize risk and maximize benefits for older people. Although evidence-based guidelines provide information about screening-related mortality reduction on a population level, these guidelines stress that individual patient factors such as health status must be taken into account when making screening decisions. This presentation explores factors to consider when providers and patients make decisions about cancer screening. The presentation serves

as a foundation for the subsequent presentations that will explore, in more depth, some of the important components of the framework.

## SESSION 1450 (SYMPOSIUM)

### PLACE ATTACHMENT IN LATER LIFE: CROSS-NATIONAL PERSPECTIVES

Chair: *C. Phillipson, Keele University, Keele, Staffordshire, United Kingdom*

Discussant: *H. Chaudhury, Simon Fraser University, Vancouver, British Columbia, Canada*

The meaning of, and attachment to, place are considered especially significant for older people. This reflects: first, the greater time spent at home and in the neighborhood; second, increased reliance upon the immediate community for support in old age; and, third, the significance of place and attachment to place in preserving a sense of identity and wellbeing in old age. This symposium explores conceptual and empirical aspects of the processes underlying place attachment in old age. Graham Rowles presents a longitudinal experiential perspective on relocation, with particular focus on a model of processes of 'making' and 'remaking' place in old age. Amber McIlwain presents findings from an ethnographic-based study among older Irish immigrants living in Boston, USA. Her research demonstrates the complex ways in which older immigrants develop a sense of home from multi-scale attachments to artifacts, including place. Tine Buffel et al. present findings from a mixed-method study on place attachment in Belgium. The study focuses on two contextual factors that explain variation in place attachment among older people living in different types of locations: the physical-spatial environment and population turnover. Finally, Elena Portacolone presents data from an ethnography of people aged 75 and over living alone in San Francisco, USA. Her paper discusses a number of factors that hinder the individual's ability to live alone and develop a sense of place in urban settings. The four papers will provide an opportunity to explore cross-national continuities and contrasts in the experience of aging in place.

### PLACE ATTACHMENT AMONG OLDER ADULTS LIVING IN FOUR COMMUNITIES IN FLANDERS, BELGIUM

T. Buffel<sup>1</sup>, L. De Donder<sup>1</sup>, C. Phillipson<sup>2</sup>, N. De Witte<sup>3,1</sup>, S. Dury<sup>1</sup>, D. Verté<sup>1</sup>,  
1. *Adult Educational Sciences, Vrije Universiteit Brussel, Brussels, Belgium*,  
2. *Keele University, Keele, Staffordshire, United Kingdom*,  
3. *University College Ghent, Ghent, Belgium*

There is strong evidence that age brings an increasing attachment to social and physical environments. However, the extent to which the experience of place attachment may vary between different types of locations remains under-explored in ageing research. Using a mixed-method approach, this contribution aims to identify contextual factors that either promote or impede older people's attachments to place. Quantitative data from the Belgian Ageing Studies were used to purposively select four municipalities: two with relatively strong, and two with relatively weak place attachments among the older population. In the qualitative phase, two focus groups with local stakeholders and 20 semi-structured interviews with older residents were conducted in each of the four case study areas. The findings focus on two contextual factors that have been linked to place attachment: the physical-spatial environment and population turnover. The paper concludes by discussing practical and policy issues raised by the research.

### RELOCATION TRAJECTORIES AND THE MAKING AND REMAKING OF PLACE

G.D. Rowles, *Univ of Kentucky, Lexington, Kentucky*

Each of the 10.3 (average) relocations Americans make during their life entail recreating a new sense of place in a destination environment. Over the life course, individuals develop competence in making and remaking place. As one moves toward old age, remaking place becomes

more consciously related to maintaining identity. Blending 32 years of ethnographic research in urban, rural and long-term care environments with an autoethnography, I propose a dynamic model of transition in attachment to place during late life relocation. Dimensions of abandonment, transference, and creation are documented in relation to social context and evolving knowledge over the second half of life. Progressively increasing individual proactivity in creating and recreating place gives way, during the final phases of life, to a pattern of reactivity as the process of making place gradually slips from individual control. Implications for interventions to maximize retention of autonomy in making and remaking place are described.

### "GOING SOLO" IN OLDER AGE IN URBAN AMERICA: A GARGANTUAN ENTERPRISE?

E. Portacolone, *San Jose State University, Berkeley, California*

Living solo is one of the "ideas that are changing life" declared the cover of *The Time*. Living alone is a platform for self-realization and engagement writes sociologist Klinenberg in his book *Going Solo*; living alone gets easier with robust welfare policies and among younger generations, he adds. Drawing from a two-year ethnography of 47 adults 75+ living alone in San Francisco, I argue that living alone in older age in urban America can often become an unsustainable enterprise constellated by unnecessary suffering. The lack of social policies supporting the condition of living alone in older age makes the condition unsustainable. The absence of public coverage of long-term care, the limited number of public social workers, and the shortage of affordable housing hinder one's ability to live alone. Given the number of solo dwellers, it is time to create social policies allowing them to successfully "stay" solo in older age.

### THE LIFE COURSE PROCESS OF HOME AMONG OLDER IRISH IMMIGRANTS

A.S. McIlwain, *Graduate Center for Gerontology, University of Kentucky, Lexington, Kentucky*

Although aging studies take particular interest in understanding the meaning of home for older adults, questions of home for older immigrants remain unanswered. This ethnographic-based study examines the process whereby older Irish immigrants develop, maintain, and communicate their sense of home over the life course and across generations. Study participants left Ireland post-WWII through the 1960s and were recruited from the Boston area; this group was chosen because of their shared experiences of migration and the period specific discursive elements that structured them. Data were collected from participant observation, secondary texts, and deep narrative interviews and analyzed using a grounded theory approach. The process of home was found to be a product of the life course and context dynamics. Older immigrants develop their sense of home through multi-scale attachments to artifacts, including temporal and spatial memories, personal expressions of identity, such as self and place, and activities and behaviors.

## SESSION 1455 (SYMPOSIUM)

### PLANNING FOR THE FUTURE IN CLINICAL GEROPSYCHOLOGY: AVENUES FOR SUCCESS

Chair: *J.J. Gregg, Psychology, West Virginia University, Morgantown, West Virginia*

Co-Chair: *J.M. Dzierzewski, University of Florida, Gainesville, Florida*

Discussant: *M. Gatz, University of Southern California, Los Angeles, California*

By the year 2030, it is estimated that the number of older adults (age > 65) in the U.S. will double to exceed 70 million. Moreover, there are currently fewer clinical geropsychologists than are needed to serve older adults through research, advocacy, and the delivery of clin-



ical services. It is likely that the coming demographic changes in the U.S. population will only exacerbate this shortfall. Thus, the training of new clinical geropsychologists with proficiency in each of these roles is a high priority. However, the emphasis placed on each responsibility (e.g., research, advocacy, administration, clinical service) varies widely across settings. The purpose of the present symposium is to inform students and early-career geropsychologists about the exciting opportunities available through various career avenues. Speakers are comprised of leaders in the field of clinical aging who have achieved success in diverse capacities. First, Dr. Sara Qualls will discuss her experience in a department of psychology, with an emphasis on forging university-community partnerships. Next, Dr. Rachel Rodriguez will describe her work in the VA health system and the opportunities available for future geropsychologists. Dr. Patricia Areán will then present on her role as a clinical geropsychologist working in an academic medical setting. Fourth, Dr. Gregory Hinrichsen will elaborate on his many experiences related to aging policy and will discuss future pathways for involvement. Finally, Dr. Margaret Gatz, a pioneer in models of training clinical geropsychologists, will synthesize across topics and provide a discussion for charting new frontiers in clinical aging.

### **COMMUNITY PARTNERSHIPS IN INTEGRATED CARE FOR GEROPSYCHOLOGY TRAINEES**

S. Qualls, *University of Colorado Colorado Springs, Colorado Springs, Colorado*

University based training programs in geropsychology can partner with community service providers to broaden the range of clinical practice. The Pikes Peak Model of Professional Geropsychology Training emphasizes the importance of training to deliver services in settings where older adults already seek services. Community partnerships offer opportunities to build training experiences in housing, social services and health care. Psychologists have an important role to play in developing and fostering integrated care across this wide range of settings. Practicum training opportunities can be built across a range of such settings as a powerful way to socialize professional psychologists in the knowledge and skills needed to succeed. Early training experiences in integrated care settings also builds the expectation that psychologists are key members of teams, valued consultants to direct care staff as well as management, and professionals with a range of assessment and intervention tools that can be selected for particular settings.

### **CLINICAL GEROPSYCHOLOGY IN THE VA MEDICAL SETTING**

R.L. Rodriguez, *Psychology Service, VA Palo Alto Health Care System, Palo Alto, California*

The vast majority of Veterans receiving services within the Veterans' Affairs Health Care System are over the age of 60. Due to VA's dedication to caring for both the physical and psychosocial needs of Veterans, there is great value placed on the role of psychology within VA. As such, working as a clinical geropsychologist within VA provides unique opportunities to serve older Veterans in a wide array of settings, including inpatient settings, outpatient clinics, and in their home environments. Dr. Rodriguez will focus this presentation on the multiple roles she holds as a clinical psychologist for the Home Based Primary Care Program within VA Palo Alto Health Care System. The strong emphasis on interprofessional teams and the role that psychologists play in supporting these teams and interdisciplinary staff will be highlighted. Additionally, the important role that psychologists have in the training of mental health and medical fellows will be discussed.

### **CAREERS FOR PSYCHOLOGISTS IN ACADEMIC MEDICINE/PSYCHIATRY**

P.A. Arean, *Psychiatry, UCSF, San Francisco, California*

This presentation will focus on the important role psychologists play in academic medical centers. Dr. Patricia Arean will talk about her 25+

year experience in departments of psychiatry, general internal medicine and rehabilitative medicine, from clinical practicum to professor. In particular, she will talk about clinical roles she and her psychologist colleagues have held in medicine as a therapist, consultant, mental health expert, researcher and educator to medical students, psychiatry and internal medicine residents, psychology interns and post doctoral fellows. Dr. Arean is currently a professor with tenure in the department of psychiatry at UCSF, a position she has held since 1994. She is the training director for the NIMH funded Clinical Services Research Training Program, faculty in the school of medicine, psychiatry residency, and clinical psychology training program. She is an actively funded researcher in geriatric mental health from NIMH and NIDDK.

### **PUBLIC POLICY CAREER OPTIONS**

G.A. Hinrichsen, *Albert Einstein College of Medicine, New York, New York*

Public policy shapes health and mental health care practice in powerful ways. Aging of the baby boomer generation will require many critical policy decisions now and in the future. Gerontologists have much to contribute to shaping public policy and aging yet the path to making a contribution often is not apparent. The presenter will broadly outline some critical public policy issues related to the delivery of mental health services to older adults. He will describe the evolution of his own interest and involvement in public policy issues including participation in the American Psychological Association Congressional Fellowship Program and the Health and Aging Policy Fellows Program. Potential pathways for involvement in public policy and aging issues for both graduate students and established professionals also will be discussed.

## **SESSION 1460 (SYMPOSIUM)**

### **TWO NATIONS GROWING OLDER: THE UNITED STATES AND MEXICO**

Chair: *J.L. Angel, University of Texas at Austin, Austin, Texas*

Discussant: *J. Treas, University of California at Irvine, Irvine, California*

Discussant: *K. Markides, University of Texas at Galveston, Galveston, Texas*

The Hispanic population is aging rapidly, with the number of older Latinos expected to increase by more than six times by 2050 to 17.5 million. Similarly, Mexico's population is aging swiftly and will increase by 227 percent over the next 25 years. The coming nexus of aging and diversity faced by the United States will require a greater level of scrutiny and analysis if we are to provide policy solutions to aging and health care issues in the United States and, by example, in Mexico and throughout Latin America. This symposium will focus on the consequences of the rising longevity for Hispanics in the U.S. and Mexico. Because a greater proportion of older adults will be from a large immigrant population, providing cost-effective and appropriate services to aging Hispanics will require a clear understanding of the inter- and intra-diversity of needs among this group in different social circumstances. Five paper presentations and two discussants will examine several thematic issues, including: 1) the effects of immigration-related factors on financial security and healthful aging; 2) the impact for family and economic resources on long-term care 3) health and long-term care services for older people of Mexican ancestry and other ethnic minorities. The resulting discussion will provide new empirical and theoretical insights on the determinants of successful aging for these groups. It will also inform policy debates and aid in implementing innovative strategies and concrete solutions to improve the health and social welfare of two nations growing older: Mexico and the United States.

## THE NEXUS OF AGING AND DIVERSITY IN THE UNITED STATES AND MEXICO: IMPLICATIONS FOR SOCIAL POLICY AND PRACTICE

F. Torres-Gil, K. Spencer Suarez, *University of California at Los Angeles, Los Angeles, California*

This presentation examines twin bilateral developments affecting the United States and Mexico, and the aging of both nations and cross-national migration patterns. As Mexico must prepare for a dramatic increase in their elderly population, the United States also debates the sustainability of public benefits for the elderly. Mexico currently has approximately one million expatriates from the United States that have chosen to retire in Mexico and in particular regions of that country. While Mexico continues to send young nationals to the United States, the demographic is beginning to change; undocumented flows from Mexico is decreasing and drug violence appears to draw affluent Mexicans to U.S. Border cities. This presentation will examine the complexities of these dynamic and interrelated trends and propose a new conceptual framework of what these mean for present and future aging in the United States and Mexico.

## RACE/ETHNIC AND NATIVITY DIFFERENTIALS IN LATE-LIFE DISABILITY IN THE UNITED STATES

J. Melvin, R.A. Hummer, *LBJ School of Public Affairs, University of Texas at Austin, Austin, Texas*

This study examines nativity differences in functional disability during middle and late life across racial and ethnic groups, with a special emphasis on Hispanic origin. We also assess the extent to which and how gender differentiates these groups and education explains group differences in disability. We combine data from the 1999-2009 National Health Interview Survey to make these detailed comparisons. Results indicate that middle-aged foreign-born individuals in every sub-group and Mexicans in particular experience relatively low rates of disability; however, this pattern reverses in late life. Moreover, most U.S. born minority women have significantly higher disability relative to non-Hispanic whites throughout life course. The crossover effect has important implications for the health and well-being for older persons of Mexican-origin, and especially for women.

## DOES FRAILTY HAVE THE SAME IMPLICATIONS FOR OLDER ADULTS IN MEXICO AND THE UNITED STATES?

R. Samper-Ternent<sup>1</sup>, K.G. Emerson<sup>2</sup>, A. Michaels-Obregon<sup>1</sup>, *1. University of Texas Medical Branch at Galveston, Galveston, Texas, 2. University of Georgia, Athens, Georgia*

Frailty increases the risk of adverse events including hospitalization, disability, and mortality. Given the cultural, social, and health differences between older adults in Mexico and the U.S., we analyze factors that determine how frailty impacts elders in each country. We apply Rockwood's Accumulation of Deficit Frailty Model using the Mexican Health and Aging Study and the Health and Retirement Study. The results here reveal higher rates of frailty among older Mexican adults than in the U.S. We further examine whether the consequences of frailty differ by modeling predicted probability of mortality, disability and hospitalization across the two countries. Implications of the different predicted probabilities and the consequences of frailty are discussed in light of aging policies in the U.S. and Mexico.

## HOW DO HISPANIC ETHNICITY, RACE, AND RESOURCES IMPACT NURSING HOME USE? EVIDENCE FROM THE HRS

J. Angel, M. Thomeer, S. Mudrazija, *LBJ School of Public Affairs, University of Texas at Austin, Austin, Texas*

Older Hispanics are less likely to enter nursing homes than non-Hispanics and their duration of stay is often short, despite their high rates of chronic conditions and disability. The reasons for these racial and ethnic-based differences in long-term care are complex and poorly under-

stood. In this study, we seek to understand the many ways in which family and economic resources impact the risk of nursing home admission and duration of stay for Hispanics and non-Hispanics. Employing data from the HRS (1998-2010), we estimate the hazard of nursing home admission and the duration of stay. Preliminary results show that Hispanics underutilize nursing home services. Our findings suggest these ethnic-based disparities in nursing home use become more pronounced when health, socioeconomic status, family reliance, and access to health care are taken into account. Policy implications will be considered in light of the Affordable Care Act.

## LIFE COURSE STAGE AT MIGRATION AND FINANCIAL STRAIN IN THE OLDER MEXICAN-ORIGIN POPULATION

K. Eschbach<sup>2</sup>, C. Diaz-Venegas<sup>1</sup>, J.L. Angel<sup>1</sup>, *1. LBJ School of Public Affairs, University of Texas at Austin, Austin, Texas, 2. University of Texas Medical Branch at Galveston, Galveston, Texas*

In this study, we investigate demographic, family structure, social support, financial, health and neighborhood correlates of financial strain among older community-dwelling Mexican Americans. Our methods incorporate a complete-case, mixed-model analysis (individuals in census tracts) of dichotomized self-reports of financial strain by respondents to the Hispanic EPESE. Our results find the strongest bivariate correlates of financial strain are Spanish language, immigration as an older adult, residence in an immigrant barrio, CES-D score, and having few financial resources. After multivariate adjustment, we found that Spanish use, living alone, depression score, and rural or immigrant barrio residences remain the strongest predictors of strain net of income and assets. Our findings point strongly to immigrant status, cultural characteristics, family structure, and neighborhood context as powerful influences on the experience of financial strain among older Mexican Americans.

## SESSION 1465 (PAPER)

### DISPARITIES IN HEALTH AND HEALTH CARE

#### PROJECTING HEALTH INEQUALITIES AMONG OLDER ADULTS: BAYESIAN HIERARCHICAL AGE-PERIOD-COHORT ANALYSIS

A. Zajacova, S. Huzarbazar, *University of Wyoming, Laramie, Wyoming*

A recent study by Zajacova et al. showed that health inequalities around the age of retirement translated into more than 30-year gap in age equivalents: older adults with less than high school had worse health at age 40 than the advantaged groups at 70. The previous result was obtained by pooling repeated-cross-section data, obfuscating potentially important age, period, and birth cohort (APC) influences. Here we disentangle the influences of these three time dimensions in order to project the inequality trends into the near future. We use National Health Interview Survey 1986-2010 data on adults age 40-70 to analyze the effect of education (less than HS, HS and some college, and BA or more) on health (self-rated health and activity limitations). We estimate the models using Hierarchical APC approach described by Yang (2006) but estimate the posterior distributions of parameters using a new approach, integrated nested Laplace approximations. Preliminary results indicate that the education inequalities are increasing for more recent birth cohorts, especially between older adults with high school and some college versus BA or more. The results suggest that the current health gaps at older ages will likely grow in the near future. The health disparities have strong implications for the debate on raising the retirement age beyond 67 if less advantaged workers' poor health does not permit them to remain in the work force.

## EXPLAINING DISPARITIES IN HIP FRACTURE CARE: THE ROLE OF PATIENT FACTORS

M.D. Neuman<sup>1</sup>, S. Ibrahim<sup>1</sup>, C. Osigwe<sup>2</sup>, J. Karlawish<sup>1</sup>, 1. *University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania*, 2. *Louisiana State University School of Medicine, New Orleans*

**Background:** Prior research suggests that black patients receive operative treatment for hip fracture at lower rates than do whites. We hypothesized that black and white patients at risk for hip fracture would differ in their attitudes and beliefs related to hip fracture surgery. **Methods:** We conducted a cross-sectional survey in a sample of adults without prior hip fracture recruited from one urban geriatric medicine practice. Our questionnaire assessed attitudes and beliefs about hip fracture surgery, as well as demographics, medical history, expectations regarding aging, health-related quality-of-life, and health care system distrust. **Results:** Of 66 participants, 30 were white and 36 were black; the median age was 76 years (IQR 69, 82). Compared to whites, blacks reported fewer past surgeries, a greater number of comorbidities, lower levels of education, and greater healthcare system distrust ( $p < 0.05$  for all). 12 of 36 (36.3%) black patients would “definitely” or “probably” not be willing to undergo surgery for a hip fracture if recommended to them by a physician, compared to 1 of 30 white patients (3.5%,  $p = 0.001$ ). While beliefs regarding the likelihood of severe pain or death due to hip fracture surgery did not differ by race, more blacks than whites believed that recovery after hip fracture surgery would take longer than 6 months (60.7% vs. 31.0%,  $p = 0.025$ ). **Conclusions:** At-risk black and white patients differ in their stated attitudes and beliefs related to hip fracture surgery. Such differences may contribute to racial variations in receipt of surgery for hip fracture.

## RACE/ETHNIC DIFFERENCES IN LIFE COURSE ACCUMULATIVE PROCESSES LEADING TO LATE-LIFE FUNCTIONAL LIMITATIONS: TEST OF A CONCEPTUAL MODEL

J. Kelley-Moore, D. Dannefer, J. Lin, T. Bhatta, *Sociology, Case Western Reserve University, Cleveland, Ohio*

Drawing from the conceptual frames of cumulative dis/advantage and the disablement process, we articulate the likely accumulative life course mechanisms whereby pathology and impairment appear in mid-life, increasing risk of functional limitations in later life. We further hypothesize race/ethnic differences both in specific social and health circumstances that influence functional limitations and in the accumulative processes over the life course. Given the vast late-life health disparities observed between race/ethnic groups, this is an important but understudied line of inquiry. Using six waves of the Health and Retirement Study, we test our hypothesized accumulative processes by combining endogenous treatment and latent growth curve models to estimate trajectories of late-life functional limitations. We estimated mid-life morbidity using best-fitting combinations of early- and mid-life circumstances for Black, White, and Hispanic older adults. We then entered this instrumented morbidity risk variable into the substantive growth curve models (which also adjusted for selective mortality). Childhood health and SSDI/SSI application are significant predictors of mid-life morbidity for all three groups. Consistent with our conceptual model, each ethnic group had a unique set of predictors, and the accumulative pathways to functional limitations differed significantly. Further, accounting for the group-specific accumulative processes substantially reduced the systematic relationship between late-life functional limitations and unobserved heterogeneity generated when the endogenous relationships between early-, mid-, and late-life circumstances are ignored. These findings underscore the importance of (1) specifying accumulative life course processes in models of late-life health; (2) accounting for race/ethnic differences in those accumulative processes.

## RACIAL/ETHNIC DIFFERENCES IN THE RELATION BETWEEN BODY MASS INDEX AND SELF-RATED MENTAL HEALTH AMONG OLDER ADULTS

G. Kim<sup>1</sup>, P.A. Parmelee<sup>1</sup>, J. DeCoster<sup>2</sup>, A.N. Bryant<sup>1</sup>, D.A. Chiriboga<sup>3</sup>, 1. *Center for Mental Health and Aging / Department of Psychology, University of Alabama, Tuscaloosa, Alabama*, 2. *University of Virginia, Charlottesville, Virginia*, 3. *University of South Florida, Tampa, Florida*

**Objectives:** The present study examined racial/ethnic differences in the relation between body mass index (BMI) and self-rated mental health (SRMH) among community-dwelling older adults. **Methods:** Drawn from the Collaborative Psychiatric Epidemiology Surveys, adults aged 60 or older from diverse racial/ethnic backgrounds were analyzed. Data were analyzed using chi-square tests, ANOVA, two-way ANOVA, and linear contrasts. **Results:** After controlling for covariates, there was a significant main effect of race/ethnicity ( $p < .001$ ) on SRMH, but the main effect of BMI was not significant ( $p = .362$ ). A significant interaction between BMI and race/ethnicity on SRMH was found ( $p < .05$ ). The linear contrasts showed that Whites had a significant trend ( $p = .02$ ) showing poorer SRMH with increases in BMI, whereas Blacks had a significant trend ( $p = .04$ ) showing better SRMH with increases in BMI. The linear trends for Hispanics ( $p = .10$ ) and Asians ( $p = .76$ ) were not significant. **Conclusions:** Significant racial/ethnic differences existed in the relation between BMI and SRMH. Understanding the role of race/ethnicity as a moderator of the relation between BMI and mental health may help improve the treatment for older adults with unhealthy weights. Clinical implications are also discussed.

## ASSOCIATION BETWEEN RACE, POVERTY STATUS AND GRIP STRENGTH IN MIDDLE TO OLD AGE ADULTS

R. Thorpe<sup>1</sup>, E.M. Simonsick<sup>2</sup>, A.B. Zonderman<sup>2</sup>, M.K. Evans<sup>2</sup>, 1. *Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland*, 2. *National Institute on Aging, Baltimore, Maryland*

Although poor grip strength, an indicator of frailty and precursor to functional limitations and disability, is more prevalent in older disabled black women, little is known about the effects of race and poverty-related disparities in grip strength in men or women in early late life. We examined the cross-sectional relationship between race, poverty status, and hand grip strength in men and women aged 50 years and older in the Healthy Aging in Neighborhoods of Diversity across the Life Span study. General linear models were used to estimate grip strength (maximum of two trials on both sides) by race/poverty status adjusted for age, weight, height, hand pain, education, insurance status, family income, and number of chronic conditions. Of 929 adults, 422 (45.4%) were male, 509 (54.8%) were black, and 320 (34.5%) were living below 125% of the federal poverty level (low SES). In adjusted models, black women had greater grip strength than white women (low SES: 29.3 vs. 26.9 kg and high SES: 30.5 vs. 28.3kg;  $p < 0.05$  for all). Among men, high SES blacks had better grip strength than high SES whites (46.3 vs. 43.2;  $p < 0.05$ ). No other race or poverty differences were observed for men. In women, the low SES had lower grip strength than high SES; blacks had higher grip strength than whites. However in men, high SES blacks had greater grip strength than high SES whites. Efforts to develop interventions and health promoting strategies to maintain hand grip strength should be targeted to middle age women and high SES men.

## SESSION 1470 (PAPER)

### PARENT-ADULT CHILD RELATIONS

#### EMBEDDED IN FAMILIES: INTERGENERATIONAL AND SIBLING TIES OF GAY AND LESBIAN ADULTS

I.A. Connidis, *Sociology, University of Western Ontario, London, Ontario, Canada*

Too often studies of the family relationships of gay and lesbian adults are studies of ‘their’ families rather than of ‘our’ families. This paper

seeks to redress the focus on the unique experiences of gay and lesbian adults in same-sex partnerships and as same-sex parents by considering the ongoing negotiation of their relationships with parents and siblings. The analysis is based on qualitative data from a study of 10 multi-generational families that includes a total of 49 participants, 14 of whom are gay or lesbian, aged 22–88 years. The initial contact was a gay or lesbian adult. Interviews with family members did not identify sexual orientation as a point of interest. Conversational interviews were used to obtain multiple perspectives on the constellation of relationships that comprise these families. The paper considers the observations of the gay or lesbian subject and his or her parent/s and sibling/s regarding the place of the gay or lesbian family member in ties with members of the family of origin. Particular attention is paid to expressed sentiments, contact, support exchanges, and family involvement as reported by both gay and lesbian adults and their parents and siblings. This multi-voice perspective identifies multiple ways in which gay and lesbian adults are embedded in the web of family relations that catches us all.

### PERCEPTIONS OF EQUITY AND BALANCED SUPPORT EXCHANGE IN MOTHER-ADULT CHILD RELATIONS

J. Sechrist<sup>1</sup>, A. Howard<sup>2</sup>, J. Sutor<sup>2</sup>, K. Pillemer<sup>3</sup>, 1. *Sociology, University of Texas-Pan American, Edinburg, Texas*, 2. *Purdue University, West Lafayette, Indiana*, 3. *Cornell University, Ithaca, New York*

Classic theories of social exchange suggest that relationships are more harmonious when members of dyads believe that their exchanges are fair. However, the level and frequency of exchange, rather than perceptions of equity, have been the focus of most research on support and the quality of intergenerational relations. Using data from both waves of the Within-family Differences Study on 1,463 mother-child dyads nested within 413 families, we explore the degree to which perceptions of equity reflect mother's reports of exchange with their adult children and whether mothers' perceptions of equity are better predictors of closeness and relationship strain than are mothers' reports of balanced exchanges of support. Preliminary analyses showed that in three-quarters of the dyads, mothers reported equitable relationships with their adult children. In contrast, across four exchange domains, balanced exchange was reported in as many as 37% of the dyads in the case of comfort for a personal problem and in as few as 8% of the dyads in the case of care when sick. Cross-sectional analyses revealed that mothers' perceptions of equity were more consistent predictors of relationship quality than were their reports of actual support exchanges. Longitudinal analyses showed similar patterns, but only in the case of relationship strain. These findings contribute to a growing body of research demonstrating that the psychological processes that shape intergenerational relationships mirror those of other ties.

### CHANGING CONTEXTS OF FAMILY AND INTRA-FAMILY INTERGENERATIONAL SUPPORT IN SWEDEN

C. Lennartsson<sup>1</sup>, J. Fritzell<sup>2</sup>, M. Silverstein<sup>3</sup>, 1. *Aging Research Center, Karolinska Institutet/Stockholm University, Stockholm, Sweden*, 2. *Center for Health Equity Studies, Stockholm University/Karolinska Institutet, Stockholm, Sweden*, 3. *USC Davis School of Gerontology, Los Angeles, California*

In spite of the advancement of the Swedish welfare state, family solidarity remains strong and mutual intergenerational support is a central part of many families. However, the question of whether the shifting context of modern family life has brought about changes in intergenerational support late in life is of increasing interest. This study examines intergenerational intra-family financial and social support, in the form of financial transactions/gifts and instrumental support. We will address whether there is a difference in intergenerational support between stable and disrupted families and whether there is any genetic basis for differences in intergenerational intra-family financial and social support. Based on data from nationally representative surveys results indicate that as yet family disruptions do not affect the giving of financial sup-

port to adult children. Divorce is still uncommon among the oldest old, however the increasing divorce rates among upcoming elderly cohorts might lead to a different picture of transfer behavior, since findings among younger cohorts show that transfers are less common in disrupted families. As regards instrumental support married couples and divorcees seldom report receiving help from their children (widowed parents are frequently helped by their children). In addition divorcees also lack the support most commonly given by a spouse. The increasing number of divorcees can pose a challenge for future care provision. The consequences of the changes in family structures on later intergenerational intra-family support will be discussed and a gender perspective will be used to examine the findings in the context of the Swedish welfare state.

### PARENTAL ADAPTATIONS TO THE MILITARY DEPLOYMENT CYCLE

D. Myers, J. Crow, J. Ellor, *School of Social Work, Baylor University, Waco, Texas*

Military service members are deployed, some repeatedly, to Operations Enduring Freedom and/or Iraqi Freedom. DOD classifies these as tours to a combat zone, communicating an inherent danger. Parents of these service members are affected due to their long-term attachment, the adult child's impact on the well-being of the parent, and persistent parental worry. The loss of access and added stress of a dangerous mission further attenuates the inherent concerns that parents have for their adult offspring. Very little attention has been paid to the experiences of these parents in military family research. In this session, participants reflect on an analysis of parental narratives around coping and supporting within each phase of the deployment cycle. Findings are based upon in-depth, semi-structured interviews of thirteen parents of deployed service members. Parents participated in one of four focus groups conducted in 2011 as Phase I of a DOD-funded comprehensive study of service member, spouse, and parent responses to the deployment experience. The 90 minute sessions were recorded and transcribed for qualitative analysis of the deployment cycle by the research team using Atlas ti software. Findings revealed a wide variety of emotions ranging from pride to deep fear for the adult child's safety and ruminations about the consequences of their loved one's untimely demise. Parents' coping strategies within each phase of the deployment cycle and the responses of the relational and community support systems in which they embedded are reported. Implications for theory-development, research, and intervention related to parent-adult child relationship are provided.

### SESSION 1475 (SYMPOSIUM)

#### GERIATRIC ED CARE: AN UNCHARTED FRONTIER

Chair: *M. Cadogan, UCLA School of Nursing, Los Angeles, California*

Discussant: *H. Aronow, Cedars-Sinai Medical Center, Los Angeles, California*

Although awareness of U.S. population aging continues to increase, the magnitude and impact of these demographic changes is less well understood. Accumulating evidence points to higher demand for and use of emergency department (ED) services among older adults with a new recognition of the challenges for meeting the needs of older adults and their caregivers within existing ED care models. One recent estimate suggests that by 2030, one in four ED patients will be aged 65+ (Wilber, 2006). The aim of this symposium is to expand the boundary of current geriatric ED research through presentation of some rarely studied aspects of geriatric ED care. The first paper describes the geriatric syndromes present at the time of discharge among older adults seen in the ED who are discharged home without a hospital admission. The second paper explores the impact of geriatric syndromes such as falls, on both the frequency of ED readmissions and the length of intervals between ED visits. The third paper uses a group-based trajectory model

(GBTM) to identify different trajectories of ED use among older adults who make repeated ED visits. The final paper presents trajectories of centenarians seen in the ED, a unique group not previously described. Our overall goal is to develop better understanding of some distinct subsets of older adult ED users in order to develop targeted ED-based interventions that are responsive to their needs.

### **GOING HOME TO WHAT? PROBLEMS OF OLDER ED USERS WHO GO HOME**

L.R. Phillips, M. Cadogan, J. Mentis, D.L. Woods, *Nursing, UCLA, Los Angeles, California*

Despite popular beliefs, national data show most older individuals who visit the ED are not admitted. This paper focuses on the problems that bring older individuals to the ED who are then discharged to home and the geriatric syndromes present at the time of discharge. Data were derived from an administrative data set containing 18,468 patients between the ages of 65 and 108 years. Although individuals 75+ tended to be admitted (63% admission rate) and those ages 65 and 74 tended to return to their original place of residence (49% admission rate), a substantial portion were not admitted. Discriminant analysis showed the geriatric syndromes strongly associated with not being admitted were: anorexia, falls, urinary incontinence, constipation, syncope/dizziness and malaise. For those with heart failure, adverse drug events were also associated with being discharged. Findings have important implications for transitional care planning and for ED educational programs.

### **ARE CERTAIN GERIATRIC SYNDROMES INDICATORS FOR REPEATED ED USE?**

J. Mentis, M. Cadogan, L.R. Phillips, D.L. Woods, *Center for the Advancement of Gerontological Nursing Science University of California Los Angeles, Los Angeles, California*

In analyses of an administrative database of ED contacts for an urban medical center, we identified symptoms in older ED users, indicative of geriatric syndromes, such as delirium, depression, dementia, dehydration, falls, urinary incontinence, malaise, dizziness to name a few. Patterns for admission or no admission emerged based on the presence of a geriatric syndrome for the contact. Discriminant analysis of repeat users of the ED without chronic kidney disease or congestive heart failure who had geriatric syndromes of falls (2.026), syncope/dizziness (1.141), malaise (1.818) and anorexia (1.492) were more likely not to be admitted. This paper will characterize the discharge disposition recommended for these older patients and whether the presence of those four common syndromes results in a shortened time interval for repeat visits, with intent to develop a risk assessment based on the presence of these geriatric syndromes.

D.L. Woods<sup>1</sup>, M. Yefimova<sup>1</sup>, L.R. Phillips<sup>1</sup>, M. Cadogan<sup>1</sup>, J. Mentis<sup>1</sup>, H. Aronow<sup>2</sup>, 1. *Center for the Advancement of Gerontological Nursing Science, School of Nursing, University of California, Los Angeles, Los Angeles, California*, 2. *Cedars Sinai Medical Center, Los Angeles, California*

Understanding the patterns of older adults who make repeated visits to the ED is challenging. This paper focuses on describing the trajectories of 6579 the older adults over 65 who made repeated visits to the ED over 2 years. Of those, 3415 (52%) had only 2 visits. Using Group Based Trajectory Modeling 5 distinct trajectories were identified for 3164 (48%) persons with > 2 visits. Data was aggregated into 3 month periods. Trajectory patterns are distinctly different with distinctly different characteristics for each group. For example, there were significant differences between groups in age, geriatric syndromes, number of co-morbidities, and medical diagnosis with the youngest having the most co-morbidities, geriatric syndromes, ED visits and fewest hospital admissions. Identifying specific trajectories and geriatric syndromes

that contribute to these trajectories is critical predicting persons who are at risk and timing interventions such that the trajectory may be altered.

### **UNANTICIPATED VISITORS: CENTENARIANS IN THE EMERGENCY DEPARTMENT**

M. Cadogan, L.R. Phillips, J. Mentis, D.L. Woods, S. Takayanagi, *UCLA School of Nursing, Los Angeles, California*

According to the U.S. Census Bureau, there were 71,991 centenarians in the United States in 2010. This number is expected to increase to 601,000 by 2050. Little is known about use of health services among this unique group. This presentation will focus on 156 visits to an urban emergency department (ED) made over a two year period by 82 adults age 100 and older. The relationships among demographics, symptoms and diagnoses, and discharge disposition from the ED will be compared between those with single ED visits (n= 49) and those with repeat visits (n = 33). ED visit patterns for those with multiple visits will be discussed. Understanding the unique patterns of ED use and needs of centenarians is urgent in order to develop appropriate care strategies for this rapidly increasing subset of older adults.

### **SESSION 1480 (SYMPOSIUM)**

#### **INTEGRATING FRAILTY CARE INTO ACUTE HOSPITAL WORKFLOW**

Chair: H. Aronow, *Nursing Research & Development, Cedars-Sinai Medical Center, Los Angeles, California*

Discussant: M. Mezey, *New York University, New York, New York*

Fraillty often triggers a cascade of events leading to functional decline, exacerbation of chronic illness, and hospital admission. A multidimensional health problem, frailty is not amenable to a "single bullet" treatment plan. While a hospital episode is a significant health event, it also presents an opportunity for the care team to identify frailty and attenuate adverse outcomes with prompt, individualized care plans. Acute hospitals have typically implemented one of two general approaches to improving care of frail adults: specialized geriatric care (units or mobile consulting teams); or nurse-led organizational change (NICHE). Each approach has its strengths and limitations. We developed both strategies with the goal of integrating interdisciplinary geriatric care into the usual work flow of nursing units. A three-step program was developed: 1) Early recognition of frailty during hospitalization; 2) Comprehensive multidisciplinary assessment and coordination of care throughout the hospital stay; and 3) Creation of a standardized discharge plan that outlines on-going patient needs. This symposium will prompt discussion on the integration of geriatric care into acute hospitals and suggest guidelines for the development and evaluation of a hospital-based multidisciplinary intervention. The first paper will frame the issue of integrating geriatric knowledge into general acute care. The second paper presents the epidemiology of frailty and association with adverse hospital outcomes. The third paper reports findings from an interdisciplinary test of change. The final paper suggests strategies for activating the continuum of post-discharge care and future steps in building organizational infrastructure to support improved outcomes for frail adults.

#### **EPIDEMIOLOGY OF FRAILTY IN ACUTE HOSPITAL CARE – PATIENT RISKS AND ADVERSE OUTCOMES**

H. Aronow<sup>1</sup>, J. Borenstein<sup>2</sup>, 1. *Nursing Research & Development, Cedars-Sinai Medical Center, Los Angeles, California*, 2. *Cedars-Sinai Medical Center - Department of Medicine, Los Angeles, California*

To guide timely, effective interventions, we evaluated the association of evidence-based frailty risk factors to adverse hospital outcomes (AHO). Method. Convenience sample of 214 Medicare patients assessed with a standardized interview within 48 hours of admission; charts abstracted for additional medical and pharmacy risks and for AHO and readmissions. Results. Average age = 75 years. Patients averaged 3.4

+/- 2.1 risk factors (median = 3). AHO formed two distinct clusters; readmissions remaining an independent outcome. In adjusted regression models, recent weight loss and presence of high risk medications were associated with likelihood of one AHO cluster; cognitive impairment, anemia, and recent weight loss associated with a second cluster; and previous admission, hyponatremia, and impaired function associated with readmissions. Conclusion. Combined healthsystem trends of aging patients and increased burden of disease suggest that identifying high risk patients for targeted interventions is the first step to preventing adverse outcomes.

#### **FRAMING THE VALUE ISSUES OF INTEGRATING GERIATRIC KNOWLEDGE INTO GENERAL ACUTE CARE**

L. Burnes Bolton, G.D. Braunstein, *Cedars-Sinai Medical Center, Los Angeles, California*

Frailty cuts across principal reasons for inpatient admission and puts patients at risk for suboptimal outcomes. At one large urban medical center, 12% of adult non-OB discharges per year were 85+ years old. A multi-disciplinary workgroup was convened to improve effectiveness and efficiency of care to frail adults. In tandem, the hospital became NICHE designated. Nine nursing units, with a combined rate of admission of patients at risk for frailty of 23 per day, were identified to conduct a test of change. This paper presents the value case for integration of geriatric assessment and care plans into the usual workflow for interdisciplinary direct care team members. With increasing numbers of older adult inpatients, the attempt to isolate patients in special geriatric nursing units, or to provide sufficient consultative team interventions, is impractical. The alternative can prove to add value as well as improve outcomes for vulnerable older adults.

#### **NICHE AND INTEGRATION OF A MULTIDISCIPLINARY FRAILTY TEAM INTERVENTION INTO UNIT TEAM WORKFLOW**

J. Swanson, F. Haus, *Geri and Richard Brawerman Nursing Institute, Cedars-Sinai Medical Center, Los Angeles, California*

Recognition as a NICHE facility involves leadership and strong commitment from staff nurses. At our medical center, 1524 nurses participated in a NICHE organizational assessment, and geriatric education was initiated. In less than one year, 464 RNs registered for NICHE resources, 190 received their GRN, and 25 ANCC certification. In tandem, a multi-disciplinary workgroup has implemented a test of change. On one pilot nursing unit a core frailty team has developed processes and work flows evaluating patients screened at risk by the primary nurse. The team model is currently being integrated into the daily assessment and rounding by primary unit staff. A total of 165 patients have been screened and identified with frailty-related risks; with 72 provided interdisciplinary frailty risk assessment and recommendations for nursing, pharmacy, and social work actions and physician orders addressing individual risks. This paper reports preliminary outcomes from the pilot unit and planned roll out.

#### **ACTIVATING THE CONTINUUM OF CARE AND FUTURE STEPS IN BUILDING ORGANIZATIONAL INFRASTRUCTURE**

J. Borenstein, *Medicine, Cedars-Sinai Medical Center, Los Angeles, California*

Frailty remains a long-term management challenge for patients, families and providers. Hospital admission provides an opportunity to assess patients' risks and initiate interventions to prevent adverse hospital outcomes. We propose that the impact of the hospital intervention may be expanded by summarizing assessments, interventions and continuing recommendations in a discharge frailty care plan to address safe transitions and long-term outcomes. This paper presents a case study of the development and implementation of a frailty care process that spans the continuum of acute to community care settings; addressing

standardization of communication processes while maintaining individualized patient assessments and recommendations, provider preferences for hand offs, and features of the organizational and information infrastructures that either facilitate or create barriers to optimal outcomes for patients. The case study has broad applicability to other health systems serving older, vulnerable adults.

### **SESSION 1485 (SYMPOSIUM)**

#### **NURSING HOME MINIMUM DATA SET QUALITY MEASURES—THE MDS 3.0 GENERATION**

Chair: *K. Reilly, Aging, Disability & Long Term Care, RTI International, Waltham, Massachusetts*

Co-Chair: *L. Smith, Aging, Disability & Long Term Care, RTI International, Waltham, Massachusetts*

Discussant: *C.A. Wiseman, Centers for Medicare & Medicaid Services, HHS, Baltimore, Maryland*

Minimum Data Set (MDS) data are used nation-wide in Medicare and Medicaid certified nursing homes (NH) to clinically assess and care plan for residents, publicly report quality, and set reimbursement. The new MDS assessment was launched October 1, 2010 and in Spring 2012, CMS' Nursing Home Compare website will reflect new MDS 3.0-based quality measures (QMs), replacing the MDS 2.0-based QMs which have been publicly reported since 2002. Seventeen MDS 3.0 QMs were developed to include both resident interviews and staff assessment reflecting the "patient/resident voice," integrating the latest measurement instruments used in the MDS 3.0, and re-specifying the long-stay and short-stay definitions. In February 2011, ten QMs received National Quality Forum (NQF) endorsement; seven QMs received time-limited endorsement (TLE) (one QM was later withdrawn). MDS 3.0 QMs have undergone rigorous item- and facility-level analyses to ensure their reliability and validity, including revisions to address NQF panel issues. This symposium discusses CMS' new MDS 3.0 quality measures (QMs) vis-à-vis CMS' MDS 2.0 QMs. An overview of the QMs will be discussed along with analyses investigating reliability and validity of the MDS 3.0 QMs. Individual presentations will use key sections of CMS' QM Blue Print to focus validity and reliability discussions related to five TLE QMs: short-stay and long-stay pressure ulcers; long-stay falls; long-stay depression; and short-stay and long-stay pain.

#### **MDS 3.0 QUALITY MEASURES: SHORT-STAY AND LONG-STAY PRESSURE ULCERS**

L. Smith<sup>1</sup>, K. Reilly<sup>1</sup>, S. Kissam<sup>1</sup>, F.S. Rokoske<sup>1</sup>, N. Zheng<sup>1</sup>, C.A. Wiseman<sup>2</sup>, *1. RTI International, Waltham, Massachusetts, 2. Center for Medicare and Medicaid Services, Baltimore, Maryland*

Pressure ulcers (PUs) are high-volume, high-cost, yet preventable/treatable adverse events in nursing homes. There are two MDS 3.0 PU QMs—long-stay residents with one plus Stage 2-4 PU(s) and short-stay residents with new/worsening PUs since prior assessment. Analyses used national MDS 3.0 data from Q4/2010-Q3/2011 (~1,371,500 short-stay; ~800,000 long-stay resident-episodes). Risk adjustments applied: four resident-level covariates for SS PU QM and sample restriction for LS PU QM. Mean SS PU score was 2.1%; (SD 2.5%; IR 3.1%). Mean LS PU QM score was 7.0% (SD 4.7%; IR 6.1%). Both SS and LS PU QMs demonstrate reliability—on average ~17% and 22% of facilities' quarterly rate changed two SDs or less for the SS PU QM and the LS PU QM respectively. Approximately 60% of facilities' percentile ranking changed within one decile for SS PU QM and ~51% for LS PU QM. Results indicate the QMs are appropriate for public reporting.

### **MDS 3.0 QUALITY MEASURE (QM): FALLS WITH MAJOR INJURY (LONG-STAY (LS))**

F.S. Rokoske<sup>1</sup>, K. Reilly<sup>1</sup>, L. Smith<sup>1</sup>, S. Kissam<sup>1</sup>, N. Zheng<sup>1</sup>, C.A. Wiseman<sup>2</sup>,  
1. RTI International, Waltham, Massachusetts, 2. Center for Medicare and Medicaid Services, Baltimore, Maryland

Research indicates that 10%–25% of nursing home resident falls result in fractures and/or hospitalization. The MDS 3.0 QM captures the percent of LS residents with falls with major injury and, using the new MDS discharge assessment, also includes falls resulting in discharges to a hospital. Analyses used national MDS 3.0 data from Q4/2010–Q3/2011 (~1,200,000 LS resident-episodes). The mean score for the fall QM was 3.4% with a standard deviation of 2.7%. The interquartile range was 3.4%. On average, the majority (74.6%) of facilities' quarterly QM scores changed by no more than one standard deviation. The correlation between a facility's percentile rank on this QM and on QM #0688 (Percent of Residents Whose Need for Help with Activities of Daily Living Has Increased (LS)) was weak but statistically significant with a Pearson correlation coefficient of 0.1143 ( $p < 0.001$ ). Results indicate this QM is appropriate for public reporting.

### **MDS 3.0 QUALITY MEASURE: DEPRESSIVE SYMPTOMS (LONG-STAY)**

S. Kissam<sup>1</sup>, K. Reilly<sup>1</sup>, L. Smith<sup>1</sup>, F.S. Rokoske<sup>1</sup>, N. Zheng<sup>1</sup>, C.A. Wiseman<sup>2</sup>,  
1. RTI International, Waltham, Massachusetts, 2. Center for Medicare and Medicaid Services, Baltimore, Maryland

Depression among nursing home residents can be triggered by physical/cognitive change or environmental factors. Depression is often under-diagnosed and under-treated. The MDS 3.0 Depression QM contains both resident interview and staff assessment versions of the Patient Health Questionnaire (PHQ-9) depression instrument, which is based on diagnostic criteria for a major depressive disorder in the DSM-IV. Analyses used national MDS 3.0 data from Q4/2010–Q3/2011 (~1,200,000 LS resident-episodes). The Depressive Symptoms QM values were somewhat skewed: the mean score is 7.0% and the median score is 3.8% (SD 9.7%). The interquartile range was 8.5%; 23.9% of facilities had "perfect" scores. On average, the majority (~82%) of facilities' quarterly QM scores changed by no more than one standard deviation. Averaging across two pairs of quarters, 65.3% of facilities' percentile ranking changed within 1 decile. Results indicate this QM is appropriate for public reporting.

### **MDS 3.0 QUALITY MEASURES (QMS): SELF-REPORTED PAIN PREVALENCE (SHORT-STAY (SS) AND LONG-STAY (LS))**

N. Zheng<sup>1</sup>, K. Reilly<sup>1</sup>, L. Smith<sup>1</sup>, S. Kissam<sup>1</sup>, F.S. Rokoske<sup>1</sup>, C.A. Wiseman<sup>2</sup>,  
1. RTI International, Waltham, Massachusetts, 2. Center for Medicare and Medicaid Services, Baltimore, Maryland

40–85% of nursing home residents have pain; failure to identify pain can leave it untreated, with adverse physiological and psychological effects. Resident self-report on the MDS3.0 assessment is the sole source of information triggering both SS and LS Pain QMs. Residents who are rarely/never understood are excluded. The LS Pain QM is risk adjusted for cognitive status. Analyses used national MDS 3.0 data from Q4/2010–Q3/2011 (~962,000 short-stay resident-episodes; ~800,000 long-stay resident-episodes). The LS Pain QM mean score was 11.9% (SD 8.6%) with an interquartile range of 11.8%. The SS Pain QM mean score was 23.2% (SD 12.5%) with an interquartile range of 17.1%. For both SS and LS Pain QMs, on average, ~73% of facilities' quarterly QM score improved/declined within one SD. The facility percentile ranking correlation between SS and LS Pain QM was 0.55 ( $p < 0.001$ ). Results indicate both the LS and SS Pain QMs are appropriate for public reporting.

## **SESSION 1490 (SYMPOSIUM)**

### **PHENOTYPIC AND GENETIC SURVIVAL ADVANTAGES OF LONG LIFE FAMILY STUDY SUBJECTS**

Chair: T.T. Perls, Medicine & Geriatrics, Boston University School of Medicine, Boston, Massachusetts

Discussant: E. Hadley, National Institute on Aging, Bethesda, Maryland

The Long Life Family Study, now in its 7th year, is an NIA-sponsored study of families demonstrating clustering for exceptional survival. Three American and one Danish study site have enrolled and annually follow ~4800 family members from 2 generations (proband and offspring), belonging to ~500 families. A great deal of medical history and functional status data have been collected on these subjects and this year, genotype data (2 million SNPs) were generated on each subject. Thus, in addition to our ongoing analyses of phenotypic data, we are now in the process of conducting genome wide association studies. In this symposium, we will present some of our latest phenotypic and genetic findings: (1) Compared to a randomly selected sample of age, gender and geographically matched Medicare enrollees, LLFS subjects have a lower overall mortality rate and lower incidences of age-related diseases. (2) The SAVE scale, is a measure of vigor that includes grip strength, gait speed, physical activity, fatigue, and weight loss and we hypothesize that particularly in LLFS families this is a heritable trait. Using maximum likelihood methods, heritability of this trait was estimated for the entire LLFS cohort (age-adjusted  $h^2 = 0.33$ ,  $p = 6.3 \text{ E-}23$ ), in probands ( $h^2 = 0.26$ ,  $p = 5.0 \text{ E-}5$ ), and in offspring ( $h^2 = 0.44$ ,  $p = 1.4 \text{ E-}16$ ). These findings support further evaluation of the genetic and environmental factors contributing to this phenotype of vigor. (3) We have observed (a) lower neuroticism and (b) more favorable lipid profiles amongst LLFS subjects relative to published norms and present our GWAS findings for these traits.

### **COMPARING THE LONG LIFE FAMILY STUDY (LLFS) COHORT WITH MATCHED MEDICARE CONTROLS**

A.S. Ash<sup>1</sup>, H. Fang<sup>1</sup>, A. Kroll-Desrosiers<sup>1</sup>, T.T. Perls<sup>2</sup>, 1. *Universitii Massachusetts School of Medicine, Worcester, Massachusetts*, 2. *Boston University School of Medicine, Boston, Massachusetts*

Objective: To determine if LLFS participants in Medicare are healthier than demographically-similar Medicare enrollees. Methods: We compared the Medicare-covered, LLFS cohort ( $n = 1143$ ) with a 4:1 age-sex-zipcode match from Medicare's 2009 Beneficiary Annual Summary File. Results: Average age was 82 years and 50.6% were women. Both groups were predominantly White (LLFS 99%; Medicare 94%). The LLFS cohort had significantly lower mortality (4.9% vs. 10.0%) and 2009 incidence of Alzheimer's (2.6% vs. 8.7%), Dementia (9.3% vs. 18.8%), Kidney disease (11.3% vs. 14%), Obstructive Pulmonary Disease (6.6% vs. 8.7%), Diabetes (11.9% vs. 17.4%), Heart Failure (14.7% vs. 19.6%), and Ischemic Heart Disease (25.4% vs. 29.1%). However, it had higher rates of Cataracts (19.9% vs. 14.2%), Glaucoma (10.9% vs. 8.5%), Osteoporosis (12.1% vs. 9.9%), and arthritis (20% vs. 17.3%). Conclusions: LLFS subjects are substantially healthier than demographically-similar members of the general population. It is not clear how this familial survival advantage arises.

### **GENOME WIDE ASSOCIATION STUDY OF PERSONALITY TRAITS IN THE LLFS**

T.T. Perls<sup>1</sup>, P. Sebastiani<sup>2</sup>, J. Sun<sup>2</sup>, H. Bae<sup>2</sup>, S.L. Andersen<sup>1</sup>, T.M. Neary<sup>1</sup>, J.D. Gass<sup>1</sup>, L. Feldman<sup>1</sup>, 1. *Medicine & Geriatrics, Boston University School of Medicine, Boston, Massachusetts*, 2. *Boston University School of Public Health, Boston, Massachusetts*

Previous studies have shown that personality traits such as neuroticism and conscientiousness have strong heritability. Results from previous genome wide association studies support the hypothesis that the genetic bases of personality traits is highly complex and is determined by many genetic variants that individually explain a very small proportion of variability. We measured personality traits in ~4,900 subjects

of the Long Life Family Study (LLFS) using the NEO Five-Factor Inventory (NEO-FFI) by telephone interview. The data were analyzed to compute estimates of heritability and to conduct a genome wide association study of 5 personality traits using the Illumina 2.5 array. For replication, we used a small set of 250 offspring enrolled in the New England Centenarian Study. Preliminary analysis found several SNPs that were significantly associated with neuroticism level, although did not reach genome wide significance. Interestingly, some of these SNPs are in genes that were linked to stroke risk (eg NINJ2) and stroke genes were implicated with personality traits in previous candidate gene studies.

#### **HERITABILITY OF THE SCALE OF AGING VIGOR IN EPIDEMIOLOGY (SAVE) IN THE LONG LIFE FAMILY STUDY**

A.B. Newman<sup>1</sup>, J. Sanders<sup>1</sup>, J. Singh<sup>1</sup>, M.M. Barmada<sup>1</sup>, J.D. Walston<sup>2</sup>, I. University of Pittsburgh, Pittsburgh, Massachusetts, 2. Johns Hopkins University, Baltimore, Maryland

What is the genetic contribution to vigor in old age? The Long Life Family Study (LLFS) assessed heritability of vigor in long-lived sibships (n=1188, mean age 88.6) and their adult children (n=2077, mean age 60.4). To measure the spectrum of vigor in middle aged and older adults we used the SAVE scale, which is informative across the age range and has been shown to be associated with disease burden. Components included grip strength, gait speed, physical activity, fatigue, and weight loss; each scored 0, 1, or 2 using approximate tertiles; and summed from 0-10 to create a continuous, normal vigor distribution in both generations. Using maximum likelihood methods, heritability of this trait was estimated for the entire LLFS cohort (age-adjusted  $h^2=0.33$ ,  $p=6.3 \text{ E-}23$ ), in probands ( $h^2=0.26$ ,  $p=5.0 \text{ E-}5$ ), and in offspring ( $h^2=0.44$ ,  $p=1.4 \text{ E-}16$ ). These findings support further evaluation of the genetic and environmental factors contributing to this phenotype of vigor.

#### **GENOME-WIDE ASSOCIATION STUDY FOR BLOOD LIPID LEVELS IN THE LONG LIFE STUDY FAMILY**

M.F. Feitosa<sup>1</sup>, A.T. Kraja<sup>1</sup>, M.A. Province<sup>1</sup>, I. Borecki<sup>1</sup>, K. Christensen<sup>3</sup>, C.M. Kammerer<sup>4</sup>, J.H. Lee<sup>2</sup>, 1. Washington University, St. Louis, St. Louis, Missouri, 2. Columbia University, New York City, New York, 3. University Southern Denmark, Odense, Denmark, 4. University of Pittsburgh, Pittsburgh, Pennsylvania

Objective: To identify novel loci influencing lipid profile that may have protective effect on atherosclerotic disease in the Long Life Study Family (LLFS), which is a family-based cohort study designed to characterize exceptionally healthy elderly people. Methods: We performed genome-wide association scans on fasting levels of triglycerides (TG), high-density lipoprotein cholesterol (HDL) and low-density lipoprotein cholesterol (LDL) using a mixed model accounting for family structure with the kinship correlations using ~2.5 million SNPs (Illumina Omni chip). A total of 4114 subjects (480 families) from European-American descent were studied. Results: We identified novel associations near-NLRP1 (17p13) associated with HDL ( $p<3.2 \times 10^{-8}$ ). Additionally, we found several SNPs associated with HDL (CEPT), LDL (APOC1, APOE, PVRL2, COBL) and TG (APOA5, ZNF259, SIK3, BACE1, LPL, SLC18A1), at genome-wide significant levels ( $p<5.0 \times 10^{-8}$ ), that were previously reported. Conclusions: A possibly regulatory variant upstream of NLRP1 is associated with higher levels of HDL in this elderly sample, which may contribute to the longevity and health of these subjects. NLRP1 plays an important role in the induction of apoptosis and its inflammasome is critical for mediating innate immune responses. An NLRP1-variant has been reported to be more frequent in the long-lived than control samples (Flachs-

bart et al., 2010), however, the connection with HDL levels has not been described.

## **SESSION 1495 (SYMPOSIUM)**

### **PHYSICAL ACTIVITY AND INACTIVITY IN OLDER ADULT HEALTH: CUTTING-EDGE ACCELEROMETRY RESULTS FROM THE OSTEOPOROTIC FRACTURES IN MEN (MROS) STUDY**

Chair: D.C. Mackey, San Francisco Coordinating Center, California Pacific Medical Center, San Francisco, California, Simon Fraser University, Burnaby, British Columbia, Canada

Discussant: T.B. Harris, National Institute on Aging, Bethesda, Maryland

Objective methods of physical activity assessment promise to provide important additional information about physical activity over and above self-report methods, and it is now feasible to implement objective assessment of physical activity in large epidemiologic studies. The Osteoporotic Fractures in Men (MrOS) Study recently completed what we believe to be the first large-scale assessment of objective physical activity in a cohort of over 3000 well-characterized older men who continue to be followed prospectively for endpoints. During the study's third clinic examination between March 2007-March 2009, MrOS men reported their participation in physical activities on the Physical Activity Scale for the Elderly (PASE) and wore a multi-sensor armband (SenseWear Pro armband, BodyMedia, Pittsburgh, PA, v5.1) that monitored their activity for 5 days. This symposium will explore the relationships between self-reported and objective physical activity and will highlight novel associations between objective measures of physical activity and a wide range of health outcomes. The first presentation (Dr. Mackey) will show how objectively assessed physical activity compares to self-reported physical activity. The next presentation will illustrate cross-sectional associations between objective measures of physical activity and lean mass, muscle strength, and physical performance (Dr. Dam). The final three presentations will explore longitudinal associations between objective measures of physical activity, including daily minutes of sedentary activity, and functional limitations (Dr. Cawthon), falls (Dr. Cauley) and mortality (Dr. Ensrud). This symposium will provide cutting-edge results to enhance understanding of the role of activity and inactivity in health among older adults.

### **OBJECTIVE PHYSICAL ACTIVITY AND FALLS: INTERACTION WITH AGE**

J.A. Cauley<sup>1</sup>, S. Litwack Harrison<sup>2</sup>, P.M. Cawthon<sup>2</sup>, K. Ensrud<sup>3</sup>, M.E. Danielson<sup>1</sup>, E. Orwoll<sup>4</sup>, D.C. Mackey<sup>2</sup>, 1. University of Pittsburgh, Dept of Epidemiology, Pittsburgh, Pennsylvania, 2. California Pacific Medical Center Research Institute, San Francisco, California, 3. University of Minnesota, Minneapolis, Minnesota, 4. Oregon Health and Sciences University, Portland, Oregon

Observational studies have suggested that fall risk may be higher among the most active and the least active. We hypothesized that age may modify this U-shaped relationship. To determine if physical activity influenced fall risk differently by age, we studied 2918 men with objective measures of physical activity energy expenditure (EE) (kcal/d), (SenseWear Pro Armband worn >5 days). Falls were identified by self-report every 4 months over a 12 month period. Logistic regression was used to calculate odds ratio and p for trend across quintiles of total EE. In multivariate adjusted models (age, race,



clinic, season, health status, height, weight, smoking and diabetes), lower active EE was associated with a lower odds of falling among men <median age of 78, p trend=0.01. Among older men (>78yrs), lower active EE was associated with a higher odds of falling, p trend=0.007, p interaction <0.01. Age influences the association between PA and falls.

### PHYSICAL ACTIVITY ENERGY EXPENDITURE, SEDENTARY BEHAVIOR AND FUNCTIONAL LIMITATIONS IN OLDER MEN

P.M. Cawthon<sup>1</sup>, T. Blackwell<sup>1</sup>, J.A. Cauley<sup>2</sup>, K. Ensrud<sup>3</sup>, T.L. Dam<sup>4</sup>, S. Harrison<sup>1</sup>, K.W. Peters<sup>1</sup>, D.C. Mackey<sup>1</sup>, 1. *Research Institute, California Pacific Medical Center, San Francisco, California*, 2. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 3. *University of Minnesota, Minneapolis, Minnesota*, 4. *Columbia University, New York, New York*

In MrOS men aged  $\geq 71$  yrs, average daily physical activity energy expenditure (PAEE) and minutes of sedentary activity (minSED, <1.5 METS) were assessed by accelerometer (SenseWearPro armband). Self-reported functional limitations included instrumental activities of daily living [(IADL): cannot manage money, medications, shopping, housework or meal preparation]; activities of daily living [(ADL): cannot climb stairs, walk 2-3 blocks, transfer or bathe] and were determined at accelerometry assessment and 2.2 years later. Among men initially free of limitations (N=1983), the multivariate model showed that each SD decrease in PAEE/day (-385 kcal/day) increased the odds of IADL limitation by 1.5-fold and ADL limitation by 1.4-fold. In a separate model, each SD increase in minSED (91 minutes/day) increased the odds of IADL limitation by 1.3-fold and ADL limitation by 1.2-fold (p<.05 for all results). This suggests that both physical activity and sedentary time are independently associated with the development of functional limitations.

### OBJECTIVE VERSUS SELF-REPORTED PHYSICAL ACTIVITY IN OLDER MEN

D.C. Mackey<sup>1,2</sup>, K.W. Peters<sup>1</sup>, P.M. Cawthon<sup>1</sup>, K. Ensrud<sup>3</sup>, T.L. Dam<sup>4</sup>, E. Barrett-Connor<sup>5</sup>, E. Orwoll<sup>6</sup>, J.A. Cauley<sup>7</sup>, 1. *California Pacific Medical Center Research Institute, San Francisco, California*, 2. *Simon Fraser University, Burnaby, British Columbia, Canada*, 3. *University of Minnesota, Minneapolis, Minnesota*, 4. *Columbia University, New York, New York*, 5. *University of California, San Diego, San Diego, California*, 6. *Oregon Health & Science University, Portland, Oregon*, 7. *University of Pittsburgh, Pittsburgh, Pennsylvania*

To examine the value of objective physical activity assessment, we compared self-reported physical activity from the Physical Activity Scale for the Elderly (PASE) to objective physical activity from the SenseWear Pro armband (BodyMedia, Pittsburgh, PA, v5.1, worn  $\geq 5$  days) in 2912 men aged 71-98 years from the MrOS Study. The overall PASE score (mean=135, SD=67) was moderately correlated with armband total energy expenditure (kcal/day) (Spearman  $\rho=0.345$ ), physical activity energy expenditure (kcal/day at MET $\geq 3$ ) ( $\rho=0.415$ ), and minutes per day of physical activity (MET $\geq 3$ ) ( $\rho=0.415$ ) (p<0.001 for all correlations). Correlations were stronger for the overall PASE score than for the leisure-time, household, and occupational sub-scores, and correlations were stronger among men aged > 78 vs.  $\leq 78$  years. PASE underestimated daily time in light and moderate intensity activities and overestimated time in vigorous activities compared to the armband (p<0.001). Objective assessment of physical activity provides valuable information beyond self-report.

### PHYSICAL ACTIVITY ENERGY EXPENDITURE, SEDENTARY ACTIVITY AND LEAN MASS AND OBJECTIVELY ASSESSED PHYSICAL PERFORMANCE IN OLDER MEN: THE MROS STUDY

T.L. Dam<sup>1</sup>, K.W. Peters<sup>2</sup>, P.M. Cawthon<sup>2</sup>, E. Barrett-Connor<sup>3</sup>, K. Ensrud<sup>4</sup>, J.A. Cauley<sup>5</sup>, E. Orwoll<sup>6</sup>, D.C. Mackey<sup>2</sup>, 1. *Medicine, Columbia University, New York, New York*, 2. *California Pacific Medical Center, San Francisco, California*, 3. *University of California San Diego, San Diego, California*, 4. *University of Minnesota, Minneapolis, Minnesota*, 5. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 6. *Oregon Health and Sciences University, Portland, Oregon*

Self-reported sports/recreational activity is associated with lean mass and physical performance. The association with average daily physical activity energy expenditure (PAEE) and minutes of sedentary activity (minSED, <1.5 METS), assessed by accelerometer (SenseWearPro armband worn >5 days) with lean mass (whole body dual x-ray energy absorptiometry) and objectively-assessed physical performance is unknown. In 2868 men >71 years, decreasing PAEE was associated in a graded manner with lower appendicular lean mass (ALM), grip strength, leg power, slower gait speed and longer time to complete 5 chair stands (p-trend <0.0001 all) after adjusting for age, clinic, race and season. Conversely, increasing minSED was associated in a graded manner with lower grip strength, leg power, slower gait speed and longer time to complete chair stands, but not ALM (p-trend <0.001). This suggests that increasing sedentary activity and decreasing energy expenditure are strongly associated with decreased lean mass and physical function in older men.

### DAILY SEDENTARY ACTIVITY AND MORTALITY IN OLDER MEN

K. Ensrud<sup>1</sup>, T. Blackwell<sup>2</sup>, J.A. Cauley<sup>3</sup>, T.L. Dam<sup>4</sup>, P.M. Cawthon<sup>2</sup>, J. Schousboe<sup>5</sup>, E. Barrett-Connor<sup>6</sup>, D.C. Mackey<sup>2</sup>, 1. *VA Medical Center / University of Minnesota, Minneapolis, Minnesota*, 2. *California Pacific Medical Center Research Institute, San Francisco, California*, 3. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 4. *Columbia University, New York, New York*, 5. *University of Minnesota / Park Nicollet, Minneapolis, Minnesota*, 6. *University of California - San Diego, La Jolla, California*

Higher energy expenditure is associated with a lower mortality risk in older adults, but the association of sedentary activity with mortality is uncertain. To determine whether daily sedentary activity predicts risk of death, we examined 2918 men  $\geq 71$  years with objective measures of energy expenditure (SenseWearPro armband worn  $\geq 5$  days) including minutes/day of sedentary ( $\leq 1.5$  METS) activity and ascertained vital status every 4 months over a 3.6-year period. Cause of death was adjudicated using death certificates/medical records. After multivariable adjustment including gait speed and self-reported physical activity, increasing sedentary activity was associated in a graded manner with higher risk of mortality (p-trend <0.001) with a 1.9-fold higher risk in men in Q4 vs. Q1 (referent group). This association was due to higher risks of cardiovascular and non-cancer non-cardiovascular deaths among sedentary men. Increasing objectively measured daily sedentary activity is strongly associated with a higher risk of mortality in older men.

### SESSION 1500 (SYMPOSIUM)

#### VA GRECC SYMPOSIUM - BRIDGING A FRAGMENTED SYSTEM: A HOLISTIC APPROACH TO TRANSITIONAL CARE

Chair: A. Kind, William S. Middleton VA Hospital GRECC, Madison, Wisconsin, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin

The transition from hospital to home can be treacherous for vulnerable patients. Poor quality transitions may result in medication errors, care-plan discontinuity, patient dissatisfaction, and likely contribute to

nearly 1 in 5 patients experiencing rehospitalization within 30 days of discharge. Studies of non-Veterans Affairs (VA) hospital settings have demonstrated that transitional care programs bring about improvements in patient safety and post-hospital outcomes. However, few existing transitional care programs target the high-rate of patient dispersion, cognitive impairment and vulnerability found in a VA setting. This symposium includes presentations about four VA Geriatric Research, Education and Clinical Center (GRECC) programs that offer practical approaches to enhancing hospital-to-home transitions in older veterans. The Bronx VA RHIO Intervention utilizes a regional electronic health information network to facilitate clinical data sharing across settings, enhancing transitions among veterans using multiple health systems. The Gainesville VA Home Assessments Utilizing a Video Camera Pilot represents a cost-effective means of identifying environmental hazards and equipment needs prior to discharge. The low-resource, telephone-based Madison VA Coordinated-Transitional Care (C-TraC) program uses a registered nurse to coordinate transitional care, reducing rehospitalization rates. The VA Ann Arbor Healthcare System (VAAHS) "Bridging the Gap" demonstration project uses medication reconciliation, social work consultation/intervention and behavior management to improve transitions for veterans with cognitive impairment. After attending this activity, participants will be able to: (1) identify patient and health care system characteristics that require non-traditional transitional care approaches, and (2) describe potential outcomes of novel transitional care programs including cost avoidance, rehospitalization rates and medication discrepancies.

#### **THE VA COORDINATED-TRANSITIONAL CARE (C-TRAC) PROGRAM: A REGISTERED NURSE TELEPHONE-BASED INITIATIVE TO IMPROVE TRANSITIONS FOR HOSPITALIZED VETERANS WITH DEMENTIA AND OTHER HIGH-RISK CONDITIONS**

A. Kind<sup>1,2</sup>, L.L. Jensen<sup>2</sup>, S. Barezzi<sup>1,2</sup>, A.J. Bridges<sup>3</sup>, B. Kordahl<sup>3</sup>, M.A. Smith<sup>4,5,6</sup>, S. Asthana<sup>1,2</sup>, 1. *Department of Medicine, Geriatrics Division, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*, 2. *GRECC, William S. Middleton Hospital, United States Department of Veterans Affairs, Madison, Wisconsin*, 3. *William S. Middleton Hospital, United States Department of Veterans Affairs, Madison, Wisconsin*, 4. *Department of Populational Health Sciences, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*, 5. *Department of Family Medicine, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*, 6. *Department of Surgery, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*

The Affordable Care Act encourages dissemination of evidence-based transitional care programs designed to improve patient safety and outcomes after hospital discharge, but no existing program fully addresses the challenges of distance, dementia and patient vulnerability common in a VA setting. We developed a low-resource, telephone-based VA Coordinated-Transitional Care (C-TraC) program to improve care coordination and outcomes in hospitalized veterans with dementia and other high-risk conditions discharged to community settings. Once fully established, C-TraC patients experienced 1/3 fewer rehospitalizations than a baseline comparison group, resulting in an estimated net savings (cost avoidance) of \$1,273/patient enrolled after accounting for all programmatic costs. C-TraC may represent a viable alternative for transitional care in VA, rural or other settings challenged by distance, constrained resources and patient vulnerability.

#### **A RHIO ENHANCED CARE TRANSITIONS INTERVENTION**

K. Boockvar, W.W. Hung, B. Morano, *GRECC, James J. Peters Veterans Affairs Medical Center, Bronx, New York*

Background: Older veterans who transition from acute care to home are at high risk for adverse outcomes. The Bronx RHIO, a regional electronic health information network, provides a platform

for sharing clinical data. We designed a care transitions intervention (CTI), supported by the use of RHIO for veterans discharged from VA and surrounding non-VA hospitals. Program Information: 205 CTIs were delivered via home visits and telephone calls by a CTI coach, and contained components of education, self-management and empowerment. After hospital discharge, the coach identified an average of 1 unmet need per patient including medication discrepancy or mishaps. At 30 days, 92% of patients had follow-up physician visits and readmission rate was lower among those served by CTI (19.5%) when compared to those referred but not served. Conclusion: This pilot program suggests that a low-cost intervention utilizing community resources may enhance care transitions among veterans who use multiple health systems.

#### **BRIDGING THE GAP: CARE MANAGEMENT TARGETING VETERANS WITH COGNITIVE IMPAIRMENT AT TIMES OF TRANSITION**

C. Cigolle<sup>1,2</sup>, P. Lee<sup>1,2</sup>, 1. *GRECC, Department of Veterans Affairs, Ann Arbor, Michigan*, 2. *Department of Family Medicine, University of Michigan Health System, Ann Arbor, Michigan*

Background Cognitive impairment is prevalent, under-diagnosed, and accompanied by complex care needs. It complicates veterans' care during healthcare transitions and predisposes veterans to transitions. The VA Ann Arbor Healthcare System (VAAHS) used support from the Transformation-21 initiative, Innovative Patient Centered Alternatives to Institutional Extended Care, to fund the "Bridging the Gap" demonstration project. Process Inclusion criteria: veterans  $\geq 60$  years with cognitive impairment and recent/anticipated transition in care. Interventions: medication reconciliation; social work consultation/intervention; behavior management. Outcomes Veterans enrolled: n=192; mean age, 83 years; mean number of medications, 9; Zarit Burden Scale, 7. Medication problems identified, 237, with 65% improved/resolved. Social service interventions, 533. Institutionalization, 11%. Mortality, 16%. Lessons Learned (1) Project resulted in case finding for institutionalization (need to intervene early in patients with dementia to delay/prevent institutionalization). (2) Prime opportunity to coordinate with Patient Aligned Care Team (PACT); project is a destination site on PACT Navigator Tool at VAAHS.

#### **HOME ASSESSMENTS UTILIZING A VIDEO CAMERA: A PILOT PROJECT**

C. Campbell<sup>1,2</sup>, J. Meuleman<sup>1,2</sup>, 1. *GRECC, Department of Veterans Affairs, Gainesville, Florida*, 2. *University of Florida, Gainesville, Florida*

The Home Assessments Utilizing a Video Camera: A pilot project was developed to improve the quality and cost-effectiveness of home safety assessments for older hospitalized veterans discharge to home. The aim of the assessments was to reduce environmental hazards and ensure appropriate home equipment provision. Homes were assessed by reviewing video recordings taken by patients' family members (N=29). Recordings were analyzed using measurement forms identifying the type of home and problem areas. Problem areas included mobility/seating, bathroom, bedroom, entry, and kitchen. Safety concerns were identified in each problem areas and suggest that video recording may be a useful tool for identifying environmental hazards and equipment needs. All 29 patients had bathroom safety issues and 7 required assistive devices for mobility. On average per patient, recording saved 3 Occupational Therapist work hours, totaling \$2,610. Results from this pilot suggest that this approach is cost-effective when partnering with patients' families is feasible.

## SESSION 1505 (SYMPOSIUM)

### EFFECTS OF COMMUNITY FACTORS ON SERVICES DELIVERY AND WELL-BEING OF OLDER PEOPLE IN CHINESE COMMUNITIES ACROSS CULTURES

Chair: *V. Lou, The University of Hong Kong, Hong Kong, Hong Kong, Sau Po Centre on Ageing, Hong Kong, Hong Kong*  
Co-Chair: *T.Y. Lum, The University of Hong Kong, Hong Kong, Hong Kong*

The objective of this symposium is to examine the effects of community-level factors on the delivery of aging services and well-being of older adults in Chinese communities across cultures. Based on data from different community surveys, Lai will discuss how the form of social capital and its effect on older people's health varied across Chinese communities in different cultures. Ye and Chen will discuss the role of community participation on the depressive symptoms of older people in Shanghai. They collected data from 936 older adults in 2011 and found that a sense of belonging to the neighborhood, volunteering in the neighborhood, and being pride of the neighborhood were positively associated with fewer depressive symptoms. However, giving only monetary donation to the neighborhood had no effect on depressive symptom. Lou, Lum and Nu will address the association between social capital and subjective well-being of older people in Hong Kong. They interviewed 408 older people in Hong Kong in 2011 and found that older people's life satisfaction and depressive symptoms were associated with their wealth, health, family capital, and community capital. Moreover, the effect of community capital was greater among those who had low family capital. Lum, Yang and Wang compared the dementia care system in four Chinese Cities: Guangzhou, Hong Kong, Shanghai and Taipei. They found that because of different funding modes and balance in residential and community care, there existed great disparities in how older people with dementia were cared in these Chinese cities.

### SOCIAL CAPITAL AND HEALTH OF AGING CHINESE: AN INTERNATIONAL PERSPECTIVE

D. Lai, *Faculty of Social Work, University of Calgary, Calgary, Alberta, Canada*

Social capital is an emerging theme connected with understanding of healthy aging. While social capital is a western construct, its manifestation and impact on health of older adults may vary in different socio-cultural-environmental contexts. Based upon quantitative and qualitative data from different research studies, social capital is examined in the context of aging Chinese in different countries. This presentation is based upon data from community surveys utilizing mixed sampling methods of 4,240 aging Chinese 55 years or older in China, Hong Kong, Taiwan, Canada, and the United States, as well as qualitative in-depth personal interview data from aging Chinese in Calgary, Canada), Nanjing, and Shanghai in China. The findings illustrate variables reflective of social capital; and their relationship with physical health and mental health is discussed. Forms of social capital from the perspective of the aging Chinese and their connection with healthy aging will also be examined.

### THE INFLUENCE OF NEIGHBOURHOOD IDENTITY ON CHINESE ELDERS' PSYCHOLOGICAL WELL-BEING

M. Ye<sup>1</sup>, Y. Chen<sup>2</sup>, *1. Department of Sociology, Bowling Green State University, Bowling Green, Ohio, 2. Department of Psychology, Bowling Green State University, Bowling Green, Ohio*

Although accumulated research discovered the effect of neighbourhood, little has been done on the relationship between elders' neighbourhood identity and their well-being. Guided by the social identity theory, this study investigates neighbourhoods identity in three dimensions: cognitive, emotional, and contributive components. The study uses a senior consumer satisfaction survey of community services in Shanghai, China, 2011, a randomly sample of 936 respondents aged 55

and above. Neighbourhood identities and the depressive symptom were the key variables. Other control variables were age, gender, education, income, marital status, and health. The Ordinary Least Squares (OLS) regression showed that after controlling demographic attributes, elders' feeling of belonging to the neighbourhood, doing volunteer works for the neighbourhood, and being pride of the neighbourhood had positive effects on their well-being. However, elders' charitable donation has no significant effect on their well-being. This study suggested that increasing elders' neighbourhood identity can facilitate their well-being.

### COMMUNITY CAPITAL AND WELL-BEING OF OLDER PEOPLE IN HONG KONG

V. Lou<sup>1,2</sup>, T.Y. Lum<sup>1,2</sup>, N. Lu<sup>1</sup>, T. Tong<sup>2</sup>, *1. Department of Social Work & Social Administration, The University of Hong Kong, Hong Kong, Hong Kong, 2. Sau Po Centre on Ageing, The University of Hong Kong, Hong Kong, Hong Kong*

Objective: This study examined the associations between social and family capitals and well-being of older people in Hong Kong. Particularly, we focused on how these two capitals affected the subjective life satisfaction and depressive symptoms among older people in Hong Kong. Method: We conducted face to face interviews with 408 older people (average age = 75 years) recruited from four communities (one old urban community with mixed public and private housings; one rural village, one old public household, and one new public housing community) in 2011. Subjective well-being was measured by the Geriatric Depression Scale and the Life Satisfaction Scale for Chinese older adults. Social and family capital were measured by parent-child relationship, reciprocity, community organization participation, and perceived community support. Findings: We found that older people's life satisfaction and depressive symptoms were associated with their wealth, health, family capital, and the community capital. Moreover, community capital complemented family capital. Older people with low family capital living in an area of high community capital had better well-being outcomes than those living in an area of low community capital.

### DEMENTIA CARE IN FOUR METROPOLITAN CITIES IN GREATER CHINA

T.Y. Lum<sup>1,2</sup>, P. Yang<sup>3</sup>, V. Lou<sup>1,2</sup>, J. Wang<sup>1,2</sup>, *1. Social Work and Social Administration, The University of Hong Kong, Pokfulam, Hong Kong, 2. Sau Po Center on Ageing, Pokfulam, Hong Kong, 3. National Taiwan University, Taipei, Taiwan*

The goal of this study is introduce and compare dementia care in four metropolitan cities in greater China: Hong Kong, Guangzhou, Shanghai, and Taipei. Methods: We reviewed publicly available information from governments and service providers and interviewed key stakeholders in these four cities. We did a content analysis of all data collected and compared our findings from four cities. Findings: There were few dementia specialized services in these four cities. Hong Kong and Taiwan have launched a few successful dementia service models. Guangzhou has just started to aware the issue of dementia, but specialize dementia care services are limited as Guangzhou has just begun to set up its long-term care system. In Shanghai, individual hospitals tried to provide services for those diagnosed patients. However, at the community level services are still not commonly developed. The future of dementia care in greater Chinese region will be discussed.

## SESSION 1510 (SYMPOSIUM)

### PRODUCTIVE ACTIVITIES: COMPETING AND COMPLEMENTARY ROLES

Chair: *C. Matz-Costa, Boston College, Chestnut Hill, Massachusetts, Sloan Center on Aging & Work, Chestnut Hill, Massachusetts*  
Discussant: *N. Morrow-Howell, Washington University, George Warren Brown School of Social Work, St. Louis, Missouri*

While productive activities have been central to theoretical discussions and empirical analysis of well-being in later life, the nature and

experience of older adults' participation is not well understood. Much of the research in this area considers a single activity at a time and fails to consider that these roles are not performed in isolation. Unlike other periods of life that tend to be characterized by a primary life role—for example work or school or child-rearing—it is far more likely that older adults are participating in a mix of work, leisure, family time, learning or giving back at any one time. Further, such simultaneous involvements are likely underreported, as many older adults perform significant amounts of unpaid productive work (e.g., caregiving, informal volunteering or helping) that they do not recognize as such. In this session, we will present empirical analyses that explore various ways in which productive roles complement and compete with each other in older adulthood. The first presentation will address the role of volunteering and caregiving as pathways to work after retirement. The second will explore the prevalence of productive activity within nursing homes. Next, findings on the effects of combining caregiving and paid work will be presented. And the final presentation will demonstrate linkages between the quality/quantity of productive activity and well-being. A discussant will reflect on the contributions of these works toward the development of scholarship, policies and programs that may be beneficial for older adults, families, and society.

#### **QUANTITY, QUALITY, OR NATURE OF PRODUCTIVE ACTIVITY IN LATER LIFE? EFFECTS ON SUBJECTIVE WELL-BEING**

C. Matz-Costa, J. James, E. Besen, *Boston College, Sloan Center on Aging & Work, Chestnut Hill, Massachusetts*

**Objective.** We seek to understand older adults' involvement in various combinations of paid work, volunteer work, caregiving, or educational activities and the effect of these involvements on well-being. **Methods.** Using data from the 2010 Life & Times in an Aging Society Study, this presentation explores the impact of extent of involvement (e.g., number of hours), type of involvement (e.g., caregiving for child vs. elder), and perceived quality of involvement (psychological engagement) on subjective well-being among adults age 50 to 64 (N=374) and age 65 and older (N=246). **Results.** Findings suggest that a perceived sense of excitement, dedication, and positive challenge regarding one's involvement in activities is more consequential to well-being among older adults than the extent or type of involvement in and of itself; this effect becomes stronger among the age 65 and older group. **Implications.** Recommendations for enhancing role quality to promote well-being in later life will be discussed.

#### **PATHWAYS TO WORK AFTER RETIREMENT: VOLUNTEERING AND CAREGIVING**

E. Gonzales, *Washington University, St. Louis, Missouri*

**OBJECTIVES:** I hypothesized that volunteering in later life maintains/enhances human and social capital and is a pathway to returning to work. I also examined how education and caregiving compete/complement returning to work. **METHODS:** A sample of fully retired respondents aged 62+ were drawn from the Health and Retirement Study in 1998 (n=8,332) and followed to 2008. Dependent variable: whether retiree returning to work or not. Bivariate analyses and logistic regressions were utilized. Controls: education, health, wealth, gender, race, marital status, number in household. **RESULTS:** No retiree sought educational classes/training for returning to work. Volunteer status significantly predicted returning to work in the subsequent wave (complement). If the respondent was caregiving, some volunteering complemented returning to work, while a lot of volunteering competed with it. **IMPLICATIONS:** Volunteering in later life is a pathway for retirees to return to work. Integrating and bolstering volunteer/caregiving policies can lead to longer working lives.

#### **PRODUCTIVE SOCIAL ENGAGEMENT IN NURSING HOMES: VOLUNTEERING & PROVIDING SUPPORT**

S.N. Leedahl, R.K. Chapin, *School of Social Welfare, University of Kansas, Lawrence, Kansas*

**Objective:** Little is known, even at the descriptive level, about the prevalence of productive activity within nursing homes. This study examined the extent to which older adults volunteer at the nursing home and provide support to others, and tested hypotheses about relationships between social engagement and mental health. **Methods:** We conducted a quantitative study of adults age 65+ (N=140; M=83.1 years) in 30 Kansas nursing homes. Using a standardized questionnaire, we interviewed older adults face-to-face. Bivariate analyses and structural equation modeling were used to answer research questions. **Results:** Analyses indicate that approximately 35% volunteer within the nursing home and 32% provide emotional support to staff and family on a regular basis. Findings suggest that volunteering is related to higher mental health scores. **Implications:** We will discuss potential policy implications and strategies for staff, family, and friends to help older adults identify productive activities when they are receiving long-term care services.

#### **COMBINING EMPLOYEE AND CAREGIVING ROLES: WHY WORK-FAMILY CONFLICT MATTERS**

M. Brown, *Social Work, Boston College, Chestnut Hill, Massachusetts*

**Objective.** I hypothesized that work-family conflict would mediate differences in psychological distress between employees caring for an older family member and employees without caregiving responsibilities. I also examined the workplace characteristics associated with decreased work-family conflict among caregivers. **Methods.** OLS regression analyses were conducted using a sample of employees from the National Study of the Changing Workforce (2008) (n=1,773). Control items included gender, race, marital status, and age. **Results.** Differences in psychological distress between caregivers (n=501) and non-caregivers (n=1,272) were partially explained by work-family conflict. Workplace characteristics associated with reduced work-family role conflict among caregivers include having a manageable workload, a supportive supervisor, and access to workplace flexibility. **Implications.** Combining work and caregiving roles becomes problematic when conflict between role responsibilities occurs. Alleviating work-family conflict will be critical to ensuring the well-being of family caregivers of older adults who are also working for pay.

#### **SESSION 1515 (PAPER)**

#### **DEPRESSION AND ANXIETY, DISPARITIES, MEDICATIONS, THERAPIES, AND PHYSICAL HEALTH**

#### **THE RECEIPT OF CARE, SELF-PERCEPTIONS OF AGING, AND DEPRESSION**

M. Kwak, *School of Social Work, Univ Michigan, Ann Arbor, Michigan*

Receiving care can be a source of support that buffers the adverse effects of stressful events, such as illness and disabilities; however, it can also trigger negative feelings about one's own aging. This study examines the extent to which self-perceptions of aging explain the relationships among functional impairment, the receipt of care, perceived loss of control, and depressive symptoms among older adults. The sample consists of older adults ages 50 and over from the 2006, 2008, and 2010 waves of the Health and Retirement Study (HRS) (n=6,180). Structural equation modeling was used to test an analytic model that focused on the mediated effects of self-perceptions. Demographic characteristics of the respondents were included as control variables. The model fit indices were acceptable (RMSEA=.049, CFI=.926). The results indi-

cate that self-perceptions of aging mediate the relationship between receipt of care and perceived loss of control as well as the relationship between receipt of care and depressive symptoms. That is, older adults who receive a greater amount of care are more likely to perceive their aging negatively, which, in turn, increases perceived loss of control and depressive symptoms. These findings suggest that the receipt of care may make frail older adults more vulnerable to negative self-perceptions. Discussions will include practice implications, including ways to minimize the negative repercussions of receiving care for older adults.

### **RACIAL DISPARITIES IN DEPRESSION DIAGNOSIS AND TREATMENT AMONG COMMUNITY-DWELLING ELDERLY**

K.A. Zurlo, A. Akincigil, *Rutgers University, New Brunswick, New Jersey*

**Objective:** To investigate racial/ethnic disparities in the diagnosis and treatment of depression among community dwelling elderly. **Methods:** Secondary analyses of Medicare Current Beneficiary Survey data (n=33,708) for 2001-2005. Logistic regression models were estimated to assess the association of race with the probability of being diagnosed and treated for depression with either antidepressant medication or psychotherapy. **Results:** Depression diagnosis rates were 6.4% for non-Hispanic whites, 4.2% for African Americans, 7.2% for Hispanics and 3.8% for others. After adjusting for a range of covariates including a two-item depression screener, African Americans were significantly less likely to receive a depression diagnosis from a health care provider (aOR=0.53, CI=0.41-0.69) than non-Hispanic whites; among those diagnosed, they were less likely to be treated for depression (aOR=0.45, CI=0.30-0.66). **Conclusions:** Among elderly Medicare beneficiaries, significant racial/ethnic differences exist in the diagnosis and treatment of depression. Vigorous clinical and public health initiatives are needed to address this persisting disparity in care.

### **INCREASED USE OF POTENTIALLY INAPPROPRIATE MEDICATIONS IN OLDER ADULTS WITH DEPRESSIVE AND ANXIETY SYMPTOMS**

H. Alfonso<sup>1,2</sup>, C. Beer<sup>1,3</sup>, J.J. Pfaff<sup>1,2</sup>, L. Flicker<sup>1,3,4</sup>, N. Stock<sup>6</sup>, N. Kerse<sup>7</sup>, B. Draper<sup>8</sup>, O. Almeida<sup>1,2,5</sup>, *1. WA Centre for Health and Ageing, Perth, Western Australia, Australia, 2. School of Psychiatry and Clinical Neurosciences, University of Western Australia, Perth, Western Australia, Australia, 3. School of Medicine and Pharmacology, University of Western Australia, Perth, Western Australia, Australia, 4. Department of Geriatric Medicine, Royal Perth Hospital, Perth, Western Australia, Australia, 5. Department of Psychiatry, Royal Perth Hospital, Perth, Western Australia, Australia, 6. Discipline of General Practice, The University of Adelaide, Adelaide, South Australia, Australia, 7. School of Population Health, University of Auckland, Auckland, Auckland, New Zealand, 8. School of Psychiatry, University of New South Wales, Sydney, New South Wales, Australia*

**Background:** Depression and anxiety are common and disabling disorders that affect about 10% of adults over the age of 60 years. People with depression have a higher prevalence of nonspecific medical complaints than non-depressed counterparts. They are also greater consumers of health resources, and may, consequently, be more often exposed to Potentially Inappropriate Medications (PIM) than people without mental health symptoms. **Aim:** To examine the use of PIM among older adults with and without clinically significant anxiety and depressive symptoms. **Methods:** We used the baseline data from the DEPS-GP study, which obtained health information from an Australian-wide sample. Depression and anxiety symptoms were assessed by the Hospital Anxiety and Depression Scale (HADS). PIM were identified following the consensus criteria of medications to avoid (independent of diagnosis) in older adults (Arch Inter Med 2003; 162:2716). Logistic regression was applied to examine the associations between PIM use and

outcomes variables, adjusting for potential confounders. **Results:** Of 17,240 participants aged 65 years and over, 25.0% reported using at least one PIM, mostly anxiolytic benzodiazepines, antihistamines and antidepressants. Those with depression or anxiety were more frequent users of PIM, after adjusting for potential confounders (OR 1.69, 95% CI 1.54, 1.86 for depression, OR 1.95, 95% CI 1.76, 2.16 for anxiety). The risk of PIM use increased progressively with the increasing severity of depression or anxiety symptoms. **Conclusions:** Older adults with clinically significant anxiety and depression are disproportionately exposed to the potentially negative consequences of PIM use and, as such, may benefit from safer alternatives of treatment.

### **ADAPTING MINDFULNESS-BASED COGNITIVE THERAPY (MBCT) FOR DEPRESSION IN LATER LIFE: MODIFICATIONS AND PRE/POST OUTCOMES**

M.A. Foulk<sup>1</sup>, B. Ingersoll-Dayton<sup>2</sup>, J. Kavanagh<sup>3</sup>, E.A. Robinson<sup>3</sup>, H. Kales<sup>3</sup>, *1. The University of Michigan Geriatrics Center, Ann Arbor, Michigan, 2. The University of Michigan School of Social Work, Ann Arbor, Michigan, 3. The University of Michigan Dept. of Psychiatry, Ann Arbor, Michigan*

Depression and anxiety are mental health conditions that compromise quality of life among older adults. Given that aging individuals often take multiple medications for their mental and physical health, identifying effective psychological interventions to decrease the need for poly-pharmacy is valuable. Mindfulness-based therapies show particular promise, as recent studies have demonstrated that mindfulness-based cognitive therapy (MBCT) for depression has equivalent effects to anti-depressant medication. However, to date there have been few attempts to apply mindfulness-based approaches to older adults. This paper describes an adaptation of MBCT for older adults (aged 60+) with depressive diagnoses, and examines quantitative changes in several outcome variables associated with their participation in the program. The content and structure of the 8-week program are described in detail, including exercises in class and at home, as well as follow-up sessions after the program's completion. The specific adaptations made to accommodate older adults (e.g., length of meditations, changes in mindful movement exercises) are also detailed. Pre-post pilot data for 4 MBCT groups (n = 22) found significant changes in anxiety (t= -3.18, p<.01) and ruminative thoughts (t= -4.00, p<.01), but only marginal ones in depression (t= -1.36, p=.10) and none for sleep (t= -.38, p=.66), although some individual sleep items did change significantly. Additional qualitative data and case examples are presented to illuminate these outcomes. Findings show that this non-pharmacological intervention is feasible for older adults and is associated with positive changes. Suggestions are provided both for clinical practice of MBCT and for future research on older populations.

### **RELATIONSHIP BETWEEN DEPRESSION AND DIABETES SELF-MANAGEMENT INTERVENTION OUTCOMES FOR ELDER LATINOS**

D.H. Sommerfeld, V. Cardenas, G.A. Aarons, *University of California, San Diego, La Jolla, California*

**Introduction:** Diabetes among elderly Latinos is a significant public health issue that is frequently comorbid with depression. Self-management programs represent one approach for addressing these concerns. This study examines the relationship between depression and multiple diabetes outcomes for elderly Spanish speakers following participation in an evidence-based diabetes self-management program. **Data & Methods:** Data come from a San Diego County study of elderly Latinos (age 60 and over) with diabetes and depression. Data were collected prior to participation in the intervention and again 4 months after completing the 6 weekly sessions (n=128). Depression was measured using the PHQ-9. Multiple indicators of diabetes self-management behaviors, self-efficacy, and symptoms were examined (5 indicators). We conducted separate linear regression analyses to predict each of the diabetes

outcome indicators at follow-up. For each analysis we included the baseline measurement of the dependent variable, gender, age, education, diabetes severity, family support, and baseline and follow-up measures of depression. Findings: Controlling for all measures indicated above, the results of the 5 analyses indicated that higher depression at follow-up was significantly related with lower nutritional (but not exercise) self-care, lower diabetes self-efficacy, and higher numbers of hypo- and hyperglycemia symptoms at follow-up. Baseline depression was not significant in any analysis. Conclusions: The findings indicated that depression at follow-up (but not baseline) was related to multiple diabetes outcomes and that low levels of depression following the completion of the intervention were associated with favorable diabetes outcomes. This suggests that further attention to reducing and maintaining low levels of depression is important for the success of diabetes self-management programs.

## SESSION 1520 (PAPER)

### NURSING HOME QUALITY OF CARE, ELECTRONIC RECORDS, MEDIA IMAGES, AND CHARACTERIZING OF RESIDENTS

#### ELECTRONIC HEALTH RECORDS ADOPTION AND USE IN SKILLED NURSING FACILITIES

A.A. Filipova, *Public Administration (mail code 449), University of Wisconsin Oshkosh, Oshkosh, Wisconsin*

**Purpose of the Study:** This study is the first to utilize a scientifically-based, comprehensive instrument to determine nursing home administrators' perceptions about level of automation of clinical/operational functions, the benefits of EHR use, and the barriers to EHR adoption in Wisconsin skilled nursing facilities. **Design and Methods:** A cross-sectional design was implemented. Data were collected from facility administrators utilizing a mail and online survey approach. A total of 156 usable questionnaires were returned of 397 distributed—a 39.30% response rate. **Results:** While many facilities reported fully automated Minimum Data Set assessments (69%), licensed nurse clinical notes (47%), and care plans (46%), there remains a predominant reliance on paper for functions, such as diagnostic tests (61%) and consults (63%). Automated clinical decision support was mostly used for clinical assessments (65%) and care plans (42%). Eighty-five percent reported using electronic systems to capture information relevant to healthcare quality. The majority of facilities had no telehealth/telemonitoring capabilities. The top three barriers included: the amount of capital (49%), cost for hardware/infrastructure (47%), and availability of subsidies (33%). The top three benefits were: quality monitoring (87%); management oversight (83%), and anywhere/anytime easier access to clinical data (83%). **Implications:** The predominant reliance on paper for a variety of clinical/operational functions, the lack of plans for future expansion of automated functions, as well as the barriers to EHR adoption suggest that Wisconsin SNFs will be further behind in EHR implementation in the future. Administrators should consider issues related to planning, software adaptation, collaborations with partners/vendors, and implementation.

#### THE PORTRAYAL OF THE NURSING HOME SECTOR IN 50 U.S. NEWSPAPERS, 1999-2008

E.A. Miller<sup>1</sup>, C.R. Oala<sup>1</sup>, B. McGonagle<sup>1</sup>, D. Tyler<sup>2</sup>, V. Mor<sup>2</sup>, *1. Gerontology, Univ Mass Boston, Boston, Massachusetts, 2. Brown University, Providence, Rhode Island*

This study identifies how U.S. newspapers depicted the nursing home sector from 1999 to 2008. Keyword searches of the Lexus Nexus database were used to identify more than 15,000 articles in 50 newspapers from 46 states plus the District of Columbia. The content of each article was analyzed and tone, themes, prominence, and other attributes assessed. Basic frequencies and descriptive statistics we used to exam-

ine article content, both cross-sectionally and over time. The majority of articles were published from 1999-2003 (60%); fewer during 2004-2008 (40%). Reporting was substantially more extensive in some newspapers (>10% of total coverage) than others (<1%). Most articles were news stories (87.9%), relatively few editorials (8.4%), columns (1.2%), or letters (3.6%). About one-third were located on the front page of the newspaper or section. Most focused on government (45.5%) or industry (37.3%) interests, very few on residents/family (12.2%) and community (4.9%) concerns. Most were negative (39.6%) or neutral (42.9%) in tone; very few were positive (10.7%) or mixed (6.7%). Common themes include quality (53.2%), financing (34.5%), and negligence/fraud (24.1%). Less common themes included costs (10.6%), rebalancing (8.7%), and property/business issues (10.6%). Natural disasters (2.7%), access (3.3%), and politics (3.3%) were rarely discussed. Both tone and themes varied across years and newspapers (e.g., national v. regional). Overall, findings highlight longitudinal variation in the framing of nursing home coverage in the U.S. Media, not only with respect to tone but also with respect to shifts in media attention from one aspect of this issue to another over time.

#### NURSE AIDE ABSENTEEISM IS NURSING HOMES

N. Castle<sup>1</sup>, J. Engberg<sup>2</sup>, J.C. Ferguson-Rome<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. RAND, Pittsburgh, Pennsylvania*

Little research is available addressing absenteeism in nursing homes. However, Nurse Aide (NA) absenteeism may be a considerable staffing concern. High rates of NA absenteeism may influence resident care. In this research, the association of NA absenteeism with quality of care of nursing home residents is examined (using 14 indicators of care quality). Data used came from a survey of nursing home administrators (response rate = 65%), the Online Survey Certification and Reporting data, and the Area Resource File. The quality indicators came from Nursing Home Compare. The information including absenteeism and staffing variables of Registered Nurses, Licensed Practical Nurses, and NAs were measured in 2007, and came from 3,941 facilities. Multivariate regression models using GEE were used. An average of 4.4% of NAs were absent on any given day. However, this ranged from 0.5% to 12.3%. High NA absenteeism was associated with high turnover. In the multivariate analyses, controlling for turnover and staffing levels (along with 12 other facility and market characteristics), high absenteeism was associated with lower quality in 9 of the 14 quality indicators. High absenteeism was also associated with more deficiency citations. The findings provide tentative evidence that absenteeism may be an important staffing characteristic, and show that NA absenteeism may influence quality of care.

#### HOSPICE FOR NURSING HOME RESIDENTS: DOES OWNERSHIP TYPE MATTER?

M.E. Canavan<sup>1</sup>, M.D. Carlson<sup>2</sup>, H.L. Sipsma<sup>1</sup>, E. Bradley<sup>1</sup>, *1. Epidemiology and Public Health, Yale University, New Haven, Connecticut, 2. Department of Geriatrics and Palliative Medicine, Mount Sinai School of Medicine, New York, New York*

Currently, more than half of all nursing home residents use hospice at some point, a 4-fold increase since 1992. Studies have shown benefits to hospice enrollment for patients; however, the literature on ownership differences in hospice care in general has indicated that for-profit hospices offer a narrower scope of services and employ fewer professional staff. Although nursing home staffing patterns have been shown to be essential to quality of care, the literature has not explored differences in patient-to-staff ratios for hospice care within nursing homes. Using data from the National Hospice Survey, a random sample of all Medicare-certified hospices operating between September 2008 and November 2009, we identified 509 hospices that served nursing home residents. Based on financial incentives, we hypothesized that for-profit hospices would have higher patient-to-staff ratios for registered nurses, medical social workers and home health care workers and require less

training time for staff prior to working with nursing home residents. Adjusted analysis indicated a higher concentration of patients among for-profit hospices for each staff type; however, this relationship was only significant for home care workers with an additional 13 patients (p-value 0.003) for each worker. Moreover, compared with nonprofit hospices, for-profit hospices required significantly fewer hours of training for both registered nurses (37 p=0.046) and medical social workers (67 p=0.003) in their first year of employment. Since staffing is an important indicator of hospice quality, our findings can be useful for anticipating potential impacts of the growth in for-profit hospice on nursing home residents.

#### **CHARACTERIZING USERS OF VA OWNED AND OPERATED INSTITUTIONAL LONG-TERM CARE: SIMILARITIES AND DIFFERENCES TO OTHER NURSING HOME ENTRANTS**

S. Cai<sup>1</sup>, O. Intrator<sup>1,4</sup>, E.A. Miller<sup>2</sup>, B. Kinoshian<sup>3</sup>, S. Hyde<sup>4</sup>, S.C. Miller<sup>1</sup>, 1. *Brown University, Providence, Rhode Island*, 2. *University of Massachusetts, Boston, Rhode Island*, 3. *University of Pennsylvania, Philadelphia, Pennsylvania*, 4. *Providence VA Medical Center, Providence, Rhode Island*

The Veterans Health Administration (VHA) provides nursing home (NH) level care in VHA owned and operated Community Living Centers (CLCs). Other Veterans can receive VHA-paid or non-VHA-paid NH care in community NHs. This study compared the characteristics of CLC Veterans to Veterans using other NHs and all male NH residents. The cohort was derived from the first CLC/NH admission Minimum Data Set assessment for all males in 2009. Significant differences in socio-demographic characteristics, health conditions, and other known correlates of NH admission were identified. The cohort included 32,035 CLC Veterans, 95,887 Veterans in other NHs, and 800,527 men admitted to NHs. CLC Veterans were considerably younger (37% aged under 65) than Veterans admitted to NHs (8%), and all men admitted to NHs (19%). CLCs also had a higher proportion of African American residents than the other settings (17%, 10%, and 12%, respectively). CLC Veterans were less physically impaired but more cognitively impaired than their community NH counterparts. While CLC Veterans were more frequently admitted from home, the other two groups were more frequently admitted from hospitals. CLC Veterans were less likely than Veteran or NH residents in the other two groups to have a diagnosis of congestive heart failure, were more likely to have a cancer diagnosis, but were as likely to have a diagnosis of COPD or diabetes. Understanding the unique care needs of Veteran LTC users in various settings provides an opportunity to improve service delivery by better matching the resources allocated to the populations served.

#### **SESSION 1525 (SYMPOSIUM)**

##### **GSA-SFRBM JOINT SYMPOSIUM: THE FREE RADICAL THEORY OF AGING REVISITED**

Chair: *K.J. Davies, University of Southern California, Los Angeles, California*

Co-Chair: *K.J. Davies, University of Southern California, Los Angeles, California* Co-Chair: *M.E. Matzko, Geisinger Medical Institute, Danville, Pennsylvania*

This session represents a joint symposium with the Society for Free Radical Biology and Medicine (SFRBM). Previous research clearly indicates the importance of oxidative stress for aging at the molecular, cellular and tissue levels. Although there is much information on the specific factors that induce oxidative stress and the consequences of oxidative stress, new information is continuously evolving. The purpose of this session is to bring together investigators to discuss new concepts and ideas related to the mechanisms and consequences of oxidative stress.

#### **OXIDATIVE STRESS AND NEURODEGENERATION IN BRAIN OF SUBJECTS WITH ALZHEIMER'S DISEASE AND AMNESTIC MILD COGNITIVE IMPAIRMENT: CENTRAL ROLE OF AMYLOID $\beta$ -PEPTIDE (1-42) AND INSIGHTS FROM REDOX PROTEOMICS**

D. Butterfield, *Chemistry, Univ of Kentucky, Lexington, Kentucky*

D. Allan Butterfield, Ph.D. The UK Alumni Association Endowed Professor of Biological Chemistry; Director, Center of Membrane Sciences; and Faculty, Sanders-Brown Center on Aging, University of Kentucky, Lexington, KY 40506 USA. Our laboratory was among the first to demonstrate elevated oxidative stress in brains from subjects with Alzheimer's disease (AD) and amnesic mild cognitive impairment (MCI), arguably the earliest form of AD. We also showed that amyloid beta-peptide 1-42 (A $\beta$ 42) could induce oxidative stress in vitro and in brain in vivo. Our laboratory reported the first use of redox proteomics to identify oxidatively modified brain proteins in subjects with AD and MCI, several of which were found to be oxidatively modified in common in AD and MCI, implicating key pathways in progression of this neurodegenerative disorder. These results are consistent with the clinical presentation, pathology, and biochemical alterations in these disorders. A $\beta$ 42 in model systems in vitro and in vivo is able to replicate oxidative modification of many of these redox proteomics-identified proteins, implicating this peptide as a major contributor to the oxidative stress inherent in AD and MCI brain. Support: NIA/NIH.

#### **REVISITING THE ROLE OF FREE RADICALS IN THE ACTIONS OF CALORIC RESTRICTION**

R. Weindruch, 1. *University of Wisconsin, Madison, Wisconsin*, 2. *VA GRECC, Madison, Wisconsin*

A complex literature spanning ~35 years describes the role that free radicals may play in the retardation of aging and diseases by caloric restriction (CR). This body of knowledge is based on diverse types of experimental outcomes such as measure of oxidative damage, oxidant production, mitochondrial function and free radical mediated signaling. As has recently occurred in the general field of "free radicals and aging", it has been proposed that CR's actions occur by way of hormesis involving an increase in free radical production and an activation of stress response pathways. Evidence from studies of rodent skeletal muscle do not support this idea. Another possibility to be discussed is that increases with aging in free radicals associated with systemic inflammation are opposed by CR and contribute importantly to its phenotype.

#### **DIMINISHED PROTEOLYSIS AND OXIDATIVE STRESS ADAPTATION IN AGING**

K.J. Davies, 1. *Davis School of Gerontology, University of Southern California, Los Angeles, California*, 2. *Division of Molecular & Computational Biology, Dornsife College of Letters, Arts, and Sciences, the University of Southern California, Los Angeles, California*

Proteins are major targets for oxidative damage, and both intracellular and extracellular accumulation of oxidized proteins occurs in many ageing and disease models. In young, healthy individuals, moderately oxidized, soluble cell proteins are selectively and rapidly degraded by the Proteasome in the cell cytoplasm, nucleus, and endoplasmic reticulum. Inside mitochondria, the Lon matrix proteinase selectively degrades oxidized soluble proteins. 20S Proteasome and Proteasome regulators Pa28 $\alpha\beta$  (or 11S), Pa28 $\gamma$ , and Pa200 all exhibit direct activation and increased synthesis during cellular adaptation to oxidative stress (hormesis), in a process controlled by the Nrf2 signal transduction pathway. Immunoproteasome and Lon are also synthesized. Blocking 20S Proteasome, Immunoproteasome, Proteasome regulators, or Lon induction with relevant siRNA's also limits the adaptive response. Aged or senescent cells exhibit compromised induction of Proteasome and Lon,

and diminished adaptive capacity. I suggest this supports the hypothesis that diminished cellular adaptive capacities play a role in aging processes.

#### **EFFECTS OF REDUCED SUPEROXIDE DETOXIFICATION IN SKELETAL MUSCLE AND NEURONAL TISSUE ON MECHANISMS UNDERLYING SARCOPENIA**

H. Van Remmen<sup>2,3,1</sup>, Y. Zhang<sup>3,1</sup>, Y. Shi<sup>3,1</sup>, L.M. Larkin<sup>5</sup>, A. McArdle<sup>4</sup>, M. Jackson<sup>4</sup>, A. Richardson<sup>3,1,2</sup>, S. Brooks<sup>5</sup>, 1. *UTHSCSA, San Antonio, Texas*, 2. *STVHCS, San Antonio, Texas*, 3. *Barshop Institute, San Antonio, Texas*, 4. *University of Liverpool, Liverpool, United Kingdom*, 5. *University of Michigan, Ann Arbor, Michigan*

We asked whether oxidative stress in muscle or neurons is the primary driving force for age-related muscle atrophy using mice lacking CuZnSOD, an important scavenger of superoxide anion, specifically in skeletal muscle or in neurons. Muscle specific deletion of CuZnSOD (mKO mice) results in essentially a complete deletion of CuZnSOD protein expression in skeletal muscle, but not in other tissues. Oxidative damage and mitochondrial production of hydrogen peroxide and ATP are not altered in skeletal muscle from mKO mice. Furthermore, the adult mKO mice have no muscle atrophy compared to approximately 20% atrophy in age matched CuZnSod1<sup>-/-</sup> mice, yet function is altered in mKO mice as indicated by a decrease in maximum isometric force and the time to run mice to exhaustion on treadmill. In contrast, neuronal loss of CuZnSOD results in muscle atrophy in young mice, supporting a primary role for motorneuron oxidative stress in skeletal muscle atrophy.

#### **SESSION 1530 (PAPER)**

#### **ALZHEIMER'S DISEASE AND NEURODEGENERATION**

#### **IMPACT OF ANGIOTENSIN RECEPTOR BLOCKERS ON ALZHEIMER'S DISEASE NEUROPATHOLOGY IN A LARGE BRAIN AUTOPSY SERIES**

I. Hajjar, L. Brown, W. Mack, H. Chui, *Univeristy of Southern California, Los Angeles, California*

Background: Emerging evidence suggests that angiotensin II is involved in amyloid metabolism in the brain and that angiotensin receptor blockers (ARB) are superior to other antihypertensive classes in preventing cognitive decline. We evaluated the impact of ARBs on the neuropathological findings in a large autopsy series from the National Alzheimer's Coordinating Center (NACC) database. Methods: The NACC aggregated uniformly-collected data from 29 Alzheimer's Disease Centers throughout the United States. Participants were self or provider-referred and included those with and without cognitive disorders. Our analysis sample included only hypertensive participants and excluded cognitively and neuro-pathologically normal participants (n=890, mean (range) age at death 81 (39-107) years, 43% women, 94% white). Neuropathological data included neuritic plaque and neurofibrillary tangle densities assessed by NIA-Reagan criteria and vascular injury markers. Multiple logistic regression was used to compare the pathological findings in subjects on ARBs to other antihypertensive treatment and to those who did not receive antihypertensive medications. Results: Participants who were exposed to ARBs, with or without AD, showed less amyloid deposition markers compared to those treated with other antihypertensives (lower CERAD OR=0.47, 95% confidence interval =0.27 to 0.81; ADRDA OR=0.43, CI=0.21 to 0.91; BRAAK & BRAAK OR=0.52, CI= 0.31 to 0.85; neuritic plaques OR=0.59, CI=0.37 to 0.96). They also had less AD-related pathology compared to untreated hypertensives. Participants receiving ARBs were more likely to have had a stroke and hence had more frequent pathological evidence of large vessel infarct and hemorrhage. Conclusion: In hypertensive individuals, treatment with ARBs is associated with

lower evidence of amyloid deposition and AD-related pathology on autopsy evaluations. Investigation for the possible role of ARBs in the treatment of AD is urgently needed.

#### **EFFECT OF FOXO1 POLYMORPHISM ON EFFICACY OF ACETYLCHOLINESTERASE INHIBITORS IN ALZHEIMER PATIENTS**

G. Paroni<sup>1</sup>, D. Seripa<sup>1</sup>, G. D'Onofrio<sup>1</sup>, F. Ciccone<sup>1</sup>, M. Urbano<sup>1</sup>, C. Gravina<sup>1</sup>, F. Panza<sup>1</sup>, A. Pilotto<sup>1,2</sup>, 1. *I.R.C.C.S. Casa Sollievo della Sofferenza, San Giovanni Rotondo, Italy*, 2. *Azienda ULSS 16 Padova, S. Antonio Hospital, Padova, Italy*

Oxidative stress have been suggested as an important determinant in the pathogenesis of many human diseases, including sporadic Alzheimer's disease (AD). Foxo1 protein, encoded by the forkhead box O1 (FOXO1) gene at locus 13q14.1 is one of the main proteins involved in defence against oxidative stress. In the present study we evaluated the influence of the FOXO1 SNP rs7981045 on the efficacy of acetylcholinesterase inhibitors (AChEIs) in patients with sporadic AD. A total of 74 hospitalized elderly (22 males and 54 females, mean age 78.71±7.18 years) with a clinical diagnosis of sporadic AD according to the NINCDS-ADRDA criteria were investigated in blinded fashion. Patients were treated with AChEIs for 6-months. Briefly, Donepezil (5mg/die) and Rivastigmine patch (4.6mg/die) for a month and a double dosage for the remaining 5 months. Cognitive and functional status were evaluated at baseline and after 6-months of treatment. Response to therapy was defined according to the NICE criteria. Compliance and drug-related adverse events were also evaluated. At 6-months follow-up, 31 patients (41.9%) were responders and 43 patients (58.1%) were non-responders to AChEIs treatment. A significantly higher frequency of patients with the G/G genotype of rs7981045 was found in non-responder than in responder patients (p=0.045). These results suggest that the SNP rs7981045 of FOXO1 gene may influence the clinical efficacy of AChEI in patients with sporadic AD. The analysis of FOXO1 genotypes may be useful in identifying subgroups of patients with AD with different clinical response to AChEI.

#### **ASSOCIATION STUDY BETWEEN INTERLEUKIN-8 GENE POLYMORPHISM AND LATE-ONSET ALZHEIMER'S DISEASE IN POPULATION IN XINJIANG PROVINCE**

F. He, *Geriatrics, Xinjiang uygur autonomous region people's hospital, Urumqi, China*

Objective Interleukin-8 gene polymorphism has been associated with respiratory syncytial virus and gastric cancer, including late-onset Alzheimer's disease (LOAD) in Caucasian. However, the association of IL-8 polymorphism and Alzheimer's in Chinese population has not been well established. To explore the relationship between Interleukin-8 gene polymorphism and late-onset Alzheimer's disease in Chinese population, we studied -251A/T, 781C/T and 1633 C/T polymorphism in IL-8 gene. Methods Polymorphism distribution of interleukin-8 gene -251A/T and 781C/T in 80 LOAD and 80 normal controls were detected by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) analysis. Directly using method of counting to calculate of alleles and gene frequencies type. Type of gene proceeded Hardy-Weinberg balance estimates, other statistical analysis completed with SPSS13.0 software, comparing to genotype frequencies and allele frequencies made use of the chi-square test. Results (1) For IL-8 gene-215 A/T, frequencies distribution of every genotype and allele both had significant difference (P = 0.035 for genotype, P = 0.010 for alleles) in LOAD group and normal controls. Frequencies of AT and AA type (50.0%, 16.3%) in LOAD group were high than those in the control group (40.0%, 7.5%), and frequencies of TT genotype (52.5%) in normal controls was high than in LOAD group (33.7%). In LOAD group A allele (41.2%) was dominant, and in control group T allele (72.5%) was dominant. In LOAD patients A alleles more significantly



increased than in the control group ( $P = 0.010$ ), so it may be a LOAD risk factor ( $OR = 1.851$ ). In LOAD patients and controls AA genotype had significant difference ( $P = 0.023$ ), so it may increase the risk of LOAD ( $OR = 3.370$ ). In LOAD patients frequencies of AT genotype was higher than one in the control group, the difference was not statistically significant ( $P > 0.05$ ). (2) In IL-8 gene 781 C/T, the difference of genotype frequencies and allele frequencies between LOAD group and normal controls were not statistically significant ( $P > 0.05$ ). (3) In IL-8 gene 1633 C/T, the difference of genotype frequencies and allele frequencies between LOAD group and normal controls were not statistically significant ( $P > 0.05$ ). Conclusion IL-8 gene (-251A/T) polymorphism has some relation with risk of LOAD, the polymorphism of 781C/T and 1633 C/T probably has no relation with risk of LOAD.

### IS ALZHEIMER DISEASE-LIKE CNS DEGENERATION UNIQUE TO HUMANS?

S.N. Austad<sup>1</sup>, C. Finch<sup>2</sup>, 1. *Cellular & Structural Biology, University of Texas Health Science Center San Antonio, San Antonio, Texas*, 2. *University of Southern California, Los Angeles, California*

Recent studies suggest that great apes have minimal brain atrophy during normal aging and no neurodegenerative changes that would qualify as the earliest stages of Alzheimer disease (AD). In contrast, brain atrophy is definitive in humans by age 40, followed by a near-universal progressive increase in neurons with neurofibrils. AD increases exponentially after age 60 and may afflict up to 50% by age 90. Curiously prosimians and monkeys show more substantial brain aging changes than the great apes, but no primate has shown the drastic level of neuron loss present in early stages of AD. This extreme heterogeneity in brain aging will be discussed in terms of primate genome evolution and life history, from prosimian ancestors which were likely to have had short life expectancies, but which share identical amyloid beta-peptide sequence with humans. We acknowledge NIH grants: SA, R24 RR023344; CEF< P01 AG-026572 (R Brinton, PI), R21 AG-040683, and R21 AG-040753.

### DYSFUNCTIONAL CORTICOSTRIATAL COMMUNICATION IN A TRANSGENIC MOUSE MODEL OF AGE-RELATED NEURODEGENERATION

S.L. Hong, S.J. Barton, G.V. Rebec, *Indiana University, Bloomington, Indiana*

A hallmark of both normal and pathological aging as well as neurodegeneration is an increase in random brain activity known as "neural noise," which leads to a contaminated and unpredictable brain signals. We tested the hypothesis that dysfunctional transmission of neural information is responsible for behavioral deficits prior to the onset of rapid neurodegeneration. We measured cortical and striatal local field potentials (LFPs) in actively behaving transgenic R6/2 mice, which model Huntington's disease (HD), an age-related neurodegenerative condition, and wildtype (WT) controls. Our data showed that HD resulted in increased striatal LFP signal unpredictability, which in turn resulted in predictable and repetitive patterns of behavior. Across both cortex and striatum, HD resulted in an increased presence of 25-40Hz oscillations when the animals were resting. HD also completely altered the direction of corticostriatal synchrony as behavior increased from rest to grooming to exploration. While the WT mice exhibited spreading of corticostriatal synchrony to higher frequency ranges from rest to exploration, corticostriatal synchrony in HD mice became restricted to the lower frequencies. Our findings are evidence that aberrant patterns of communication that precede rapid neuron loss and could be an important diagnostic marker of pathological brain states prior to neuron loss.

## SESSION 1535 (SYMPOSIUM)

### CREATIVE APPROACHES TO INTEGRATING IDIOGRAPHIC AND NOMOTHEIC METHODS TO STUDY THE LIVED LIFE

Chair: J. Lodi-Smith, *Canisius College, Buffalo, New York*

Co-Chair: S.K. Whitbourne, *University of Massachusetts Amherst, Amherst, Massachusetts*

Understanding the lived life is historically grounded in idiographic approaches within social-psychological gerontology. Classic studies of life course trajectories focused on individual adaptation in relation to social-personal influences. Currently, the field of gerontology builds our understanding of aging through advances in statistical and quantitative techniques. Our symposium explores the reciprocal relationship between the historical idiographic approach with modern quantitative methods to suggest innovative approaches to a variety of types of data ranging from individual life stories to self-report inventories. Lodi-Smith uses computer text analysis to examine the relationship of word use in self-defining memories to healthy aging in a life span sample. Bauer shows how older adults emphasize personal growth in their life stories, with implications for eudaimonia across the life course. Whitbourne illustrates methods of using life history data combined with narrative analysis to track longitudinal growth of personality from college to midlife. All speakers specifically address the central theme of integrating idiographic techniques with quantitative sophistication. Through this symposium, attendees will gain insight into and practical knowledge of creative methodologies to enhance their own programs of research. Secondly, this symposium hopes to catalyze a resurgence of engagement in a method that has provided some of the most lasting contributions to social-psychological gerontology.

### WORD USE IN SELF-DEFINING MEMORIES PREDICTS HEALTHY AGING

J. Lodi-Smith<sup>1</sup>, B.W. Roberts<sup>2</sup>, 1. *Psychology, Canisius College, Buffalo, New York*, 2. *University of Illinois, Urbana-Champaign, Champaign, Illinois*

Self-defining memories are vivid memories central to individual identity (Singer & Moffitt, 1991). The present research addresses how self-defining memories relate to healthy aging in a life span sample. The research analyzes word use patterns in self-defining memories of 140 healthy adults ages 21 – 85 ( $M = 49.49$ ,  $SD = 15.57$ ) using the Linguistic Inquiry and Word Count Program (Pennebaker, Francis, & Booth, 2001). The current study addressed how patterns of emotion words, cognitive words, and words associated with time related to healthy aging across both physical and psychosocial definitions of healthy aging. Results suggest that individuals who narrate self-defining memories using positive emotion words and less time-related words report healthier aging. The present study examines the extent to which these effects are moderated by age and sets the findings in a context of theoretical frameworks for healthy aging while providing an innovative approach to qualitative data on aging.

### COMBINING NARRATIVE ANALYSIS WITH MODELING OF LONGITUDINAL DATA: YIN AND YANG IN THE STUDY OF LIVES

S.K. Whitbourne, *Psychology, Univ. of Mass. Amherst, Amherst, Massachusetts*

Longitudinal researchers face a number of challenges in trying to capture the complexity of the life patterns they investigate. In the present paper, quantitative data from a 40-year (and counting) sequential study are integrated with life history information obtained from a sample of 180 adults ranging from college through late midlife. Adding to previous longitudinal analyses from the present sample will be new results from younger cohorts who were followed at a later time point

through early midlife. The presentation will focus on practical strategies that researchers can adapt to using qualitative data to inform their statistical analyses and vice versa. I will also present innovative ways to enhance life history data through creative use of internet resources that can put into social and historical perspective the non-normative events that influence the life course of the individual

### **GROWTH IS NOT JUST FOR THE YOUNG: NARRATIVES OF THE AGING, TRANSFORMATIVE SELF**

J. Bauer, *University of Dayton, Dayton, Ohio*

Narrative research contradicts a popular view of aging in psychology that says, "Growth is for the young; decline is for the old" (Bauer & Park, 2010). While declines are inevitable with age, older adults are at least as likely as younger adults to look to personal growth as a source of personal meaning when interpreting the past (e.g., Pasupathi & Mansour, 2006). Even when looking to the future, older adults' goals focus at least as much on growth and gain as on decline and loss (e.g., Ebner et al., 2006). A transformative self—i.e., a life story emphasizing growth-mindedness—has been shown to account for ties between age and well-being. At the heart of a transformative self lies a pattern of subjective interpretation: Whether narrating high or low points in life, does the person construe the event as a catalyst for growth or for merely joy or pain?

## **SESSION 1540 (SYMPOSIUM)**

### **ENABLE-AGE REVISITED – FINDINGS FROM TEN YEARS OF RESEARCH ON AGING IN PLACE**

Chair: *S. Iwarsson, Department of Health Sciences & Centre for Ageing and Supportive Environments (CASE), Lund University, Lund, Sweden*

Co-Chair: *F. Oswald, Interdisciplinary Ageing Research, Faculty of Educational Sciences, Goethe University Frankfurt, Frankfurt, Germany*

Discussant: *M. Cutchin, Division of Occupational Science and Occupational Therapy, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*

We previously presented findings on the role of home environments in advanced old age from the European ENABLE-AGE Project. Three of the four talks from this symposium present empirical findings from the longitudinal follow-up of those surviving ten years after inclusion. Data were drawn from three national sub-samples that initially included 1,150 single-living and community-dwelling individuals 75-89 years-old, in urban regions in Sweden, Latvia and Germany. Preserving a core of identical variables in all three sub-samples over time, participants have been followed-up somewhat differently, applying qualitative in-depth interviews and observations as well as quantitative assessments during home visits. In this symposium, we will emphasize processes of aging in place and related outcomes with regard to aspects of health and competence loss in the sample from Latvia (Tomson et al.) and the struggle between staying put versus relocating in the German and Swedish sub-samples (Himmelsbach et al.). We will also present findings on the differentiated role of depression and affective aggravation, studied in the German participants as they are now approaching the end of life (Schilling et al.). In Sweden, a younger cohort was recently assessed with the quantitative ENABLE-AGE core methodology. As a first contribution from this new study, descriptive findings on their housing situation and accessibility problems will be presented (Haak et al.). The multi-dimensional findings from four different but related studies will be discussed, which will further our knowledge about multiple linkages between home and health along the process of aging and towards the end of life.

### **ASPECTS OF HOME AND HEALTH OVER A NINE-YEAR PERIOD AMONG VERY OLD PEOPLE IN LATVIA**

S. Tomson<sup>1,2</sup>, V. Horstmann<sup>2</sup>, C. Löfqvist<sup>2</sup>, M. Haak<sup>2</sup>, S. Iwarsson<sup>2</sup>, *1. Riga Stradins University, Riga, Latvia, 2. Lund University, Lund, Sweden*

The aim is to present the nine year follow-up results from the first longitudinal study on home and health among single-living very old people in Latvia. Data derived from the comprehensive interdisciplinary ENABLE-AGE Survey Study, which was designed to investigate how the home environment affects health trajectories along the process of aging. At baseline, 303 community-living people 75-85 years-old participated in Latvia. Nine years later, 59 were possible to follow-up. Interviews were conducted during home visits and contained questions and observations on person and environment. The findings highlight changes in home and health aspects along the later stages of the process of aging. Preliminary results show that life satisfaction and perceived health increased and symptoms of depression decreased during the study period. Participants perceived themselves as more dependent in daily activities compared to nine years earlier, and meaning of home changed to some extent in the Latvian context. Objective 1: After attending this activity, participants will have knowledge on changes of aspects of home and health among very old people in Latvia along the process of aging.

### **AGING IN PLACE VERSUS MOVING AT THE END OF LIFE – A QUALITATIVE STUDY AMONG MOVERS AND NON-MOVERS**

I. Himmelsbach<sup>1</sup>, M. Granbom<sup>2</sup>, M. Haak<sup>2</sup>, S. Iwarsson<sup>2</sup>, C. Löfqvist<sup>2</sup>, F. Oswald<sup>1</sup>, *1. Interdisciplinary Ageing Research, Goethe University Frankfurt, Frankfurt, Germany, 2. Department of Health Sciences & Centre for Ageing and Supportive Environments (CASE), Lund University, Lund, Sweden*

Introduction: Relocation studies often deal with decision-making and reasons to move in old age. Little is known, however, about individual changes of attitudes over time, which reflect the struggle for (re-)gaining normalcy at the end-of-life, either when staying put or after moving. Aim: To empirically reconstruct the struggle for normalcy and stability over time among movers and non-movers. Method: Data stem from 80 in-depth interviews from the Swedish and German sub-sample of the European ENABLE-AGE project, 80-89 years-old at baseline. Sixteen were visited twice, at baseline and nine year follow-up; 25% were movers. Results: Patterns of dealing with issues of maintaining or regaining normalcy and of change over time due to personal and ecological circumstances are depicted. Differences and similarities between movers and non-movers are shown. Conclusion: Qualitative follow-up data may enrich theoretical discussions on the impact of aging in place and relocation at the end of life.

### **TRAJECTORIES OF DEPRESSIVE SYMPTOMS AND AFFECT BALANCE IN LATE LIFE: ONE OUT OF THREE AT RISK?**

O.K. Schilling, H. Wahl, O. Reidick, *Department of Psychological Ageing Research, University of Heidelberg, Heidelberg, Germany*

Very old age goes with risks which may promote depressive mood and imbalance of positive versus negative affect. Such affective aggravation may not harm all but unfold among subgroups of maladapted very old individuals, generating a heterogeneity of "late-life-typical" trajectories. We analyzed a sample of German long-term survivors from the ENABLE-AGE Project, followed-up within the LateLine Project (N=113, born 1911-1921, measured 2002, 2003, 2009, 2010, 2011). Latent class growth models were used to detect prototypical trajectories in depressive symptoms and affect balance, and examine relationships with physical risk factors. The trajectories found indicate a substantial risk group developing depression (30-40%), besides groups with constant depression rates (>50% non-depressed; <10% highly depressive). Global health indicators and functional status predict affective aggravation, but do not account uniquely for risk group membership.

In conclusion, a large group of very old is under risk of affective aggravation, prompted by factors yet to be researched.

## EXTENSION OF ENABLE-AGE RESEARCH QUESTIONS AND METHODOLOGY TO A YOUNGER COHORT IN SWEDEN

M. Haak, C. Löfqvist, H. Ekström, S. Elmståhl, S. Iwarsson, *Health Sciences, Lund University, Sweden*

Knowledge about the physical environment aspects in the home for people in the third age is scarce. Thus, the aim is to present the most common environmental barriers and investigate the nature of accessibility problems among Swedish people, age 67-70. A sub-sample (n=371) of the population based longitudinal SNAC-GÅS study (N=2,931) is used. Following the ENABLE-AGE methodology, data related to home and health were collected through structured interviews and observations. Out of 161 assessed environmental barriers, the results show that environmental barriers were common (n=69), more prevalent in one-family than in multi-dwelling households and more often present indoors than outdoors/entrances. The 20 most common environmental barriers (e.g. different types of controls) were found in 46% of all dwellings investigated. After juxtaposing the prevalence of barriers with the functional profiles of the participants, accessibility problems were more prevalent in multi-dwelling households than in one-family houses.

## SESSION 1545 (SYMPOSIUM)

### FALLS AND FEAR OF FALLING: NEW FINDINGS ON DETERMINANTS AND CONSEQUENCES

Chair: *G. Zijlstra, Maastricht University, CAPHRI - Dept. of Health Services Research, Maastricht, Netherlands*

Discussant: *G.I. Kempen, Maastricht University, CAPHRI - Dept. of Health Services Research, Maastricht, Netherlands*

Falls and fear of falling are common in older populations. Falls are a determinant of fear of falling and vice versa. The prevalence of falls and fear of falling increases with factors such as age and frailty. Additionally falls and fear of falling can lead to reduced quality of life, reduced social and physical functioning and to increased costs in health care. In view of the increase in life expectancy and the commonness of (co)morbidity and frailty in older people, it is likely that falls and fear of falling and their consequences will be even more prevalent in the near future. This merits the development and implementation of (cost) effective programs. These programs obviously need to correspond to people's physical and cognitive abilities and thus different programs may be needed for different populations, e.g. in community or geriatric rehabilitation settings. During this symposium four researchers from the US, Germany and Switzerland will present new data on determinants of falls and fear of falling in different older populations. The presentations will focus on: 1) risk factors for falling among people with multiple sclerosis, 2) the relationship between nocturnal activity, urge incontinence and fear of falling in community-dwelling older people, 3) the role of fear of falling in functional recovery among hip fracture patients, and 4) the relationship between fear of and foot clearance in older people. Our discussant from the Netherlands will reflect on the presentations in view of GSA's theme 'Charting New Frontiers in Aging' and will facilitate a discussion on-site.

### RISK FACTORS FOR FALLING AMONG PEOPLE WITH MS: PHYSICAL AND PSYCHOLOGICAL VARIABLES NEED ATTENTION

E.W. Peterson<sup>1</sup>, U. Einarsson<sup>2</sup>, L. Widén Holmqvist<sup>2</sup>, C. Ytterberg<sup>2</sup>, *1. Univ of Illinois at Chicago, Chicago, Illinois, 2. Karolinska Institutet, Huddinge, Sweden*

Introduction: Falls among people with multiple sclerosis are common and often injurious. Research examining the unique fall risk fac-

tors for people with multiple sclerosis is in its infancy. Aim: To identify factors associated with increased likelihood of reporting a recent fall among people with multiple sclerosis. Methods: We conducted a cross-sectional study involving 164 people with multiple sclerosis aged 19-79. Data obtained in the context of a Stockholm population-based, cross-sectional study was utilized. A logistic regression model examined factors associated with reporting a fall in the past three months. Results: Of participants, 38% reported at least one fall in the past three months. Reduced walking speed, impaired balance, and weak sense of coherence were significantly associated with a recent fall. Conclusion: Findings suggest walking speed, balance and sense of coherence are important to address in clinical work intended to reduce fall risk among people with multiple sclerosis.

### MODIFIABLE FACTORS ARE ASSOCIATED WITH FEAR OF FALLING IN COMMUNITY DWELLING ELDERLY – THE ACTIFE ULM STUDY

M.D. Denkinger<sup>1</sup>, K. Rapp<sup>2</sup>, J. Klenk<sup>2</sup>, T. Nikolaus<sup>1</sup>, A. Lukas<sup>1</sup>, *1. Agaplesion Bethesda Hospital, Ulm, Germany, 2. Institute of Epidemiology and Medical Biometry, Ulm University, Germany*

Background: Modifiable risk factors (RF) for fear of falling (FOF) are needed. We studied urge incontinence (UI), bowel incontinence (BI), overactive bladder (OAB), walking activity (WA) and nocturnal activity (NA). Methods: ActiFE Ulm is a population-based observational study in 1506 community dwelling elderly (age 65-90). The Short FESI (dichotomized into fear versus no or little fear) was used as the outcome. Multiple logistic regression analyses were performed and controlled for age, sex and known RF. Activity was measured using accelerometers (ActivePAL) for one week (day and night). Above mentioned RF were entered separately. Results: OAB (OR 2.55, CI95% 1.16-5.59) and WA (activity per day in minutes; OR 0.990, CI95% 0.981-0.999) were associated with FOF. UI, BI and NA were not associated. Discussion: OAB and decreased daily walking activity were significantly associated with FOF.

### FEAR OF FALLING AND REHABILITATION OUTCOMES IN OLDER ADULTS RECOVERING FROM HIP FRACTURE

J. Wetherell<sup>1,2</sup>, A. Petkus<sup>3</sup>, E.J. Lenze<sup>4</sup>, *1. VA San Diego Healthcare System, San Diego, California, 2. University of California, San Diego, La Jolla, California, 3. SDSU/UCSD Joint Doctoral Program in Clinical Psychology, San Diego, California, 4. Washington University, St. Louis, Missouri*

We examined whether fear of falling predicted functional capacity and need for a higher level of care in a sample of 235 adults over age 60 who were undergoing inpatient rehabilitation following a hip fracture. We controlled for physical function 4 weeks after the fracture, other medical illness, depressive symptoms, and age. Fear of falling at week 4 predicted poorer physical function at week 12 (p<.05) and decline in physical function from prefracture levels to week 12 (p=.002), and week 26 (p=.02). Fear of falling at week 12 predicted needing a higher level of care at week 26 (p=.05). Overall, these results suggest that fear of falling is an independent predictor of poor physical function, functional decline, and need for a higher level of care in older adults recovering from hip fracture, even after controlling for other health and mental health variables.

### THE RELATIONSHIP BETWEEN FEAR OF FALLING AND FOOT CLEARANCE IN OLDER PEOPLE

S. Rochat<sup>1</sup>, B. Mariani<sup>4</sup>, C. Lenoble-Hoskovec<sup>1</sup>, F. Botrugno<sup>2</sup>, C. Piot-Ziegler<sup>3</sup>, K. Aminian<sup>4</sup>, B. Santos-Eggimann<sup>2</sup>, C. Bula<sup>1</sup>, *1. CHUV, Lausanne, Switzerland, 2. IUMSP, Lausanne, Switzerland, 3. UNIL, Lausanne, Switzerland, 4. EPFL, Lausanne, Switzerland*

Introduction : Fear of falling (FOF) is associated with falls and modifications in gait parameters. Foot clearance during walking is directly linked to tripping and falling. The relationship between FOF and foot

clearance has never been evaluated. Methods : Participants (N=568, aged 66 to 71 years, 57.2% women) underwent gait parameters measurements using footworn sensors. Specific foot clearance parameters evaluated included maximal and minimal heel and toe clearances and their variability. FOF was assessed using a single question. Results : Overall, 27.4% of the participants reported FOF. Compared to the others, participants with FOF had decreased maximal heel (28.9 vs 30.4 cm,  $p<.001$ ) and toe clearance (12.5 vs 13.8 cm,  $p<.001$ ), and decreased minimal toe clearance variability (SD 3.7 vs 4.0 cm,  $p<.001$ ). Conclusion : These preliminary results suggest a relationship between FOF and foot clearance parameters. Multivariate analyses are underway.

## SESSION 1550 (SYMPOSIUM)

### INNOVATIVE APPROACHES TO THE SYNTHESIS OF KNOWLEDGE IN GERONTOLOGY: INTEGRATIVE DATA ANALYSIS

Chair: *A.L. Gross, Institute for Aging Research, Harvard Medical School, Boston, Massachusetts*

Co-Chair: *Q. Xue, Center on Aging and Health, Johns Hopkins University, Baltimore, Maryland*

Discussant: *A.M. Piccinin, Department of Psychology, University of Victoria, Victoria, British Columbia, Canada*

A key challenge for gerontologic research is the synthesis of knowledge from multiple sources of information. Integrative data analysis (IDA) is the analysis of multiple observational datasets that have been pooled into a single dataset to address substantive research hypotheses. The presentations in this symposium describe and illustrate innovative applications of IDA in several aging-related areas of scientific inquiry and highlight the advantages and pitfalls of combining different datasets. The first presentation by VanNess focuses on hypothesis generation as an aspect of research design. This topic is especially important for IDA given its synthetic aspirations and wide range of questions. The presentation will highlight the role of statistics in hypothesis generation and provide examples relevant to gerontologists. Kern and colleagues integrated two studies to illustrate the potential for using archival longitudinal data to test complex lifespan theories of personality and health, while noting some limitations and issues they encountered. Gross and Jones combined neuropsychological data from 7 studies using a composite measure of cognition. The result is a standardized, adaptable tool that can provide a platform for harmonizing studies of cognitive aging. Using a bricolage approach to hypothesis generation, the study highlights heterogeneity in cognition in patients with Alzheimer's disease depending on diagnostic criteria used. Finally, Kennison and colleagues examined effects of physical and cognitive activity on measures of cognitive performance in data from four longitudinal studies. Among the multiple relationships detected, cognitive activity most consistently predicted semantic knowledge, while physical activity most consistently predicted fluency/speed and reasoning.

### HYPOTHESIS GENERATION: WHAT IT IS, HOW IT'S DONE, AND THE ROLE STATISTICS CAN PLAY

P.H. Van Ness, *Yale School of Medicine, New Haven, Connecticut*

The formulation of a scientific hypothesis is an important part of the design of a gerontologic research study and a crucial prerequisite for a successful grant application. It is especially important, and challenging, that a hypothesis be well formulated when study results are being synthesized in meta-analyses or integrative data analyses. In this symposium contribution practical insights about the process of hypothesis generation will be provided by describing the key properties of scientific hypotheses, i.e., that they be unambiguous, testable, consequential, and novel, and the major means by which they are generated, i.e., by mentoring, literature review, first-hand experience, bricolage, and by exploratory data analysis. Two models for the role that statistics can play in hypothesis generation will be described and illustrated:

Peirce's abduction model and Tukey's detection model. Very different examples from gerontologic research, involving small pilot samples and integrative data analyses, will be used to illustrate key points.

### USING INTEGRATIVE DATA ANALYSIS TO TEST COMPLEX LIFESPAN PERSONALITY AND HEALTH MODELS

M.L. Kern<sup>1</sup>, H.S. Friedman<sup>2</sup>, S.E. Hampson<sup>3</sup>, L.R. Goldberg<sup>3</sup>, *1. University of Pennsylvania, Philadelphia, Pennsylvania, 2. University of California, Riverside, Riverside, California, 3. Oregon Research Institute, Eugene, Oregon*

Personality predicts healthy aging, but pathways remain uncertain. Theoretical models with multifaceted explanatory processes have been developed, but lifespan models are difficult to test. Drawing on existing longitudinal studies and integrative techniques allows comprehensive analysis of lifespan personality-health mechanisms. Using data from the Terman Life Cycle Study (begun 1921, lifelong follow-up) and the Hawaii Personality and Health Study (begun 1959, data collection ongoing), we demonstrate integrative analyses studying long-term personality-health processes. Personality, health, and behavioral variables were aligned, data were combined, and structural models demonstrated acceptable fit. We then employed the parallel personality factors to predict outcomes unique to each sample. Conscientiousness predicted physiological regulation in the Hawaii study and longevity in the Terman study, but effects were attenuated by behaviors, supporting a combined behavioral-physiological pathway. We highlight the potential for integrating other longitudinal studies to analyze healthy aging theories, while noting limitations and issues to consider.

### INTEGRATIVE DATA ANALYSIS OF COGNITIVE FUNCTION IN OLDER ADULTS: IMPLICATIONS FOR DEMENTIA CRITERIA

A.L. Gross, R.N. Jones, *Harvard Medical School, Boston, Massachusetts*

Previous research has demonstrated severe lack of agreement among diagnostic criteria for Alzheimer's disease (AD). Disagreement leads to different prevalence estimates, but no study has objectively quantified differences in cognitive function using a common metric across datasets. The present integrative data analysis used item response theory to link general cognitive performance (GCP) from neuropsychological batteries administered in several diverse cognitive aging studies. The GCP was scaled to be representative of the US population over 70 using sampling weights from the Aging, Demographics, and Memory Study (ADAMS) study (n=308), which used DSM-IV criteria for AD. Mean cognitive function among patients with AD in ADAMS was 0.9 standard deviations (SD) below that of patients with AD in a sample (n=193) using McKhann (1984) criteria and 1.2SD below that of another sample using the same criteria (n=136). These findings affirm previously reported differences in prevalence estimates and suggest heterogeneity in the AD phenotype.

### BETWEEN AND WITHIN PERSON EFFECTS OF PHYSICAL AND COGNITIVE ACTIVITY ON COGNITION IN FOUR STUDIES

R. Kennison<sup>1</sup>, M. Lindwall<sup>2</sup>, M. Mitchell<sup>3</sup>, C. Cimino<sup>4</sup>, A. Benitez<sup>5</sup>, C. Brown<sup>7</sup>, L. Gibbons<sup>6</sup>, *1. California State University, Los Angeles, California, 2. Halmstad University, Halmstad, Sweden, 3. Harvard Medical School, Boston, Massachusetts, 4. University of South Florida, Tampa, Florida, 5. Medical University of South Carolina, Charleston, South Carolina, 6. University of Washington, Seattle, Washington, 7. University of Victoria, Victoria, British Columbia, Canada*

In a combined effort of the IALSA network (PI: Hofer/Piccinin) and Advanced Psychometric Methods Workshop (PI: Mungas), the effects of cognitive and physical activity and change in these activities on four

measures of cognition were studied in data sets from Long Beach, OCTO-Twin, Seattle, and Victoria Longitudinal Studies. Mixed models with fixed and time varying covariates were fit separately to each data set, cognitive outcome, and activity type. Baseline cognitive activity consistently predicted semantic knowledge, but also predicted fluency/speed, reasoning and memory, in descending order of consistency. Cognitive activity change consistently predicted semantic knowledge, but also predicted memory, fluency/speed, and reasoning. Baseline physical activity most consistently predicted change in fluency/speed, followed by reasoning, memory and semantic knowledge. Physical activity change most consistently predicted change in reasoning, followed by fluency/speed, memory, and semantic knowledge. Benefits of physical and cognitive activity for cognition and the advantages of coordinated analysis will be discussed.

## **SESSION 1555 (SYMPOSIUM)**

### **INTERDISCIPLINARY AND INTERNATIONAL APPROACHES TO NARRATIVE GERONTOLOGY: EXPANDING THE DISCOURSE ON AGING AND OLDER ADULTS**

Chair: *P. Clark, Gerontology, University of Rhode Island, Kingston, Rhode Island*

Discussant: *B. de Vries, San Francisco State University, San Francisco, California*

Narrative methods enhance our understanding of the aging experience and improve care and services to older adults. Biographical approaches exploring the personal, professional, and policy-related dimensions of aging have been developed, and their foundations in different disciplinary and national settings have been established. This symposium uses narrative methods provided by different disciplines, professions, cultures, and countries to expand the interdisciplinary and international discourse on aging. The first paper presents research on terminally ill residents in Norwegian care institutions, and suggests that the concept of narrative identity be used to understand the process and significance of storytelling as a reaffirmation of the individual in confronting death. The second paper examines narrative structures guiding autobiographies of caregivers of family members with Alzheimer's, especially pertaining to changes in identity, roles, and self-perception. Implications for understanding and constructing meaning in the caregiving experience are explored. Next, narrative frameworks—including stories, substories, and counterstories—in Norwegian governmental White Papers on geriatric care are analyzed. Conclusions for understanding the role of culture in framing public policy problems and formulating their solutions are summarized. The final paper in this symposium explores how professional self- and patient narratives affect patterns of collaboration and communication in teamwork practice settings, with implications for interprofessional education of health and social care providers in improving geriatric care. Overall, suggestions regarding the use of narrative methods to expand the interdisciplinary and international discourse on older adults are highlighted, and recommendations offered for new directions in narrative analyses involving aging in different contexts.

### **WHAT IS IMPORTANT TO TELL WHEN YOU KNOW THAT YOU ARE GOING TO DIE? NARRATIVE IDENTITY IN THE STORIES OF TERMINALLY ILL PATIENTS IN NORWEGIAN CARE INSTITUTIONS**

*O. Synnes, Betanien Diaconal University College, Bergen, Norway*

Narrative identity underpins the importance of stories as a way of grasping and understanding human life. A central notion is how stories can incorporate unexpected events into the ongoing story, a salient aspect in research on "illness narratives," in which stories are seen as a way of reinterpreting the new situation in a life confronting discontinuity. However, much of this research is primarily focused on the interpreta-

tion of illness. In this reported study on storytelling among terminally ill, this was only one of several topics, and for some the illness was not even thematized. To understand the narrative identity in these stories we must include other versions of reconfiguration. Additionally, just as vital as the contents are the act and process of storytelling as a reaffirmation of the narrator. The stories examined in this research relate not so much to concerns about aging as those experiences in confronting death.

### **"GOOD DAYS AND BAD DAYS": PUBLISHED CAREGIVER NARRATIVES AND THE STORY OF ALZHEIMER'S**

*S. Chivers, Trent University, Peterborough, Ontario, Canada*

This paper draws on published autobiographies by caregivers of family members with Alzheimer's. The goal is to examine how narrative structures guiding autobiography mesh and clash with narrative structures related to Alzheimer's, especially pertaining to identity, which Oliver Sacks (among others) claims consists of both narrative and memory. Much published work on Alzheimer's narratives focuses, understandably, on a loss of self—for the person with Alzheimer's and for his/her caregivers. A set of autobiographical accounts by family members and friends of people with Alzheimer's about the processes they go through when they decide to take on the role and identity of caregiver is chosen for this analysis. The purpose of this discussion is to focus on the gains in self-perception that accrue from the actions and decisions related to caring for someone. Implications for understanding the meaning of caregiving experience, and how meaning may be constructed, will be explored.

### **UNDERSTANDING PUBLIC POLICY IN NORWAY: A NARRATIVE ANALYSIS OF GOVERNMENTAL WHITE PAPERS**

*F.F. Jacobsen, Bergen University College, Bergen, Norway*

How the general public in Norway conceives being an older adult and the meaning of chronological age has changed over the last few decades. As narratives of aging may be identified in the Norwegian mass media and in the population at large, dominant narratives may also be identified in policy documents as well, such as governmental White Papers. This paper develops a narrative analytical framework based on stories, substories, and counterstories; and argues that such narratives are characterized as much by what is left unsaid as by what is said, and as much by choice of words and word combinations as by explicit messages. Culture strongly influences what will be and ought to be regarding aging and geriatric care in Norway as expressed in the White Papers. Three recent governmental White Papers dealing with professional geriatric care will serve as material for a narrative analysis with these points in mind.

### **PROFESSIONAL NARRATIVES AND INTERPROFESSIONAL EDUCATION: IMPLICATIONS OF UNDERSTANDING PROFESSIONAL BIOGRAPHIES FOR COLLABORATIVE PRACTICE WITH OLDER ADULTS**

*P. Clark, Gerontology, University of Rhode Island, Kingston, Rhode Island*

Recent workforce development reports and recommendations in geriatrics and gerontology have emphasized the importance of educating different health and social care professionals to work together on interdisciplinary teams. Effective education of practitioners and students for teamwork requires recognizing the different values and biographies of each profession. These include both self-narratives—the representation of the individual as a professional—and patient narratives—how the professional constructs the "story" of the patient and his or her problem. Different health and social care professionals develop a unique identity based on these two types of narratives. This paper (1) reviews the developmental process through which each geriatrics profession acquires its self-narrative, and (2) explores how the patient narrative

affects relationships with older adults. In particular, how self- and patient narratives influence interprofessional education and practice will be highlighted, and implications for training professionals to work together to provide improved geriatric care will be summarized.

## SESSION 1560 (SYMPOSIUM)

### MEASURING THE PREVALENCE OF ELDER ABUSE AND NEGLECT: USING THE NUMBERS TO EFFECT CHANGE

Chair: *G.M. Gutman, Simon Fraser University, Vancouver, British Columbia, Canada*

Discussant: *G. Anetzberger, Cleveland State University, Cleveland, Ohio*

In gaining policy attention, numbers are important. Resources are allocated on the basis of a disease, disability or social problem affecting a sizable segment of the population. Over the past 30 years, a small number of national studies of elder mistreatment have been conducted. While they suggest that the prevalence of elder abuse may parallel that of Alzheimer's disease or exceed it, key problems exist in comparing findings across studies. These include using different: inclusion criteria, sampling methods, abuse categories, definitions, and data collection methods. Questions also arise about the appropriateness of comparing across countries with very different social and political systems and income status. In this symposium R. Acierno and M. Hernandez-Tejeda will reflect on the methodology, findings and impact to date on policy and programs of the 2010 US National Elder Mistreatment Study. L. McDonald and S. Hirst will describe instrument development and validation in preparation for a Canadian national study of community and institutional abuse. G. Anetzberger, President of the National Committee for Prevention of Elder Abuse (NCPEA) and G. Gutman, President of the International Network for Prevention of Elder Abuse (INPEA), the two organizations sponsoring this symposium, will discuss North American prevalence and incidence studies from the perspective of the NGO community in the US, Canada and internationally and how, jointly with the national and international gerontological research community, the data can be used to move from awareness-raising to action.

### ELDER MISTREATMENT: NOW WHAT?

R. Acierno, M.A. Hernandez-Tejada, *psychiatry, medical university of south carolina, Charleston, South Carolina*

The US-based National Elder Mistreatment Study of over 5,500 individuals aged 60 and above will soon be followed by its counterpart in Canada. The US study gave us the first large scale epidemiological basis from which to estimate prevalence of elder mistreatment in community residing older adults in terms of physical, sexual, emotional abuse, and neglect. Fully 10% reported experiencing one of these forms of mistreatment since age 60. But now that we know a little about prevalence, what does it mean in terms of outcome and intervention? That is, what are the health and mental health effects of community-based elder mistreatment, and what are appropriate community-based responses to both the abuse and its effects. The National Elder Mistreatment Study gives us an indication of where to look and what to look for in terms of targets for preventive intervention. It also directs us to the next steps.

### MEASURING ELDER ABUSE AND NEGLECT IN THE INSTITUTION

L. McDonald<sup>1</sup>, S. Hirst<sup>2</sup>, *1. Institute for Life Course and Aging, University of Toronto, Toronto, Ontario, Canada, 2. Faculty of Nursing, University of Calgary, Calgary, Ontario, Canada*

This paper reports on a pilot project from a larger research program that examined the validity of a measurement tool developed for a national prevalence study in the community and institutions in Canada. The measurement instrument was drafted in a series of steps that included a review of the literature, a consensus panel to develop definitions, focus groups, cognitive interviews, dyadic interviews, and, finally large-scale pretest-

ing. The community survey was administered over the telephone (N=267); the institutional survey was conducted in person (N=40). The construct validity of the measurement instrument for the institutionalized older adults, whose abuse status was known prior to the interviews, was analyzed using a known groups approach to validity. The results provide evidence of the construct validity of the institutional survey.

## SESSION 1565 (SYMPOSIUM)

### MENTAL HEALTH DISPARITIES RESEARCH USING SECONDARY DATA SETS

Chair: *G. Kim, The University of Alabama, Tuscaloosa, Alabama*

Discussant: *K.E. Whitfield, Duke University, Durham, North Carolina*

As our nation becomes more racially and ethnically diverse, understanding mental health needs of diverse elderly groups becomes more important. The purpose of this symposium is to discuss current issues of racial and ethnic disparities in mental health and mental health care among older adults using existing secondary data sets. Given that there are more than sixty secondary data sets that are publicly available for aging research, it would be helpful to discuss different topics for mental health disparities research we can consider with those existing secondary data sets. Secondary data sets that the panel will discuss in individual presentations include (a) the Collaborative Psychiatric Epidemiology Surveys (CPES), (b) the California Health Interview Survey (CHIS), (c) the Health, Aging, Body Composition (Health ABC) Study; and (d) the Caring for Adults Recovering from Stroke (CARES). Many of these have been funded by National Institutes of Health. Using these secondary data sets, racial and ethnic minority elderly groups that will be discussed in this symposium are non-Hispanic Whites, African Americans/Blacks, Latinos/Hispanics, and Asians. Experts in the field will discuss various topics relating to aging and mental health disparities such as measurement issues of mental health screening tools, geographic correlates of racial disparities, and the effect of low literacy on racial differences in depression.

### LOW HEALTH LITERACY AND BLACK-WHITE DIFFERENCES IN DEPRESSION ONSET: FINDINGS FROM THE HEALTH, AGING, AND BODY COMPOSITION STUDY

L. Barry<sup>1</sup>, R. Thorpe<sup>2</sup>, K. Yaffe<sup>3</sup>, B. Penninx<sup>4</sup>, H.N. Ayanayon<sup>3</sup>, S. Satterfield<sup>5</sup>, A.B. Newman<sup>6</sup>, E.M. Simonsick<sup>7</sup>, *1. UConn Center on Aging, Farmington, Connecticut, 2. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, 3. University of California San Francisco School of Medicine, San Francisco, California, 4. VU University Medical Center, Amsterdam, Netherlands, 5. University of Tennessee Health Science Center, Memphis, Tennessee, 6. University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, 7. National Institute on Aging, Bethesda, Maryland*

We evaluated the association between low health literacy and Black-White differences in depression onset among 3,075 older persons with up to eight clinic visits over 11 years in the Health, Aging, and Body Composition study. Low health literacy, per REALM, was reading level below 9th grade. In multivariable analysis controlling for age, sex, perceived income inadequacy, CHD, stroke, and diabetes, 42% of blacks and 36% of whites had depression onset (OR=1.25; 95%CI 1.09, 1.43), yet the association became non-significant after controlling for low health literacy. In adjusted sex-stratified analyses, race was only significant among men (OR Blacks versus Whites=1.58; 95%CI 1.29, 1.93). Low health literacy was associated with higher likelihood of depression regardless of sex and attenuated the association between race and depression in men (OR=1.34; 95%CI 1.08, 1.66). Low literacy influences susceptibility to depression in men and women and partially explains higher risk of depression in black men.

## **GEOGRAPHIC VARIATION OF RACIAL DISPARITIES IN MENTAL HEALTH SERVICE USE AMONG OLDER ADULTS: RESULTS FROM THE COLLABORATIVE PSYCHIATRIC EPIDEMIOLOGY SURVEYS**

G. Kim<sup>1</sup>, J. Parton<sup>1</sup>, J. DeCoster<sup>2</sup>, A.N. Bryant<sup>1</sup>, K.L. Ford<sup>1</sup>, P.A. Parmelee<sup>1</sup>,  
1. *The University of Alabama, Tuscaloosa, Alabama*, 2. *University of Virginia, Charlottesville, Virginia*

Given the lack of research on the role of geography in mental health care, this study examined whether racial differences in mental health service use varied across geographic regions among Black and White elders. Drawn from the Collaborative Psychiatric Epidemiology Surveys, Blacks (n=1,008) and Whites (n=1,870) aged 60 and older were selected for analysis. Logistic regression analyses and geographic information systems (GIS) were employed. After controlling for covariates, no significant racial differences in mental health service use were found in the overall sample, but racial differences in mental health service use varied significantly by region. Black elders in the South were less likely than Whites to use mental health services. No significant racial differences were observed in Northeast, West, or Midwest. The findings suggest that to reduce disparities at the national level, improving the access to mental health care in certain areas, the South in particular, may be essential.

## **ASIAN-AMERICAN OLDER ADULTS AT RISK FOR POOR MENTAL HEALTH**

D. Sorokin<sup>1</sup>, H. Nguyen<sup>2</sup>, S. Mavandadi<sup>3</sup>, 1. *University of California, Irvine, Irvine, California*, 2. *University of California, Los Angeles, Los Angeles, California*, 3. *University of Pennsylvania, Philadelphia, Pennsylvania*

Asian-American older adults likely have unmet mental health needs due, in part, to poor access to mental health services. This study examined reasons that older adults from diverse racial/ethnic backgrounds both sought help for mental health concerns, as well as no longer received treatment, highlighting the unique experience of Asian/PI older adults. Data came from the 2007 and 2009 California Health Interview Survey, a cross-sectional, population-based sample of Californian adults (N=40,000). The findings suggested that Asian/PI older adults were less likely to receive treatment for a mental health problem compared to other racial/ethnic groups (p<0.001). They reported not seeking help because they felt uncomfortable talking with a health professional (52%) or were concerned about someone finding out (58%). Furthermore, Asian/PI respondents were less likely to complete the recommended course of treatment compared to other racial/ethnic groups (p<0.001). Analyses examining the role of language proficiency and insurance status will be presented.

## **RACE, STROKE, AND THE CES-D: CARING FOR ADULTS RECOVERING FROM THE EFFECTS OF STROKE (CARES) STUDY**

M.M. Perkins<sup>1</sup>, O.J. Clay<sup>1</sup>, W.E. Haley<sup>2</sup>, V.G. Wadley<sup>1</sup>, J.S. Grant<sup>1</sup>, L. Pulley<sup>4</sup>, D.L. Roth<sup>3</sup>, 1. *University of Alabama at Birmingham, Birmingham, Alabama*, 2. *University of South Florida, Tampa, Florida*, 3. *Johns Hopkins University, Baltimore, Maryland*, 4. *University of Arkansas for Medical Sciences, Little Rock, Arkansas*

Racial differences in depression have been studied among family caregivers and stroke survivors, but methodological issues remain in their interpretation. Instruments such as the Center for Epidemiological Studies Depression (CES-D) scale can be administered either in person or over the telephone, and the method of delivery may influence how participants respond. The CARES project consists of an epidemiologically drawn sample of stroke survivors and their family caregivers. A total of 302 participants (mean age stroke survivors = 74.18, mean age caregivers = 62.36, 43.4% African American) completed the CES-D during a baseline telephone interview and a subsequent in-home visit conducted 13.1 weeks later, on average. There were no significant racial

differences in depressive symptoms for stroke survivors or their family caregivers from either assessment mode, but significantly more depressive symptoms were reported during the in-home visit for both racial groups (ps < 0.05). Implications for future research will be discussed.

## **SESSION 1570 (SYMPOSIUM)**

### **OVERCOMING QUALITATIVE METHODS CHALLENGES WITH MINORITY OLDER MEN: IMPLICATIONS FOR GERONTOLOGICAL RESEARCH AND PRACTICE**

Chair: *T.M. Maschi, Graduate School of Social Service, Fordham University, New York, New Jersey*

Co-Chair: *I.V. Carrion, University of South Florida, Tampa, Florida*

Discussant: *T.M. Maschi, Graduate School of Social Service, Fordham University, New York, New Jersey*

This symposium presents new findings and practical information using qualitative methods with minority older men's experiences of cumulative risk-resilience from qualitative research experts. This includes qualitative research challenges on recruiting and engaging older Latino men with cancer in a community based qualitative study, conducting qualitative research on stress and coping with ethnically diverse older minority men in prison, and a case study engaging a Latino immigrant man in conversation about colorectal cancer, and a photovoice study with African American men with extended hotel stays. Practical information on overcoming methods challenges and infusing aging and qualitative methods with older minority men are delineated. Additionally, understanding the common obstacles can provide valuable information to the research-practice community. The panelists also delineate how these major findings and practical lessons can be infused in gerontological research and educational curriculum.

### **CONDUCTING QUALITATIVE RESEARCH ON STRESS AND COPING WITH ETHNICALLY DIVERSE OLDER MINORITY MEN IN PRISON**

*T.M. Maschi, M.E. Morrissey, Graduate School of Social Service, Fordham University, New York, New Jersey*

This presentation is on new research on older male minority prisoners (aged 55+) on stress and coping in prison. The study used a mixed methods design and a sample of New Jersey older prisoners (N=672) of which 220 provided qualitative responses. Qualitative data was gathered using an anonymous mailed questionnaire consisting of open ended questions about stress and coping in prison. Qualitative data was analyzed using a grounded theory approach (Strauss&Corbin, 1998). Preliminary results revealed that older male prisoners reported prison stress related to oppressive/abusive environment, unfair treatment from staff and younger prisoners, family separation, and situations of uncertainty, such as fear of death and reentry. Older male prisoners also reported coping resources that involved exercise, reading, and the arts. Methodological challenges overcome include using mixed methods to understand sensitive topics, such as trauma, maximizing response rate using mail methods, reaching Spanish-speaking persons, and qualitative data management for large samples.

### **CONDUCTING A QUALITATIVE STUDY WITH OLDER LATINO MEN WITH CANCER**

*I.V. Carrion<sup>1</sup>, F. Nedjat-Haiem<sup>2</sup>, 1. University of South Florida, Tampa, Florida, 2. VA Greater Los Angeles Healthcare System, Los Angeles, California*

Addressing the psycho-social, oncology needs of older foreign born (FB) Latino men diagnosed with cancer, residing in Central Florida, is essential given the increased population and the urgency to provide effective cancer care. This study explored treatment decisions of 15 (FB) Latino men from Cuba, Mexico, Colombia and Venezuela diagnosed

with cancer within the past five years. Data were collected using in-depth interviews, tape-recorded, transcribed in Spanish and translated into English. The median age of the participants was 55.4 years. Salient themes were derived using a grounded theoretical approach and constant comparison method. The findings support the role of culture and gender in guiding treatment decisions, changing family roles, declined health, unknown expectations of health providers and (ACP) advance care planning. Methodological challenges that were effectively confronted included recruiting (FB) Latino men undergoing role changes, declining health, and fears associated with sudden diagnosis.

#### **A PHOTOVOICE STUDY ON HEALTH OUTCOMES OF OLDER MEN IN EXTENDED STAY HOTELS**

T. Lewinson, *School of Social Work, Georgia State University, Atlanta, Georgia*

Extended stay hotels are housing solutions for some older adults on the fringe of street homelessness. Recent research indicates negative health outcomes for homeless older adults residing in hotel accommodations (Hwang, Wilkins, Tjepkema, O'Campo, & Dunn, 2009). The current study focused on health challenges for older men residing in hotels. Specifically, (1) older men's perceptions of the hotel as a suitable place to reside, (2) reported health challenges as a result of person-environment interactions, and (3) positive residential and community coping strategies that improve health outcomes. This two-phased qualitative study used in-depth interviews (15 men) and Photovoice (5 men) to explore health management in extended-stay hotels. Common residential stressors and coping strategies for improving health outcomes will be discussed along with challenges associated with recruiting participants and using phase 1 data in phase 2.

#### **A CASE STUDY: AN OLDER LATINO IMMIGRANT'S EXPERIENCE WITH COLORECTAL CANCER**

F. Nedjat-Haiem, *University of Southern California, Pacific Palisades, California*

Limited research explores the impact of cancer on the lives of Latino, immigrant men. This research utilized an ethnographic, single case study design to explore how one Latino man from El Salvador experienced being diagnosed and treated for colorectal cancer. This research followed the structure of Lincoln and Guba's (1985) case study to identify how cancer becomes problematic, the context within which problems emerge, related issues, and lessons learned. Data were collected using two in-depth interviews, tape-recorded and transcribed for analysis purposes. Thematic analysis was used to piece together identified patterns in the data and to form a comprehensive picture of the colorectal cancer experience. Findings identified the most difficult parts of the cancer diagnosis and treatment which include being misinformed about the extent of surgery, complications with the side-effects of treatment, worry about finances, and concern for family. Methods for conducting a rigorous case-study will be discussed.

### **SESSION 1575 (SYMPOSIUM)**

#### **POLICY AND ENVIRONMENTAL CHANGE TO SUPPORT OPTIMAL AGING: EXEMPLAR INITIATIVES IN PUBLIC HEALTH**

Chair: *S.M. Albert, Behavioral & Community Health Sciences, University of Pittsburgh, Pittsburgh, Pennsylvania*

Co-Chair: *B. Belza, University of Washington, Seattle, Washington*

Discussant: *L. Anderson, CDC, Atlanta, Georgia*

Health promotion interventions typically focus on changing individual behavior. Yet an increasing body of research suggests that factors outside the individual, in particular policies and environments that support unhealthy behaviors or make it difficult for people to reduce health risks, create barriers to healthy aging. Recognizing the critical role of policy (laws, regulations, and rules) and environment (economic,

social, or physical contexts) in healthy aging, the CDC Healthy Aging Research Network (HAN) has focused on the design, implementation, and evaluation of environmental and policy changes that promote healthy aging. Several CDC-HAN projects have focused attention on environmental changes and policies that support mobility, physical activity, cognitive health, and prevention of depression. In this symposium, CDC-HAN investigators will report on exemplars highlighting policy and environmental change at the local and state level. Presentations will examine successes in this area as well as challenges anticipated over the next decade. Research geared to policy and environmental change in the areas of medication management and mobility will be discussed, as well as the central role of community and state coalitions in promoting environment and policy change to support optimal aging.

#### **CDC HEALTHY AGING RESEARCH NETWORKS' APPROACH TO POLICY AND ENVIRONMENTAL CHANGE**

B. Belza<sup>1</sup>, R.H. Hunter<sup>2</sup>, *1. University of Washington, Seattle, Washington, 2. University of North Carolina, Chapel Hill, North Carolina*

There is growing evidence that environmental and policy change (EPC) is needed to support healthy aging and prevent and/or delay disease and disability. This session focuses on the outcomes and lessons learned from a series of national EPC initiatives developed and disseminated by the Centers for Disease Control and Prevention (CDC) Healthy Aging Research Network (HAN). We provide examples that highlight the importance of: 1) using a variety of dissemination channels, 2) building partnerships and cross-sector collaboration, and 3) incorporating research into one's efforts so to foster environmental and policy systems change for healthy aging. Our initiatives include the development of: an environmental audit tool, conference series, clearinghouse, action briefs, online conferences, and scholarly publications. Resources and strategies will be discussed to enable attendees to create environmental and policy change in their own spheres of influence.

#### **SUSTAINABLE MEDICATION REVIEW IN LOW-INCOME SENIOR HOUSING**

S.M. Albert, Y. Agimi, K.S. Pater, *Behavioral & Community Health Sciences, University of Pittsburgh, Pittsburgh, Pennsylvania*

In an effort to change the environment of medication use among residents of low-income senior housing, we developed a partnership between a school of pharmacy, a school of public health, and a county housing authority. Advanced pharmacy students, supervised by a clinical pharmacist, conducted medication reviews as part of their experiential learning requirement. In 2009-2011, 151 people aged 50+, from 15 different sites, completed medication reviews conducted by 70 pharmacy students. Suboptimal prescribing was common, including medications that increase the risk of falls in 33.7%, contraindicated medications in 20.5%, likely drug-drug interactions in 8.6%, and medication side effects in 15.9%. 22.5% of participants who made use of the review by taking it to their physician were admitted to the hospital in the 6 months after the review, compared to 35.3% of those who did not use the review. Medication review may reduce inappropriate prescribing and lower the risk of hospitalization.

#### **CREATING WALKABLE NEIGHBORHOODS FOR SENIORS**

S.P. Hooker, *Exercise and Wellness, Arizona State University, Phoenix, Arizona*

Ageing in place arises from an ecological perspective of aging assuming interplay between individual functional capacity, adaptation, and one's physical and social environment. This is linked to related concepts of urban design, accessibility, and walkable communities. This session will describe proven strategies that can be used by state- and community-level organizations to create walkable neighborhoods for seniors (WN4S). Case studies from relevant projects (Oakland, CA; Sacramento, CA; San Diego, CA) will be used to present a variety of



achievements, challenges, and lessons learned that can be applied to similar WN4S efforts to improve the physical and social environment to increase physical activity and maintain health and independence of older adults. Translation of science to practice is vital for success of these types of projects. Thus, current findings from scientific research will also be presented to guide the refinement of future endeavors by agencies, organizations, practitioners, and advocates to create WN4S.

#### **ROLE OF STATE AND COMMUNITY COALITIONS IN PROMOTING POLICY AND ENVIRONMENTAL CHANGE**

R.H. Hunter<sup>1,2</sup>, M. Altpeter<sup>1</sup>, E. Schneider<sup>1</sup>, 1. *UNC Institute on Aging, Chapel Hill, North Carolina*, 2. *UNC Center for Health Promotion and Disease Prevention, Chapel Hill, North Carolina*

Effective environmental and policy change to support healthy aging is facilitated by engagement of people from diverse sectors, including public health, planning, government, healthcare, recreation, business, engineering, architecture, and universal design, as well as older adult advocates. State, regional and community coalitions are practical ways to bring together people from diverse backgrounds and settings, and they can be highly instrumental in promoting policy and environmental change. This presentation will highlight exemplars from the work of the North Carolina Healthy Aging Research Network - a CDC-Healthy Aging Research Network member center - to build capacity and generate environmental and policy change. We will share roles, strategies and lessons learned from the NC Healthy Aging Coalition, NC Mental Health and Aging Coalition, NC Falls Prevention Coalition (state, regional and local affiliates) and a campus-community coalition for older pedestrian safety and walkability. Participants will have an opportunity to consider back-home coalition development.

#### **DISCUSSANT**

L. Anderson, *CDC, Atlanta, Georgia*

Perspectives on translating research into practice.

### **SESSION 1580 (SYMPOSIUM)**

#### **SUCCESSFUL AGING: PATTERNS OF HEALTH AND PERSONAL RESOURCES**

Chair: *A.M. Sherman, Oregon State University, Corvallis, Oregon*

Discussant: *J. Smith, The University of Michigan, Ann Arbor, Michigan*

Successful aging requires compensation strategies, management of symptoms, and maintenance of psychological well-being. Older adults engage personal resources to manage the challenges of aging, including their social context, health behaviors, and personality dimensions. This symposium presents four papers illuminating important aspects of successful aging. First, Choun et al. explore the role of personality in how older adults meet daily health goals over 100 days. These data show that individuals high in neuroticism experienced less progress with their health goals, while those high in conscientiousness experienced greater progress with their health goals. Further, high conscientiousness and increased positive affect were related to higher goal progress. Newton and Stewart discuss regrets for women at late-mid life, showing that regret is not related to life events alone, but involves patterns of individual differences in expressions of regrets experienced over the course of 20 years. Sherman discusses the joint contribution of personality and social relations in adaptation to Osteoarthritis. She reports that psychological well-being is associated with positive social relations and optimism while pain is associated with social strain only. Finally, Versey and Newton report on race-moderated mediation of the relationship between generativity and successful aging. Specifically, they found that generativity was associated with successful aging for the sample, but this relationship was mediated by religious/spiritual importance for White women, and paid work for African American women. Strengths of the papers together include both longitudinal and cross-sectional data,

multiple data collection methods, multiple outcomes assessing both physical and psychological health and diverse participants.

#### **DYNAMIC LINKAGES OF PERSONALITY AND HEALTH**

S. Choun<sup>1</sup>, S. Mejia<sup>1</sup>, K. Hooker<sup>1</sup>, T. Pham<sup>2</sup>, R. Metoyer<sup>2</sup>, 1. *Human Development and Family Sciences, Oregon State University, Corvallis, Oregon*, 2. *School of Electrical Engineering and Computer Sciences, Oregon State University, Corvallis, Oregon*

We examined short-term intraindividual variability and interindividual differences in the dynamic linkages of personality and health by examining how daily health-goal progress is associated with daily positive and negative affect as well as whether these associations can be explained by neuroticism and conscientiousness. The analyses utilized data from the Personal Understanding of Life and Social Experiences (PULSE) Project, a 100 day internet-based, microlongitudinal daily study. Multilevel models revealed that within-person variations in daily positive affect positively covaried with daily health-goal progress, and daily negative affect negatively covaried with daily health-goal progress (travel together over time). Individuals high in neuroticism experienced lower levels of progress with their health goals and those high in conscientiousness experienced higher levels of progress with their health goals. High conscientiousness with increased positive affect was significantly related to higher health goal progress. High conscientiousness marginally attenuated the link between daily negative affect and daily health-goal progress.

#### **“REGRETS? I’VE HAD A FEW”: A LONGITUDINAL STUDY OF REGRET PATTERNS IN LATE MIDLIFE**

N. Newton<sup>1</sup>, A. Stewart<sup>2</sup>, 1. *Youngstown State University, Youngstown, Ohio*, 2. *University of Michigan, Ann Arbor, Michigan*

Considerable research concerning regret has focused on its content and relationship to well-being. Additionally, cross-sectional studies have examined women’s regrets at different ages. However, few researchers have examined the link between regret and personality or taken a longitudinal view of regret. The current research uses a qualitative, longitudinal approach to examine the relationship between how individuals deal with life events and their experience of regret, and whether individuals alter the way they express their regrets over time. Using open-ended data spanning twenty years from 27 late midlife women of the Radcliffe Class of 1964 (mean age = 62), this study identifies four patterns of regret: continuous regret, never regret, increased regret, and decreased regret. Rather than solely relating to life events at various stages, these regret patterns reflect personality traits associated with responses to the events themselves, such as resilience or a lack of adaptation.

#### **CONTRIBUTION OF PERSONALITY AND SOCIAL RELATIONS TO WELL-BEING FOR OLDER ADULTS WITH OSTEOARTHRITIS**

A.M. Sherman, *Oregon State University, Corvallis, Oregon*

Successful aging in the context of chronic illness requires management of symptoms and maintenance of psychological well-being. Older adults draw on internal resources such as personality, and on external resources, such as the social context. Although several literatures have addressed the importance of social resources and personality dimensions individually, rarely have both internal and external resources been considered together. Older adults (N=160) with Osteoarthritis were assessed regarding pain symptoms and psychological well-being (CES-D and Self-Esteem). Social support and strain were used as external resources and optimism and pessimism as internal resources to explain variance in outcomes. Results of hierarchical regression analyses showed that both internal and external resources were significantly related to psychological well-being ( $R^2 = .49, .33$ ). However, only social strain was significantly associated with pain ( $R^2 = .47$ ). Discussion highlights

the importance of assessing both internal and external resources in models explaining successful adaptation to chronic illness.

### **GENERATIVITY, PRODUCTIVE ACTIVITIES AND SUCCESSFUL AGING IN MIDDLE-AGED AFRICAN AMERICAN AND WHITE WOMEN**

H. Versey<sup>1</sup>, N. Newton<sup>2</sup>, *1. Haverford College, Haverford, Pennsylvania, 2. Youngstown State University, Poland, Ohio*

Aging successfully can be approached in many ways; researchers continue to suggest further elements of, and expansions to, Rowe and Kahn's (1987; 1997) model. The current study also aims to expand the concept of successful aging, but at the same time situates the concept within the framework of midlife, and examines its relationship to generativity (Erikson, 1974). Furthermore, this research identifies productive activities (e.g., paid work, sports) and spiritual importance as mediators of the generativity/successful aging relationship and how these differ in a sample of 244 middle-aged African American and White women (mean age = 61). Results indicate that, whereas generativity and successful aging are related for both African American and White women, mediators of the relationship differ by race. This research highlights the importance of examining different pathways between giving back to the next generation and aging successfully.

## **SESSION 1585 (PAPER)**

### **DISCOVERY EXCHANGE: END-OF-LIFE ADJUSTMENT AND CARE**

#### **DEPRESSION AND WIDOWHOOD: NEW LIGHT ON GENDER DIFFERENCES, SELECTION, AND ADAPTATION**

I. Sasson, D. Umberson, *University of Texas at Austin, Austin, Texas*

Previous research has been inconclusive with respect to gender differences in depression following widowhood. Using nationally representative longitudinal data of older adults, followed over 16 years, the authors examine short and long term effects of widowhood on depression. This study design is superior to cross-sectional designs by facilitating a comparison of depression levels pre- and post-widowhood, thus controlling for individuals' baseline depressive symptoms. Consistent with previous findings, results show that regardless of widowhood women exhibit higher levels of depression on average compared to men, and that both men and women experience more depressive symptoms following a spouse's death. However, no gender differences are found in the amount of change in depressive symptoms associated with bereavement. Furthermore, men and women appear, on average, to regain baseline levels of depression within three years of the event. Results also indicate that depressive symptoms are higher for the surviving spouse when death is unexpected, and that early widowhood may be associated with longer term consequences compared to late widowhood. While establishing that men and women exhibit similar patterns of depression with bereavement, the authors point out that selection into widowhood is highly associated with race and gender. In the sample studied women were three times more likely than men to become widowed and black women more than twice as likely as white women to experience early widowhood. This suggests that although the adverse effects of widowhood on depression may be similar across race and gender groups, exposure to such effects is highly differential.

#### **WIDOWHOOD IN OLD AGE: VIEWED IN A FAMILY CONTEXT**

M.S. Moss, S. Moss, *Arcadia University, Glenside, Pennsylvania*

We have been afforded a rare opportunity to examine widowhood in a family context, in a study of family bereavement that includes interviews with 24 widows (mean age 80) as well as separate interviews with one or two of their adult children. The husband/father had died within the previous 6 months to about a year. Two lengthy qualitative

interviews with each widow explored the ways that she described her experience of the loss as she interfaced with her children. Five themes emerged from qualitative analyses: (1) a greater emphasis on the meaning of her personal loss of her husband than on the meaning for her children of the death of their father; (2) the importance of maintaining a sense of independence and not being a burden on the children; (3) a reticence to share feelings of sadness and loneliness with the children; her emotional upset is often expressed in privacy. (4) a recognition that generational and life situations of the children thwart their ability to understand the depth of the meaning of her loss; and (5) a strong appreciation for her children's concern about her wellbeing and about her future. Overall, there is an underlying pervasive sense of protection of one's self and one's children. These themes are explored in the light of the dual process model of coping with bereavement. The meaning of widowhood in a family context is thus enriched. (Funded by NIA R01AG031806)

#### **ASSESSING OVERCOMING AND PARTICIPATORY ORIENTATIONS TO DEATH AND DYING IN ADULTHOOD**

B. Hayslip, E. Petty, D. Caballero, *Psychology, University of North Texas, Denton, Texas*

Kastenbaum and Aisenberg (1976) suggested that persons can cope with the impact of death and dying by altering their understanding of what each means to them as well as by changing their behavioral responses to such experiences. The present study's purpose was to develop a reliable and valid scale for assessing an individual's particular death perspective based on Kastenbaum and Aisenberg's (1976) distinctions between overcomers and participators. The Death Perspective Scale (DPS) developed here assessed the extent to which individuals utilize either an overcoming or participating approach to: 1) assigning meaning to dying and death, and 2) behaviorally responding to death-related experiences. Based upon data collected from 168 adults varying by age and gender, findings suggested that both overcoming and participating could be reliably assessed, correlated with measures of death anxiety and orientation toward death, and varied reliably ( $p < .05$ ) by age and gender, though such relationships were contrary to predictions by Kastenbaum and Aisenberg. Findings suggested that overcomers reported less fear of death and dying and were more accepting in this respect, while participators reported greater death-related fears and were less accepting. Women and older adults were more overcoming, while men and younger adults were more participatory, though such effects varied depending upon whether meaning versus response to death was considered. The discrepancy between the present findings and the predictions of Kastenbaum and Aisenberg may lie in better understanding how our death system has shifted over time and the degree to which this system has become culturally embedded.

#### **EXPLORING THE RELATIONSHIP BETWEEN QOL TRAJECTORIES AND DEATH FOR ADVANCED-STAGE CANCER PATIENTS**

G. Kyriotakis<sup>1,2</sup>, J.H. Rose<sup>2</sup>, *1. Geriatric Research Education and Clinical Center (GRECC), Louis Stokes VAMC, Cleveland, Ohio, 2. Case Western Reserve University, Cleveland, Ohio*

Patients diagnosed with advanced stage cancer confront complex and unique challenges that threaten their physical, psychosocial and spiritual integrity. Despite recent interventions to improve well-being, little is known about the relationship between quality of life and death. In this study we applied a joint modeling framework to analyze longitudinal data on quality of life (FACT-G), and time to event on patients with advanced stage cancer in order to describe the interrelationship between quality of life and death. 576 at baseline were analyzed from two hospitals in Cleveland Ohio, who have data until death or for up to two years after a diagnosis of advanced stage cancer. The joint distribution of quality of life and time-to-death is modeled through a set of random effects that account for the association between levels of qual-

ity of life and death. We also performed a subgroup analysis to evaluate the association between quality of life and time to death between a middle-aged (MA) and a young-old (YO) group. The results indicate that: 1) there is a negative and significant relationship between level of quality of life and probability of death; 2) overall, there are not significant long-term differences in quality of life between MA and YO. However, differences exist at the early stages of treatment; 3) the probability of dying is higher for the YO throughout the 24 months of study; 4) the association between quality of life and probability of death is different between MA and YO. The implications for interventions are discussed.

#### **TERMINALLY ILL BLACK ELDERS: MAKING THE CHOICE TO RECEIVE HOSPICE CARE**

H. Noh, *University of Wisconsin-Madison, Madison, Wisconsin*

The racial and ethnic inequality in receiving hospice care has been witnessed for decades in the United States. Researchers have explored the barriers to minorities' accessing hospice care and their end-of-life healthcare preferences. Though knowledge from previous studies provides insight into why minority elders might not choose to use hospice care even when they have access to it, currently there appears to be no research that has explored why some minority elders do choose to receive such care. This study seeks to address this gap by interviewing terminally ill older minority hospice patients and gathering information regarding the following three research questions: why do terminally ill minority elders choose to use hospice care?; what structural barriers do they face when accessing hospice care, and how have they overcome them?; and what cultural preferences do they have in receiving hospice care and what is their experience in having their preferences respected? To gain such information, face-to-face interviews were conducted using a semi-structured survey with 31 older minority hospice patients in Georgia, the vast majority of whom were black. Participants' responses were analyzed using the content analysis. Themes that emerged include the importance of open communication between healthcare providers and patients, the sources of correct/incorrect information, family support/non-support in choosing to use hospice care, the role of spirituality/religiosity in making the choice, and important values in receiving hospice care. The findings of this study will provide end-of-life care providers with insights for strategies to promote the hospice use by minority communities.

#### **END-OF-LIFE CARE PREFERENCES AMONG OLDER COMMUNITY-DWELLING SINGAPOREANS: A CONJOINT ANALYSIS**

C. Malhotra, M.A. Farooqui, A. Chan, E. Finkelstein, *Duke-NUS Graduate Medical School, Singapore, Singapore*

Understanding end-of-life (EOL) care preferences is important for policymakers and EOL service providers. The objective of this paper was to quantify the EOL care preferences among community-dwelling Singaporeans aged 50+ using a stated preference conjoint survey. The survey was administered to a national sample of 1500 older adults who completed a short survey and then were asked to choose between two hypothetical EOL care scenarios as a result of advanced cancer. The scenarios were described through 7 attributes with between 2 and 4 levels for each: severity of pain, amount of care required from family-members or friends, expected length of survival, quality of health care experience, expected cost of treatment from diagnosis to death, source of payment, and place of death. Ten hypothetical scenarios were presented to each respondent. A Hierarchical bayes procedure was used to estimate partworths for each attribute level and overall attribute importances. Results showed that treatment cost was the dominant attribute, followed by source of payment. Respondents showed a strong preference toward spending money from their own health savings account and were most averse to using a family member's savings. Respondents also reported a high willingness to pay to avoid severe pain or poor quality

care, but were less sensitive to other levels of these attributes. Home deaths were preferred to institutional deaths. Choices were little influenced by amount of care required from family-members or friends. These findings have implications for health insurance design, quality standards for EOL care, pain management, and other EOL care policies in Singapore.

### **SESSION 1590 (PAPER)**

#### **NURSING HOMES**

##### **HANDWASHING IN NURSING HOMES**

N. Castle<sup>1</sup>, L. Wagner<sup>2</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. New York University, New York, New York*

Use of hand hygiene practices are regarded as an important approach for effective infection control. Despite the importance of hand hygiene practices, challenges such as adherence rates for using appropriate practices exist across many healthcare providers. In this research, information from nurse aides describing their opinions of hand hygiene practices in nursing homes including perceived barriers to hand hygiene are presented. The information comes from a questionnaire consisting of 57 items. Items included in the questionnaire were developed from a review of the literature (including WHO and CDC guidelines), interviews with Directors of Nursing, and interviews with nurse aides. The items were grouped into similar areas representing compliance, facility guidelines and protocols, training, hand washing facilities and materials, and hand washing barriers. The study presented has information from 4,211 nurse aides (response rate of 56%) working in a nationally representative sample of 767 nursing homes (participation rate = 51%). Overall, it was found that 57.4% of nurse aides sometimes comply with hand washing when caring for residents, while 21.7% always comply. With facilities, 43.3% sometimes check that hand washing is performed. New nurse aides undergo adequate hand washing training 29.9% of the time. In summary, self-reported compliance was poor; and, facilities and materials were often lacking. These findings are useful in identifying issues and interventions to address hand hygiene practices.

##### **AMBIENT INTERVENTION FOR MEALTIME SOUND ABATEMENT FEASIBILITY STUDY**

L.L. Joosse, K. o'Regan, *University of Wisconsin-Milwaukee, Milwaukee, Wisconsin*

Background: Despite advances in dementia care, people living in nursing homes are often exposed to non-therapeutic levels of sound, resulting in increased challenging behavioral symptoms. Purpose: The primary aim of this feasibility study was to examine if sound levels and duration of exposure to sound during the meal experience could be reduced with the Ambient Intervention for Mealtime (AIM) sound abatement protocol. Methods: The intervention protocol was implemented in two urban nursing homes and included: a) an environmental assessment, b) collection of baseline sound levels and sources of sound data, c) recommendations for sound abatement strategies were presented to site administration, d) staff training, and e) facility tailored sound abatement strategies and techniques were implemented. Sound levels and sources of sound were collected in 10 minute periods, during the three daily meals, twice weekly for one month pre and post intervention. Results: Pre and post intervention sound data were analyzed using Wilcoxon Rank Sums. Sound level means were statistically significantly decreased during the meal periods (Breakfast  $p=.02$ ; Lunch  $p=.007$ ; Supper  $p=.03$ ). Discussion: Antecedents to predictable rapid rises in sound levels were identified. Individually tailored nursing unit sound abatement intervention was effective in reducing sound. This study demonstrates that sound levels and resident exposure to unwarranted sound can be reduced with a tailored interventional approach. Further studies are needed to confirm these results in additional nursing homes. Similarly, additional research is needed to examine the relationship

between reduced sound stimuli and resident challenging behavioral implications.

### ASSOCIATION BETWEEN TRADITIONAL NURSING HOME QUALITY MEASURES AND TWO SOURCES OF NURSING HOME COMPLAINTS

J. Troyer, W. Sause, *Economics, UNC Charlotte, Charlotte, North Carolina*

**Objective.** To test for an association between traditional nursing home quality measures and two sources of consumer nursing home complaints. **Data Sources.** Nursing home complaints to the North Carolina Long-Term Care Ombudsman Program and state certification agency from October 2002 through September 2006 were matched with Online Survey Certification and Reporting data and Minimum Data Set (MDS) Quality Indicators. **Study Design.** We examine the association between the number of complaints filed against a facility and measures of inspection deficiencies, staffing levels, and MDS Quality Indicators. **Data Extraction.** One observation per facility per quarter is constructed by matching quarterly data on complaints to OSCAR data from the same or most recent prior quarter and to MDS Quality Indicators from the same quarter. One observation per inspection is obtained by matching OSCAR data to complaint totals from both the same and immediate prior quarter. **Principal Findings.** There is little relationship between MDS Quality Indicators and complaints. Ombudsman complaints and deficiencies are generally unrelated, but there is positive relationship between state certification agency complaints and deficiencies. **Conclusions.** Ombudsman and state certification agency complaint data are consumer-directed quality measures that are distinctive from traditional quality measures.

### MEALTIME EXPERIENCES ACROSS A CONTINUUM OF CULTURE CHANGE ENVIRONMENTS

S.L. Molony<sup>1</sup>, C. Monturo<sup>2</sup>, R.P. Lopez<sup>3</sup>, *1. Connecticut Community Care Inc., Bristol, Connecticut, 2. West Chester University of Pennsylvania, West Chester, Pennsylvania, 3. School of Nursing, MGH Institute of Health Professions, Boston, Massachusetts*

**Background:** Food is deeply and inherently meaningful (Monturo, 2004) and breaking bread, or sharing a meal, is one of the most pervasive and meaningful rituals of daily life (Lopez & Amella, 2010). Dining environments and practices have been associated with improved quality of life in cognitively impaired and cognitively intact nursing home residents (Carrier, West, & Ouellet, 2007). Despite the recognition of the importance of milieu to nutritional outcomes and the overwhelming emphasis on culture change in the nursing home, there has been no systematic comparison of the dining milieu in nursing homes along the culture change continuum. **Purpose:** This study provides a rich description and comparisons of mealtime experiences across a range of organizational cultures including traditional, culture change and small house model nursing homes. **Design:** This descriptive, observational study was conducted in six nursing homes in three New England states stratified by position on the culture change continuum. Data were obtained by direct observation, semi-structured interviews with key personnel, and analysis of publicly available material. Administrators' perceptions of nursing home culture and direct care staff members' beliefs about the mealtime experience provided an "insider" view to balance field observations of three or more meals in each environment. **Observations** including food preparation, delivery, service, and consumption. **Results:** Our findings demonstrate the diversity of mealtime environments and experiences across the culture change continuum and identify key elements of a positive dining milieu. We also discuss the congruence between administrator, staff, and researcher perceptions related to everyday mealtime practice.

### CASE REVIEW - AN OPPORTUNITY TO SOLVE CARE PROBLEMS OF RESIDENTS WITH DEMENTIA LIVING IN A NURSING HOME

M. Roes, *Institute for Quality and Case Management (IQC), University of Applied Sciences Bremen, Bremen, Germany*

According to Yin (2009) a case study design should have five components: the research question(s), its propositions, its unit(s) of analysis, a determination of how the data are linked to the propositions, and criteria to interpret the findings. This study used standard techniques for posing research questions and defining the unit of analysis. The study design was focused on exploration and description. The unit of analysis was the nursing process and its integration of a multiprofessional guideline about mobility and safety of residents with dementia. **Findings:** Nurses could easily provide 'thick descriptions about their residents'; Nurses could - without checking the documentation system - and with the support of the whole team - draw a flow chart to analyse the process which lead to the care problems (like falling or wrong medication etc.); but struggled to structure these stories using the nursing process. Interesting was, that the addition of the criteria from the guideline did not confuse the discussion, but helped to clarify the different steps. **Conclusion:** All steps together supported the development of their reflection and the implementation of a reflective practice. The presentation will provide some examples of the successfully implemented case review.

## SESSION 1595 (PAPER)

### PHYSICAL ACTIVITY AND ENVIRONMENT

#### GAIT SPEED AMONG OLDER PARTICIPANTS ENROLLED IN AN EVIDENCE-BASED FALL RISK REDUCTION PROGRAM: A SUBGROUP ANALYSIS

J. Cho<sup>1,2</sup>, M.L. Smith<sup>3,2</sup>, S. Ahr<sup>4,2</sup>, C. Quinn<sup>2</sup>, A. Wilson<sup>2</sup>, M.G. Ory<sup>2</sup>, *1. Scott & White Healthcare, Temple, Texas, 2. Texas A&M Health Science Center, College Station, Texas, 3. The University of Georgia, Athens, Georgia, 4. The University of Memphis, Memphis, Tennessee*

**Background.** Functional performance is a primary risk factor for institutionalization and mortality among older adults. While community-based fall risk reduction programs are becoming widely disseminated, less is known about their impact on gait speed, a key indicator of functional performance. This study examined changes in a standardized functional assessment test, Timed Up and Go (TUG), among participants enrolled in A Matter of Balance/Volunteer Lay Leader model (AMOB/VLL), an evidence-based fall risk reduction program. **Methods.** This study included 71 AMOB/VLL participants enrolled in the Brazos Valley and South Plain regions of Texas. Gait speed was examined at baseline and again eight weeks post-intervention. Paired t-tests were employed to assess program effects on gait speed at baseline and at eight-weeks later for all participants and by subgroup (age, sex, living status, delivery sites, and self-rated health). A Bonferroni correction was applied to compensate for potential error associated with performing multiple t-tests; *p*-values less than 0.0042 (i.e., 0.05/12 comparisons) were statistically significant. **Results.** Overall, gait speed of enrolled participants improved from baseline to post-intervention ( $t=3.22, p=0.002$ ). Significant TUG score changes were observed for participants who lived with others ( $t=4.45, p=0.000$ ), rated their health as excellent/very good/good ( $t=3.05, p=0.003$ ), and attended program workshops in senior centers ( $t=3.52, p=0.003$ ). **Conclusion.** Findings suggest community-based fall risk reduction programs can enhance gait speed among old participants. More translational research efforts are needed to understand factors related to the effectiveness of fall-related programs in terms of functional performance within various populations and settings.

## GENDER DIFFERENCES IN NEIGHBORHOOD WALKING IN OLDER ADULTS

N.A. Gallagher<sup>1</sup>, P. Clarke<sup>2</sup>, C. Loveland Cherry<sup>2</sup>, D.L. Ronis<sup>2</sup>, K.A. Gretebeck<sup>2,3</sup>, 1. Michigan State University, East Lansing, Michigan, 2. University of Michigan, Ann Arbor, Michigan, 3. VA Center for Clinical Management Research, Ann Arbor, Michigan

Walking is the most common type of physical activity chosen by older adults. This cross-sectional study examined the influence of mobility limitations, self-efficacy, outcome expectations and neighborhood environment (density, design, and local destinations) on neighborhood walking in older men (N=106, aged 60-99 years, M=76.78, SD=8.12) and women (N=216, aged 60-99 years, M=75.81, SD=8.46). Using hierarchical regression, the variables explained 32.2% of the variance in neighborhood walking in older men ( $p<.001$ ). Mobility limitations ( $R^2=.09$ ), self-efficacy/outcome expectations ( $R^2=.08$ ) and environment ( $R^2=.15$ ) were significant when first entered into the model ( $p=.01$ ). In the final model self-efficacy ( $\beta=.436, p<.01$ ) density ( $\beta=.217, p<.05$ ) and design ( $\beta=.203, p=.05$ ) were significant. Grid-like streets ( $\beta=.217, p<.05$ ), maintained sidewalks ( $\beta=.217, p<.05$ ), neighborhood aesthetics ( $\beta=.217, p<.05$ ) and crime ( $\beta=.217, p<.05$ ) were design features associated with neighborhood walking in men. In older women, the variables explained 27.3% of the variance in neighborhood walking ( $p<.001$ ). Demographic characteristics ( $R^2=.05$ ), mobility limitations ( $R^2=.09$ ), self-efficacy/outcome expectations ( $R^2=.09$ ) and environment ( $R^2=.04$ ) were significant when first entered into the model ( $p<.05$ ). In the final model, self-efficacy exerted the strongest influence ( $\beta=.484, p<.001$ ), followed by destinations ( $\beta=.166, p<.05$ ), particularly walking to friends' houses ( $p<.001$ ). Walking interventions for all older adults should include enhancement of self-efficacy, but gender differences may exist in environmental influences. Neighborhood walking interventions targeting older women should incorporate local destinations, particularly friends' houses. In older men, neighborhood walking interventions should take into consideration design characteristics associated with walking in this group, including street/sidewalk design, neighborhood surroundings, and crime safety. The relationship between population density and neighborhood walking should be further examined.

## EVALUATION OF ARTHRITIS EXERCISE PROGRAM FOR ELDERLY IN RURAL ARKANSAS: WHAT ARE THE BENEFITS OF THE PROGRAM?

J. Vuk, S. Klein, R. Alcon, C. Beverly, University of Arkansas for Medical Sciences, Little Rock, Arkansas

An arthritis exercise program was conducted for individuals 55 years or older by trained instructors of the Arkansas Aging Initiative in seven rural counties of West Central Arkansas. The purpose of the study was to assess the impact of the exercise program on participants' health related to arthritis and evaluate the quality of the program. Exercise classes based on Arthritis Foundation Exercise Program Instructor's Manual (2005) were offered once a week for eight weeks. Seventy-five participants (81% women) signed informed consent, answered a pre-program questionnaire and demographic questions; sixty-one attended the last class and answered the post-program questionnaire. The highest self-reported condition was osteoarthritis (52%) followed by rheumatoid arthritis (21%). Ninety-three percent of participants reported Caucasian ethnicity, 4% Hispanic, and 3% other. The highest age group was 65-74 (44%), followed by the 75-84 group (40%), and 85 years and older (11%). Participants rated on a scale 1-5 their overall health, and on a scale 1-10 their pain, fatigue, quality of life, and confidence that they can improve quality of life by regular exercise. A paired-sample t-test showed a statistically significant increase in participants' confidence that they can improve quality of life by regular exercises,  $p<.05$ . Ninety-one percent intended to exercise at home and reported an improved condition after completing the program (less stiffness, less pain, more energy, and better mobility). The exercise program in their community was very

important with 61% of these who completed the program. Their comments included requests for frequent exercise classes and a longer program.

## WHY EXERCISE WHEN SPORT IS FUN? EMPHASIZING PLAY MAY BE KEY TO IMPROVING ACTIVITY IN OLDER ADULTS

K.L. Berlin, D.B. Klenosky, Health & Kinesiology, Purdue University, Zionsville, Indiana

Research on why active older individuals continue to be active is limited. This research examines older women (60-92 years) participating in either sports-based or exercise-based activities to understand underlying factors associated with activity choice and how that choice contributes to successful aging. The 256 respondents participate a minimum of 1.6 times per week in either bowling, golfing, swimming or walking. A mixed methodology approach was used to collect objective measures of leisure choice and successful aging and subjective factors underlying specific activity choices. Findings indicate women choose either sports- or exercise-based activities for different reasons but the result, in terms of perceived successful aging, are similar across activities. Participants across all activity groups rate themselves high (Scale 1-10, 1=unsuccessful, 10=highly successful; M=8.03, SD = 1.34) on perceived ratings of successful aging. Golfers, swimmers, and walkers' rating of success increase as the devotion to the activity increases. All respondents cite socialization and being active as key attributes for continued participation. However, goals related to activity choice differ between exercise-based respondents compared to sports-based respondents. Because of the purposive sampling technique used for this study, the findings should be viewed as preliminary and a basis for further hypothesis generation.

## LOWER BODY FUNCTION, NEIGHBORHOOD ENVIRONMENT, AND PHYSICAL ACTIVITY AS MEASURED BY ACCELEROMETERS IN OLDER ADULTS

W. Satariano, M. Kealey, S.L. Ivey, E. Kurtovich, A. Hubbard, University of California, Berkeley, Berkeley, California

Background: Poor lower-body function is associated with reduced mobility in older populations. Purpose: This study sought to determine whether neighborhood environments (e.g., land-use patterns and safety) moderate that association. Methods: The study titled "Environmental Correlates of Physical Activity among Older Adults: A Healthy Aging Research Network (HAN) Collaboration" ("HAN Walking Study") is a cross-sectional sample of 884 people aged 65 years and older identified through senior-serving organizations in Alameda County CA, Cook County IL, Allegheny County PA, and Wake and Durham counties NC. In-person interviews focused on neighborhood characteristics, physical and cognitive function, and physical activity and walking. Functional capacity was tested using measures of lower-body strength, balance, and walking speed. Participants also wore an accelerometer for seven days. Participants with at least ten hours of accelerometer wear time per day on at least four days were included in this accelerometer analysis. Accelerometer outcomes included mean intensity count per minute in wear periods from all valid days and minutes of moderate and vigorous activity bouts (8 out of 10 minute bouts) per day from all valid days. Estimates of main and interaction effects were derived from GEE models. Results: Neighborhood characteristics are associated with average intensity of activity as well as minutes of moderate and vigorous activity in older adults as measured with accelerometers. Neighborhood characteristics were found to moderate the association between lower body function and physical activity.

## TO DRIVE OR NOT TO DRIVE?

## GIVING UP THE KEYS: HOW DRIVING CESSATION AFFECTS LIFESTYLE IN LATER LIFE

A.L. Curl<sup>2</sup>, J.D. Stowe<sup>1</sup>, T.M. Cooney<sup>1</sup>, C.M. Proulx<sup>1</sup>, 1. *Human Dev. & Family Studies, Univ Missouri, Columbia, Missouri*, 2. *School of Social Work, University of Missouri, Columbia, Missouri*

We employed longitudinal data from 7 waves (1998-2010) of the Health and Retirement Study (HRS) to examine whether driving cessation impacts the lifestyles of adults, ages 65 and older. Lifestyle outcomes included involvement in productive roles (paid work, formal volunteering, and informal help to relatives, friends and neighbors), and social engagement. Additionally, we tested the mediating role of physical health, depressive symptomatology and cognitive status in the association between driving cessation and lifestyle outcomes. Understanding why driving cessation affects lifestyle is critical for design and implementation of appropriate interventions. HRS primary respondents, ages 65 and older at baseline, comprised the analytic sample (excluding those who had never driven). Proxy data were not used. The sample (N=1834) was 57% female and 86% White, with a mean age of 70.9 and 12.4 years of education. Multilevel model results provide strong evidence of the negative impact of driving cessation on productive engagement. The likelihood of employment drops ~90% when individuals report no longer being able to drive ( $p < .001$ ). Similarly, driving cessation significantly lowers the odds of informal and formal volunteering. Social engagement (days per week respondent has contact with others), however, increases after driving cessation, though this effect weakens over time. Increased depressive symptomatology and declining health contribute to the likelihood of reduced involvement in all four outcome areas, and cognitive decline reduces informal and formal volunteering. Yet, the mediating role of these health and wellbeing factors is negligible in explaining the effects of driving cessation on the lifestyle outcomes.

## TOOLS TO ASSESS FITNESS-TO-DRIVE: ARE WE MEASURING SOMETHING BEYOND AGE-RELATED CHANGES?

J. Riendeau<sup>1,2,3</sup>, M. Bedard<sup>1,2,3</sup>, 1. *Centre for Research on Safe Driving, Thunder Bay, Ontario, Canada*, 2. *Lakehead University, Thunder Bay, Ontario, Canada*, 3. *St. Joseph's Care Group, Thunder Bay, Ontario, Canada*

Impairment on a number of cognitive measures has been proposed as an indicator of greater risk of poor driving performance and/or crash risk. It is also well established that various measures used to assess driving performance are influenced by age. However, it has been suggested that it is not age per se that affects performance but rather that age is a marker for other changes (e.g., health-related declines in cognition). Nonetheless, it is possible that biological aging may account for changes in performance, but this cannot be determined unless we examine performance over a large age spectrum. To examine this issue we recruited 114 active drivers ranging in age from 18 to 89 years ( $M = 42.30$  years;  $SD = 26.50$  years). Participants were administered a series of cognitive measures routinely utilized to predict driving outcomes (Trails A and B, a short version of the Attention Network Test, and the Useful Field of View Test). In addition, driving performance was measured during a 30-min simulated drive. Age was strongly associated with the cognitive measures ( $r = .56$  to  $.84$ ,  $p < .01$ ) and with unsafe driver behaviour on the simulator ( $r = -.27$ ,  $p < .01$ ). Our results suggest that UFOV test performance, in particular ( $r = .84$ ), may largely reflect age-associated biological changes. These results have implications in predicting driving outcomes among older drivers and in developing age-adjusted normative data.

## CHANGES IN DRIVING STATUS AND TRANSITION FROM COMMUNITY TO RETIREMENT LIVING

A.M. Myers<sup>1</sup>, C. Janssen-Grieve<sup>1</sup>, A.M. Crizzle<sup>1,2</sup>, S.G. Brown<sup>1</sup>, 1. *Health Studies and Gerontology, University of Waterloo, Waterloo, Ontario, Canada*, 2. *Institute of Mobility, Activity and Participation, University of Florida, Gainesville, Florida*

Driving is the preferred mode of transportation and many seniors continue driving well into their 80's and even 90's. Ultimately, most people stop driving which often requires substantial adjustment. Retirement living may offset some of the challenges associated with driving cessation and mobility problems more generally, although no studies have examined the driving status of seniors in retirement homes or changes in driving as seniors transition from community living. We surveyed 206 residents (141 women and 64 men) from four retirement villages in southern Ontario (mean age  $85.1 \pm 6.4$ ). A third still drove, 63% had stopped and 9% had never driven. Never drivers were predominately women (94%), widowed (83%) and received more support services. Current drivers (26% of the women and 35% of the men) were more likely to be married and live with their spouse in apartments ( $p < .001$ ). About 20% of the former drivers still had a valid license and 6% still had a car. For 39% of the former drivers, driving cessation and moving to the retirement village occurred within the same year. Driving cessation preceded the move to the retirement village by at least a year for 45%, while 16% stopped driving after they moved to the village (most in just over a year). These preliminary findings suggest that driving cessation may influence the decision to move to retirement homes and that, for those who still drive at entry, retirement living in turn may influence the transition to non-driving.

## EDUCATIONAL BACKGROUND MAY AFFECT PERFORMANCE ON TOOLS USED TO ASSESS FITNESS-TO-DRIVE

M. Bedard<sup>1,2,3</sup>, M. Man-Son-Hing<sup>4</sup>, S. Marshall<sup>4</sup>, B. Weaver<sup>1,2,5</sup>, 1. *Centre for Research on Safe Driving, Thunder Bay, Ontario, Canada*, 2. *Health Sciences, Lakehead University, Thunder Bay, Ontario, Canada*, 3. *St. Joseph's Care Group, Thunder Bay, Ontario, Canada*, 4. *University of Ottawa, Ottawa, Ontario, Canada*, 5. *Northern Ontario School of Medicine, Thunder Bay, Ontario, Canada*

Background: Researchers and clinicians seek tools to identify unsafe drivers; particularly tools administered rapidly at low cost. However, one concern is that performance on these tools may be affected simply by age and education. We used data from the Candrive cohort of drivers to identify if this is the case with commonly used tools. Methods: Drivers (age  $\geq 70$ ) from seven Canadian sites are evaluated annually with the MMSE, MoCA, Trails A&B, and MVPT. During year 2 we added the SIMARD-MD (a paper and pencil tool used in British Columbia) to the protocol, and during year 3 we added the Centre for Research on Safe Driving version of the Attention Network Test (CRSD-ANT; a 10-minute computer-based tool). When we wrote this abstract we had complete data for 256 participants. We examined the simultaneous contribution of age (one-year increment) and education level (high school/trade school or less versus higher education) on participants' performance. Results: Age was related to performance for all tools (p-values ranging from .001 to .038); the CRSD-ANT was the least affected tool followed by the MVPT. Education affected only the SIMARD-MD ( $p = .009$ ) where a difference of 6.20 points (95% CI = 1.54, 10.86) separated the two education groups (better scores with more education). Conclusions: The results confirmed that age must be considered when assessing fitness-to-drive using the tools examined here. Furthermore, the SIMARD-MD is influenced by educational background; decisions about fitness-to-drive based on the SIMARD-MD may be biased against drivers with less education.

## SELF-RATED DRIVING IS NOT RELATED TO DRIVING SAFETY IN OLDER ADULTS

L.A. Ross<sup>1</sup>, J. Dodson<sup>1</sup>, J.D. Edwards<sup>2</sup>, M.L. Ackerman<sup>1</sup>, K. Ball<sup>1</sup>, *1. Psychology, University of Alabama at Birmingham, Birmingham, Alabama, 2. University of South Florida, Tampa, Florida*

Many states rely on older adults to self-regulate their driving and determine when driving is no longer safe. However, the relationship of older adults' self-rated driving (SRD) in terms of actual driving competency outcomes is unclear. This study investigates SDR in older drivers in terms of (1) systematic differences between high (good/excellent) versus low (poor/fair/average) SRD, and (2) the predictive nature of SRD to adverse driving outcomes (n=350; mean age 73.9, SD=5.25, range 65-91). Adverse driving outcomes included self-reported incidences of (1) being pulled over, (2) receiving a citation, (3) receiving a recommendation to limit/cease driving, (4) self-reported crashes, and (5) state-reported crashes. Results found that older drivers with low SRD reported more medical conditions, less driving frequency, and had received more suggestions to stop/limit their driving; there were no other significant differences. Logistic regression revealed older drivers were more likely to have a state-reported crash and receive a suggestion to limit/stop driving. Men were more likely to report all adverse driving outcomes except receiving a suggestion to stop/limit driving. Regarding SRD, older adults with high SRD were 66% less likely (OR=0.34, 95% CI=0.14-0.85) to have received suggestions to limit/stop driving after accounting for demographics, health and driving frequency. SRD was not predictive of other driving outcomes. 85.14% of older adults rated themselves as either good or excellent drivers regardless of actual previous adverse driving outcomes. SRD is likely not related to actual driving proficiency (e.g., previous crashes) in older adults. Suggestions from others to limit/cease driving may be more influential on SRD.

## SESSION 1605 (SYMPOSIUM)

### BODY FAT AND MUSCLE FAT INFILTRATION – KEY TO FUNCTION IN OLDER ADULTS

Chair: A.B. Newman, *Epidemiology and Division of Geriatric Medicine, University of Pittsburgh, Graduate School of Public Health and School of Medicine, Pittsburgh, Pennsylvania*

Discussant: T. Harris, *National Institute of Health / National Institute on Aging, Bethesda, Maryland*

Both total body fat and fat infiltration into muscle increase with age with adverse impact on functioning. Patterns of total fat and muscle fat infiltration differ in men vs. women and in blacks vs. whites. In this symposium we will present new findings from three ongoing cohort studies of older adults: the Health Aging and Body Composition (Health ABC) Study, the Study of Osteoporotic Fractures in Men (MrOS), and the Tobago Health Study. Total body and muscle fat were assessed with dual energy x-ray absorptiometry (DXA) and computerized tomography (CT) in Health ABC and with peripheral CT in MrOs and the Tobago study. Muscle fat infiltration and total fat together in Health ABC explained much of the sex difference in lower extremity function. In the MrOs study, a new risk factor for muscle fat infiltration was identified, linking peripheral nerve function with muscle fat. In Health ABC, the rate of increase in muscle fat infiltration was found to be concurrent with decline in gait speed. Over time, patterns of disability and limitation could be characterized by fat and fat distribution. Tobagonian men of African ancestry, who are known to have greater muscle fat infiltration than Caucasian ancestry men, were shown to have an acceleration of the increase in this fat depot with age late in life. Together these studies illustrate the importance of muscle fat infiltration to functional decline in old age. In her discussion, Dr. Tamara Harris will review progress in understanding additional key characteristics of age related adiposity.

## BODY FAT AND MUSCLE ATTENUATION EXPLAIN SEX DIFFERENTIAL IN LOWER EXTREMITY FUNCTION IN HEALTH ABC

L.A. Tseng<sup>1</sup>, M. Delmonico<sup>2</sup>, M. Visser<sup>3,4</sup>, R. Boudreau<sup>1</sup>, B. Goodpaster<sup>1</sup>, A.V. Schwartz<sup>5</sup>, E.M. Simonsick<sup>6</sup>, A.B. Newman<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, California, 2. University of Rhode Island Department of Kinesiology, Kingston, Rhode Island, 3. Department of Health Sciences, VU University Amsterdam, Amsterdam, Netherlands, 4. Department of Epidemiology and Biostatistics, VU Medical Center, Amsterdam, Netherlands, 5. University of California San Francisco, San Francisco, California, 6. Intramural Research Program National Institute on Aging, Baltimore, Maryland*

Higher body fat and lower muscle mass in women might explain their poorer physical performance than men. We compared physical function in 2904 men and women aged 70-79 from the Health, Aging, and Body Composition (Health ABC) study. The Health ABC Physical Performance Battery (HABCPB) is a 0-4 point score consisting of repeated chair stands, standing balance, and 6-meter usual and narrow walk tests. Total body fat and mid-thigh composition (muscle area, intermuscular fat, muscle attenuation, subcutaneous fat) were measured by DEXA and CT. Men performed better than women (LS means 2.33 vs. 2.03, p<0.001), adjusted for race, study site, age and height. Individual body composition measures attenuated (range 3-43%) the sex difference. Together, these components accounted for differences between men and women (LS means 2.16 vs 2.19, p=0.43). Poorer functioning in women compared to men was explained by lower muscle mass, lower muscle attenuation and higher total body fat.

## INCREASING THIGH INTERMUSCULAR FAT IS AN INDEPENDENT PREDICTOR OF DECLINES IN GAIT SPEED: RESULTS FROM THE HEALTH ABC STUDY

K.M. Beavers<sup>1</sup>, D.P. Beavers<sup>1</sup>, D.K. Houston<sup>1</sup>, T.B. Harris<sup>2</sup>, E.M. Simonsick<sup>3</sup>, A.B. Newman<sup>4</sup>, B. Nicklas<sup>1</sup>, S.B. Kritchevsky<sup>1</sup>, *1. Internal Medicine, Wake Forest School of Medicine, Winston-Salem, North Carolina, 2. National Institute on Aging - Laboratory of Epidemiology, Demography, and Biometry, Bethesda, Maryland, 3. National Institute on Aging - Clinical Research Branch, Baltimore, Maryland, 4. University of Pittsburgh, Pittsburgh, Pennsylvania*

Gait speed is a significant predictor of functional status in older adults; however, little data exist identifying modifiable risk factors for gait speed decline. We assessed the longitudinal relationship between change in adiposity measures and gait speed decline over 4 years. Data are from 2315 well-functioning, older (70-79 years) adults (50% women, 38% black) participating in the Health ABC study. Usual walking speed (m/s) over 20-meters was measured in years 2 through 6 and adiposity measures by DXA in years 2 and 6 and CT in years 1 and 6. Gait speed declined by 0.08±0.00 m/s over the 4-year period. Of the adiposity measures, only increases in thigh intermuscular fat independently predicted gait speed decline (-0.01±0.00 m/s per 5.67 cm<sup>2</sup>; p<0.01, for sexes combined). Increasing thigh intermuscular fat is an important predictor of gait speed decline, implying that fat infiltration into muscle strongly contributes to loss of mobility with age.

## BODY COMPOSITION-RELATED PROFILES OF OLDER PEOPLE WITH AND WITHOUT FUNCTIONAL LIMITATION AND DISABILITY

R.A. Murphy<sup>1</sup>, S.B. Kritchevsky<sup>2</sup>, D.K. Houston<sup>2</sup>, E.M. Simonsick<sup>3</sup>, A.B. Newman<sup>4</sup>, F.A. Tylavsky<sup>5</sup>, P.M. Cawthon<sup>6</sup>, T.B. Harris<sup>1</sup>, *1. Epidemiology, Demography and Biometry, National Institute on Aging, Bethesda, Maryland, 2. Wake Forest University, Salem, North Carolina, 3. National Institute on Aging, Baltimore, Maryland, 4. University of Pittsburgh, Pittsburgh, Pennsylvania, 5. University of Tennessee Health Science Center, Memphis, Tennessee, 6. California Pacific Medical Center, San Francisco, California*

Body composition may vary by limitation and disability status. Using data from Health ABC, we created profiles of participants who had no

limitation (n=867), limitation without disability (n=1,536), disability (n=262) and transitioned out of disability (n=157). Weight, grip strength, gait speed, lean mass, % fat and muscle fat infiltration were assessed at baseline, and limitation and disability over 6.5 years. Participants with no limitation were predominately white males and in fully adjusted models, had the greatest gait speed, grip strength, muscle fat and the lowest BMI and % fat (p<0.05). Participants with limitation with no disability had intermediary characteristics such that the proportion of men and whites, gait speed, grip strength and muscle fat decreased in graded manner across groups. Conversely, BMI and % fat increased across groups while lean mass did not vary. Gait speed, grip strength, fat and muscle fat reflect limitation and disability status in older adults.

#### **SKELETAL MUSCLE FAT INFILTRATION ACCELERATES WITH AGING IN AFRICAN ANCESTRY MEN**

I. Miljkovic<sup>1</sup>, Y. Sheu<sup>1</sup>, A.L. Kuipers<sup>1</sup>, B. Goodpaster<sup>2</sup>, C.H. Bunker<sup>1</sup>, A.L. Patrick<sup>3</sup>, J. Zmuda<sup>1</sup>, 1. *Epidemiology, University of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *Division of Endocrinology and Metabolism, University of Pittsburgh, Pittsburgh, Pennsylvania*, 3. *Tobago Health Studies Office, Scarborough, Tobago, Trinidad and Tobago*

Skeletal muscle fat infiltration is a metabolically and functionally important fat depot that increases with aging, and is greater in African compared with European ancestry men. Longitudinal studies examining the natural history and magnitude of changes in skeletal muscle fat with aging are lacking, particularly in African ancestry populations. We examined longitudinal changes in quantitative computed tomography measured calf skeletal muscle attenuation in 450 Afro-Caribbean men aged 40 to 81 years. During the 6 years of follow-up, we observed a significant (P<0.0001) overall percentage decrease (-0.28%/year) in skeletal muscle attenuation, which was greater with increasing age: -0.22%/year, -0.26%/year and -0.37%/year among men aged 40-54 years, 55-64 years, and 65+ years, respectively (P for trend=0.039). These changes were independent of baseline muscle area and total AT. Further studies are needed to better understand the causes and consequences of aging-related increases in skeletal muscle fat infiltration in African ancestry men.

#### **POOR SENSORY AND MOTOR PERIPHERAL NERVE FUNCTION IS ASSOCIATED WITH HIGHER SKELETAL MUSCLE ADIPOSITY: THE OSTEOPOROTIC FRACTURES IN MEN (MROS) STUDY**

E.S. Strotmeyer<sup>1</sup>, J.A. Cauley<sup>1</sup>, K.A. Faulkner<sup>2</sup>, T. Prasad<sup>1</sup>, R.E. Ward<sup>1</sup>, S. Zivkovic<sup>3</sup>, P.M. Cawthon<sup>4</sup>, I. Miljkovic<sup>1</sup>, 1. *University of Pittsburgh, Graduate School of Public Health, Pittsburgh, Pennsylvania*, 2. *National Institute for Occupational Safety and Health (NIOSH), National Personal Protective Technology Laboratory, Pittsburgh, Pennsylvania*, 3. *University of Pittsburgh, School of Medicine, Pittsburgh, Pennsylvania*, 4. *University of California, California Pacific Medical Center Research Institute, San Francisco, California*

Poor peripheral nerve function has been related to lower strength, but not muscle mass, suggesting muscle composition is affected. Sensorimotor nerve function [sural sensory nerve (SNAP=amplitude in uV) and peroneal motor nerve (CMAP=amplitude in mV) conduction from a neurodiagnostic instrument; 1.4-g/10-g monofilament detection] was related to calf intermuscular fat (IMAT) and muscle density using pQCT in 613 men (77.5±5.2 years; 99% white; 21% diabetes) in MrOS from Pittsburgh, PA. In regression analyses, the worst tertile of CMAP vs. middle/best tertiles and lack of monofilament detection (1.4-g for IMAT; 10-g for density) were associated with higher IMAT (p<0.01) and lower density (p<0.05), adjusting for age, race, diabetes, total muscle fat and area, height, lifestyle factors, physical function, medications and diabetes-related conditions. Worst SNAP tertile vs. middle/best tertiles related to higher IMAT (p<0.05). Results indicated poor sensorimotor

nerve function is associated with muscle fat infiltration independent of muscle area in older men.

### **SESSION 1610 (SYMPOSIUM)**

#### **BUILDING WISCONSIN'S COMMUNITY-ACADEMIC INFRASTRUCTURE TO PROMOTE AGING RESEARCH**

Chair: *J.E. Mahoney, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*

Co-Chair: *M. Bernard, National Institute of Aging, National Institutes of Health, Bethesda, Maryland*

Discussant: *D. McDowell, Bureau of Aging and Disability Resources, Wisconsin Department of Health Services, Madison, Wisconsin*

The National Institutes of Health recognizes that in order to best meet the health needs of the aging US population, communities should be engaging in all phases of research, from formulating questions, to designing research, to synthesizing findings, to translating findings to community practice. In 2010, the NIH funded 23 awards through the award mechanism "Building Sustainable Community-Linked Infrastructure to Enable Health Science Research". This symposium describes the University of Wisconsin's Community-Academic Aging Research Network (CAARN), funded through this mechanism. Now in Year 2, CAARN has facilitated multiple successful, multidisciplinary research partnerships between researchers from the University of Wisconsin and Wisconsin's Aging Network. Community-academic partnerships are engaged in research to develop, test, and subsequently disseminate small group and internet-based programs to reduce burden of disease and functional impairment among older adults in the community setting. To take research from pilot stage through dissemination, CAARN partners with the Wisconsin Institute for Healthy Aging (WIHA), a novel nonprofit organization whose mission is to disseminate and sustain evidence-based programs for older adults. This symposium will: 1) highlight two successful CAARN-facilitated pilot studies of innovative community-based interventions; 2) discuss how CAARN involves the Aging Network in the research process; 3) discuss the role of WIHA in supporting dissemination of EBPP and improving Aging Network readiness to engage in research. The symposium Co-Chair will highlight the importance of this type of infrastructure for NIA's research goals, and the Discussant will comment on the relevance of models such as CAARN to the Aging Network.

#### **LIGHTEN UP!: PROMOTING WELL-BEING IN OLDER ADULTS**

E. Friedman<sup>1</sup>, C. Ryff<sup>1</sup>, C. Ruini<sup>3</sup>, L. Jaros<sup>2</sup>, J. Ballard<sup>4</sup>, J.E. Mahoney<sup>1</sup>, 1. *University of Wisconsin-Madison, Madison, Wisconsin*, 2. *Aging and Disability Resource Center, Kenosha, Wisconsin*, 3. *University of Bologna, Bologna, Emilia-Romagna, Italy*, 4. *Wisconsin Institute for Health Aging, Madison, Wisconsin*

Older adults often suffer from depression and social isolation, and they are less likely to seek mental health treatment than younger adults. Lighten UP! is a pilot project to develop and document a community-based program to promote well-being in older adults. Based on Well-Being Therapy, which focuses on enhancing well-being rather than minimizing ill-being, the Lighten UP! program consists of 8 weekly group sessions and daily journal entries. Participants progress from identifying positive events, either current or past, to considering obstacles to experiencing or enjoying experiences of well-being. Ultimately, through the educational component of the program, they are introduced to concepts of eudaimonic well-being and the links between thoughts and behaviors, and they work together and individually to generate ideas about how to increase well-being in their lives. The first classes met in January, 2012, and we will present preliminary results in this symposium.



## **MED WISE: IMPROVING OLDER ADULTS' MEDICATION USE**

B.A. Martin<sup>1</sup>, B. Chewning<sup>1</sup>, J. Ballard<sup>5</sup>, J.L. Zander<sup>3</sup>, A. Margolis<sup>1</sup>, R. Smedley<sup>2</sup>, J.E. Mahoney<sup>4</sup>, B. Abramson<sup>5</sup>, *1. School of Pharmacy, University of Wisconsin-Madison, Madison, Wisconsin, 2. Community-Academic Research Network, University of Wisconsin, Madison, Wisconsin, 3. Aging and Disability Resource Center of Portage County, Stevens Point, Wisconsin, 4. University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, 5. Wisconsin Institute for Healthy Aging, Madison, Wisconsin*

The health and economic toll of medication errors by older adults is well documented, with adverse drug events (ADEs) a major cause of falls, hospitalization and death. Poor communication and medication coordination problems increase the likelihood of ADEs. The Med Wise project builds on the Chronic Care Model which posits that older adults themselves can be the key to successfully addressing this serious public health concern. Med Wise is a result of collaboration between a county Aging & Disability Resource Center (ADRC) and the UW-Madison School of Pharmacy and was facilitated by the Community-Academic Aging Research Network at UW and the Wisconsin Institute for Healthy Aging. The Med Wise program consists of two interactive sessions to improve patient encounters with pharmacists, enabling more appropriate use of medicines by older adults. Preliminary data from pre-post session evaluations documented increased participant knowledge, skills and confidence to interact with pharmacists more actively.

## **KEYS TO SUCCESS IN CREATING SUSTAINABLE COMMUNITY-ACADEMIC PARTNERSHIPS FOR AGING RESEARCH**

J. Ballard<sup>1</sup>, R. Smedley<sup>2</sup>, K. Kedrowski<sup>2</sup>, *1. Wisconsin Institute for Healthy Aging, Madison, Wisconsin, 2. University of Wisconsin, Madison, Wisconsin*

The Community-Academic Aging Research Network (CAARN) builds sustainable community-academic partnerships and ultimately facilitates the development of new, evidence-based healthy aging interventions, through provision of education, technical assistance, facilitation, matchmaking, funding assistance, and access to resources. CAARN provides facilitation and technical assistance at each stage of project development. This presentation will highlight the CAARN process and how it relates to current projects within the Aging Network. We will discuss how potential partners in the Aging Network are identified, how community partners clarify research needs, and how academic partners are "matched". Lastly we will discuss challenges encountered, strategies used to overcome them, and summarize elements that are key to CAARN's success.

## **THE WISCONSIN INSTITUTE FOR HEALTHY AGING: MEETING THE NEED TO DISSEMINATE EVIDENCE-BASED PROGRAMS**

B. Abramson, *Wisconsin Institute for Healthy Aging, Madison, Wisconsin*

This presentation will describe the development and role of the Wisconsin Institute for Healthy Aging (WIHA) as the statewide coordinator of evidence-based prevention programs. WIHA functions as a structure for maintaining ongoing quality control of evidence-based programs that have been disseminated throughout the state. WIHA screens participating organizations for implementation readiness, conducts fidelity checks of ongoing programming, and provides technical assistance to Aging Network Partners across Wisconsin to help them implement and sustain Evidence-Based Programs. We will describe WIHA's goal and vision and its role in implementing, expanding and sustaining high quality evidence-based programs across Wisconsin's Aging Network, in collaboration with health care partners. Lastly, we will explain how CAARN

functions as the research arm of WIHA, with research and dissemination activities being synergistic to each other.

## **SESSION 1615 (SYMPOSIUM)**

### **EXPLORING DYNAMIC BALANCE DISABILITY AND COGNITIVE LOAD USING NOVEL TECHNOLOGIES IN HEALTHY ELDER**

Chair: *C.J. Winstein, Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, California*  
Discussant: *E. Crimmins, University of Southern California, Los Angeles, California*

Recent developments of sensors, data recorders and communication networks allow the unprecedented measurement of physiological, cognitive and behavioral data for research and rehabilitation in those aging into disability. An example is the recent explosion of movement-controlled video games using the new Primesense™ camera and Microsoft Kinect™ system. There is considerable evidence that these games are motivating, engaging, and fun; providing an alternative to traditional and somewhat boring rehabilitation exercises. We assembled a multi-disciplinary team of scientists from the nexus fields of biomedical engineering, rehabilitation-movement science, and gerontology; all part of our Rehabilitation Engineering Research Center on Aging with Disability, to design and conduct a development-of-concept pilot study. This was a single-session counterbalanced exposure to two different dynamic balance tasks in which the participant reached for a virtual target (virtually projected Jewel) or a real target (tennis ball), matched for the number and position of targets and movements under an ordered set of initial conditions (static standing; dynamic stepping). The order of the two task scenarios (Virtual, Real) was counterbalanced across the participants. Dynamic balance and functional screening tools including a novel lower-extremity strength-dexterity test and post-exposure qualitative questionnaires book-ended the two exposures. We report preliminary results focused on understanding the nature of the cognitive, physiological and behavioral effects of VR games beyond the known benefits of engagement in physical activity, potentially better adherence, and social reward that has been previously reported. Future directions and important questions at the nexus of technology, aging and disability research will be discussed.

### **MOVEMENT STRATEGIES IN VIRTUAL AND REAL-WORLD TASK PERFORMANCE**

P. Requejo<sup>1</sup>, E. Wade<sup>2</sup>, R. Proffitt<sup>3</sup>, E. McConnell<sup>3</sup>, B. Lange<sup>3</sup>, D. Liu<sup>1</sup>, S. Mulroy<sup>1</sup>, *1. Rancho Los Amigos National Rehabilitation Center, Downey, California, 2. University of Southern California - Biokinesiology and Physical Therapy, Los Angeles, California, 3. University of Southern California - Institute for Creative Technologies, Los Angeles, California*

Goal-directed actions produced under real or virtual conditions usually evolve with similar movement strategies. This project explores how manipulating the target (virtual and real targets) affects reaching strategies. Fifteen older adults performed a standing balance reach task, requiring stepping and no stepping to reach 8 targets placed around a circle with half on the right and half on the left. Participants were free to choose the step and reach limb. Most used the right hand to reach the virtual target and the ipsilateral hand to reach the real target. In the real-world condition, reach extent was greater than in the virtual condition and generally greater in the stepping than in the standing condition. Likewise, reaching trajectories were straighter in the virtual compared to the real condition. Discussion will focus on within- and between-participant analyses of kinematic variables and implications for development of virtual target tasks that effectively challenge dynamic balance.

## FROM THE MARGINS TO THE MAINSTREAM: INTEGRATION AT THE NEXUS OF TECHNOLOGY, AGING WITH AND AGING INTO A DISABILITY

E. Zelinski, *University of Southern California - Andrus School of Gerontology, Los Angeles, California*

The need for interdisciplinary cross-talk and understanding has never been greater with population aging, disability, and the number of disabled individuals who survive into old age. Much research relevant to technology development to support disabled persons or older adults moving into disability ignores the need to integrate in-depth multidisciplinary perspectives. The 2011 issues of major international journals that address disability, rehabilitation, assistive technology, and aging were examined for the presence of articles crosscutting aging, technology, and disability. Only 1% of articles addressed two of the three areas, and none all of them. For example, most articles on disability conditions increasing in prevalence with age did not address age related changes within the disability or how age changes might affect technology usability. I will address strategies to overcome these issues.

## USER-CENTERED DESIGN AND FEASIBILITY OF A GAME FOR BALANCE TRAINING IN OLDER ADULTS

B. Lange<sup>2</sup>, R. Proffitt<sup>2</sup>, D.J. Rose<sup>1</sup>, *1. California State University Fullerton, Fullerton, California, 2. University of Southern California - Institute for Creative Technologies, Los Angeles, California*

As older adults age, the risk of a fall increases and thirty percent of older adults over 65 fall every year. Many fall prevention programs targeted towards older adults focus on improving balance skills, however few programs for older adults utilize the advances in technology and gaming. In order to develop a feasible game targeting balance training for older adults, the needs and requirements of the target population must be identified. Older adults currently involved in a wellness program for seniors at California State University- Fullerton participated in three phases of development: 1) a needs assessment, 2) iterative user testing of a prototype game for balance and 3) a feasibility study comparing the game to a non-game task. Discussion will focus around the user-centered design of the game and results from the feasibility study including qualitative data screening tools and post assessment interviews.

## REDUCED ABILITY TO STABILIZE GROUND CONTACT WITH THE LEG MAY EXPLAIN GAIT CHANGES IN AGING

V. Stern<sup>2</sup>, E. Lawrence<sup>1</sup>, W. Hu<sup>1</sup>, M. Lyle<sup>2</sup>, C.J. Winstein<sup>2</sup>, P. Requejo<sup>3</sup>, F. Valero-Cuevas<sup>1,2</sup>, *1. University of Southern California - Department of Biomedical Engineering - Viterbi School of Engineering, Los Angeles, California, 2. University of Southern California - Biokinesiology and Physical Therapy, Los Angeles, California, 3. Rancho Los Amigos National Rehabilitation Center, Downey, California*

Metrics including the Timed-Up-and-Go, Berg-Balance-Scale, Activities-Specific-Balance-Confidence-Scale, and Four-Square-Step-Test are commonly used to assess balance and risk of falling. While they are valuable, a metric focusing on the dynamical ability of the lower extremity may provide additional insight at the organ level. Using the Lower Extremity Strength-Dexterity (LE-SD) Test, we measured the lower extremity's ability to stabilize ground contact (and the metrics above) in 15 physically fit participants (59-92 yrs). The LE-SD Test simply requires the user to compress a compliant spring prone to buckling as far as possible (all forces <15% BW). Only the LE-SD Test ( $r^2=0.356$ ,  $p=0.019$ ) and Timed-Up-and-Go velocity ( $r^2=0.277$ ,  $p=0.044$ ) correlated with age (and each other:  $r^2=0.411$ ,  $p=0.010$ ). To our knowledge, the LE-SD Test is the first metric at the organ level of the leg that may explain behavioral deficits of gait without cognitive, strength, or whole-body confounds. This may make it a valuable clinical tool.

## MESURING COGNITIVE LOAD IN HEALTHY ELDERLS DURING A VIRTUAL REALITY (VR) DYNAMIC BALANCE REACHING TASK

Y. Chen, Y. Chung, C.J. Winstein, *University of Southern California - Biokinesiology and Physical Therapy, Los Angeles, California*

The evidence supporting higher levels of engagement in exercise programs using VR games compared with non-VR task practice relies exclusively on questionnaire methodology. One aim of this Nexus project is to determine the cognitive load in two dynamic balance exposures: a virtual Jewel target game and a therapist-directed target task, matched for the number of targets and movements. Fifteen healthy elders (59-92 yrs) performed the two exposures under dual task conditions. On 27% of the trials, participants responded verbally to an unanticipated auditory tone while reaching for the target. A static standing condition established baseline response time (RT). Preliminary data analysis reveals that baseline RT is significantly shorter than for either of the two exposures. Discussion will focus on a comparison of cognitive load and engagement for the two exposures and the implications for proactive intervention programs to maintain and prevent declining dynamic balance with age.

## SESSION 1620 (SYMPOSIUM)

### OUTCOMES FROM PERSON-CENTERED CARE IN LONG- TERM CARE SETTINGS

Chair: *D. Edvardsson, Nursing, La Trobe University, Melbourne, Victoria, Australia, Umeå University, Umeå, Sweden*  
Discussant: *R. Weech-Maldonado, University of Alabama at Birmingham, Birmingham, Alabama*

This symposium will present outcomes of person-centered care (PCC) in long-term care settings. Person-centered approaches to care are increasingly being advocated and implemented in long-term care globally, but outcomes are still sparsely described. The first presentation will highlight resident thriving as an existential outcome of PCC based on pre-post test data from a PCC intervention study in a 120-bed long-term care facility in Stockholm. The second presentation will outline and identify outcomes from the Planetree model of PCC on residents' alarm use, falls with major injury, and dying in place. The third presentation will draw upon MDS records from 77 units to illustrate how PCC-unit residents had better outcomes for cognitive patterns, mood and behavior patterns, physical functioning, medication use, and special treatment/procedure. The fourth presentation draws upon data on 1266 residents with dementia from 157 facilities across Sweden and shows that 82% of residents 'never' or 'almost never' participated in person-centered everyday activities, even though residents participating in outside walks, excursions, parlour games, church visits, and general housing duties had significantly higher quality of life. The fifth presentation used ethnographic observations and interviews with staff and residents to develop the RAISE (Resident-centered Assessment of Interactions with Staff and Engagement) tool that captures the quality and frequency of staff-resident interactions and resident engagement as aspects of PCC. As a whole, this symposium will enable participants to define and measure PCC, and discuss the outcomes of PCC on resident health in long-term care.

### DEVELOPMENT OF THE RESIDENT-CENTERED ASSESSMENT OF INTERACTIONS WITH STAFF AND ENGAGEMENT (RAISE): A NURSING HOME QUALITY OF CARE OBSERVATIONAL TOOL

A. Snow<sup>1,2</sup>, J.A. Palmer<sup>3</sup>, L. Jacobs<sup>2</sup>, P.A. Parmelee<sup>2</sup>, R.S. Allen<sup>2</sup>, D. Berlowitz<sup>3</sup>, C.W. Hartmann<sup>3</sup>, *1. Tuscaloosa VA Medical Center, Tuscaloosa, Alabama, 2. University of Alabama Center for Mental Health & Aging and Dept. of Psychology, Tuscaloosa, Alabama, 3. VA HSR&D Center for Health Quality, Outcomes, and Economic Research, Bedford, Massachusetts*

Person-centered care (PCC) has become a widespread nursing home (NH) care model, yet measuring PCC outcomes remains a challenge. We conducted 60 hours of ethnographic observations and 20 hours of

staff and resident interviews to identify key PCC outcome constructs. Thematic analysis revealed quality and frequency of staff-resident interactions and resident engagement as aspects of person-centered care not captured by current quality assurance systems (e.g., MDS3.0, annual inspections). We then developed a structured observational tool (the RAISE; Resident-centered Assessment of Interactions with Staff and Engagement) to capture these identified constructs. We conducted 100 hours of RAISE observations in 2 VA facilities (8 NH units). Using an iterative approach informed by ethnographic notes and coding meetings, we identified a set of coding rules and administration processes that were as simultaneously efficient, non-reactive, and representative of CLC life. Inter-rater reliabilities have been adequate (Cohen's kappa = .75; n = 47 observations).

### **EVERYDAY ACTIVITIES ARE ASSOCIATED WITH HIGHER RESIDENT QUALITY OF LIFE**

K. Sjögren<sup>1</sup>, L. Petersson<sup>1</sup>, P. Sandman<sup>2</sup>, D. Edvardsson<sup>3,1</sup>, 1. Department of Nursing, Umeå University, Umeå, Sweden, 2. Department of Neurobiology, Care Sciences and Society (NVS), Division of Nursing, Karolinska institutet, Stockholm, Sweden, 3. School of Nursing and Midwifery, La Trobe University, Melbourne, Victoria, Australia

Person-centred care involves providing everyday activities for aged care residents, but there is limited statistical evidence in relation to resident quality of life. This cross-sectional study explored the provision and impact of everyday activities on quality of life among 1266 residents with dementia from 157 residential aged care facilities across Sweden. The Quality of Life in Dementia scale was used to assess quality of life, and the Multi-Dimensional Dementia Assessment Scale to explore participation in everyday activities. The findings show that 82% of residents 'never' or 'almost never' participated in everyday activities. Residents participating in the following everyday activities had significantly higher quality of life: outside walks, excursions, parlour games, church visits, and general housing duties. The findings reinforce the need to provide person-centred and meaningful everyday activities as such promote resident quality of life in long-term care. A higher prevalence of activity based nursing interventions is urgently needed.

### **MULTI-METHOD ASSESSMENT OF PERSON-CENTERED CARE OUTCOMES ACROSS LONG-TERM CARE SETTINGS**

M. Lepore, 1. Planetree, Derby, Connecticut, 2. Brown University, Providence, Rhode Island

Person-centered approaches to care are increasingly being implemented in long-term care (LTC) settings around the world. To identify outcomes of person-centered care (PCC), a multi-method assessment procedure is being implemented in 30 LTC sites that have adopted the Planetree model of PCC, including skilled nursing and assisted living settings in the U.S. and internationally. Monthly evaluation of facility-level performance on numerous measures, including residents' alarm use, falls with major injury, and dying in place, provide quantitative data on PCC outcomes. Results show similarities and differences in PCC outcomes, and changes over time, across skilled nursing and assisted living settings. Satisfaction surveys and focus groups with residents, staff, and family, and organizational self-assessment documentation, provide additional data on PCC implementation and outcomes. Quantitative and qualitative data triangulation informs the efficacy of PCC implementation strategies. Generated outcome and implementation data show multi-method approaches to assessing PCC have value for research and practice.

### **OUTCOMES OF PERSON-CENTERED CARE IN NURSING HOME RESIDENTS: A LONGITUDINAL FOLLOW-UP**

D. Porock, Y. Chang, J. Li, School of Nursing, University at Buffalo SUNY, Buffalo, New York

Aims: This study aimed to evaluate the effect of PCC on nursing home residents' outcomes using the Minimum Data Set (MDS) com-

prehensive assessment data. Methods: This retrospective, longitudinal study was conducted with residents living in two units (PPC-unit and traditional-unit) within one nursing home. The de-identified MDS records of these residents from January 2005 to April 2007 were retrieved from the New York Association of Homes and Services for the Aging (NYAHS). Results: MDS data from 26 PCC-unit residents and 51 traditional-unit residents were analyzed. After adjusting for baseline differences, PCC-unit residents had better outcomes for cognitive pattern, mood and behavior patterns, physical functioning, medication use, and special treatment/procedure. Conclusions: Our findings indicate that PCC generated some better outcomes for residents and provide preliminary evidence to support the uses of PPC in nursing homes. Furthermore the MDS may be sensitive enough to detect differences in PCC research.

### **EXISTENTIAL OUTCOMES OF PERSON-CENTRED CARE – HOW CAN SUCH BE MEASURED, ACHIEVED, IMPLEMENTED AND DISSEMINATED?**

P. Sandman, D. Edvardsson, Nursing, Dept of Neurobiology, Care science and Society, Huddinge, Sweden

Person-centred care is a contemporary buzz word for aged care policy and practice. This presentation will highlight resident thriving as an existential outcome of person-centred care based on pre-post test data from an intervention study promoting person-centred care in a 120-bed?? Long-term care facility in Stockholm, Sweden. The thriving in older residents measurement scale will be presented in relation to contemporary measures of person-centred care, characteristics of long-term care units with high person-centredness will be highlighted, and successful strategies to develop and implement a more person-centred day-to-day care practice in long-term care will be discussed. The presentation will draw upon pre-post test intervention data together with narrative evidence to present existential outcomes such as thriving, of person-centred care for residents, and how such are measured, achieved, implemented and disseminated across long-term care facilities.

## **SESSION 1625 (PAPER)**

### **EDUCATIONAL EVALUATION**

#### **THE DEDICATED EDUCATION UNIT IN LONG-TERM CARE: IMPROVING NURSING STUDENT SKILLS AND PERCEPTIONS**

S.M. Gilbert, C. Dietrich, Radford University, Radford, Virginia

Building on a research project launched in 2009 by Mullenbach and Burggraf (2012), this mixed methods longitudinal study examined skill proficiency and attainment as well as perceptions of older adults and long term care (LTC) as a professional practice specialty. Senior nursing student completed a one day per five week rotation in long term care centers identified as Dedicated Education Units (DEU) where students worked with RN preceptor role models and clinical instructors. Using a pre-test/post-test design, students completed a skills checklist at the beginning and end of each semester. To examine the effectiveness of the intervention, dependent samples (paired) t-tests were used to ascertain whether average confidence ratings changed significantly after DEU experiences. Results show statistically significant improvement in student confidence ratings in performing skills such as, nebulizer treatments, intravenous medications, tracheostomy and wound care, and tube feedings. Reflective journals were recorded after Day 2 and Day 5. Students were first asked to describe perceptions of older adults and LTC as a practice environment. The second journal asked for any new perceptions obtained during the rotation. Descriptive qualitative analysis was used to discover recurrent themes and concepts. This rich data yielded a picture of students' changing perceptions of older adults, an

acute awareness of staffing needs in LTC, and an appreciation for the diversity of the skill set needed to care for this population.

### **THE INTERPROFESSIONAL CLINICAL EXPERIENCE: INTRODUCING INTERPROFESSIONAL TEAM MEETINGS TO TRAINEES**

K.D. Sheppard<sup>1</sup>, C.R. Ford<sup>1</sup>, K.T. Foley<sup>1</sup>, P. Sawyer<sup>1</sup>, C. Ritchie<sup>2</sup>, C.J. Brown<sup>1</sup>, 1. *University of Alabama at Birmingham, Birmingham, Alabama*, 2. *University of California San Francisco, San Francisco, California*

Interprofessional training experiences are gaining importance since the establishment of interdisciplinary teamwork as a core competence in geriatric health care. To meet this need, the University of Alabama at Birmingham Geriatric Education Center (UAB GEC) recently developed a program to provide an interprofessional clinical experience (ICE) for trainees from dentistry, medicine, nursing, nutrition, occupational therapy, optometry, pharmacy, physical therapy and social work. ICE is offered at a university affiliated local nursing home with a previously established clinical rotation for students from dentistry, medicine, nutrition, and occupational therapy. Each week students individually interview with a selected NH resident; they subsequently meet to discuss the resident in an hour-long interprofessional care plan meeting facilitated by a geriatrician. In this meeting, each of the trainees contributes perspectives from their discipline relevant to the care of the resident. This session will describe the development, implementation, and student evaluation of ICE. We will discuss the recruitment of a planning committee of preceptors representing each discipline as well as the development of relationships with nursing home administrators and staff. We will review the learning objectives, team meeting guidelines, and evaluation materials developed by the planning committee. Realized outcomes include an increased awareness of the contributions of each profession to the care of the older adult as well as providing opportunities for collaboration among professions. We will present discipline specific evaluations of the program along with barriers we encountered in implementing the program.

### **DIFFERENCES BETWEEN EXPECTED VS. ACTUAL USE OF INFORMATION FROM VIDEO TELECONFERENCE EVENTS**

R. Chernoff<sup>2</sup><sup>1</sup>, S.H. Jasin<sup>1</sup>, S.M. Porbeck<sup>1</sup>, 1. *University of Arkansas for Medical Sciences, Little Rock, Arkansas*, 2. *GRECC, Central Arkansas Veterans Healthcare System, Little Rock, Arkansas*

The Arkansas Geriatric Education Center has been conducting 90-day post event surveys (PES) on video teleconferences (VTC) since 2007. The objective of the PES was to evaluate the impact of program attendance on clinical practice, transfer of knowledge to co-workers, and use of handouts. Impact was defined as using knowledge in patient care, modifying patient assessment, changing counseling practice, and noticing improved patient outcomes. Since Fall 2010, the following question is included on our event evaluation: "Do you expect to use information from this program in the near future." The possible responses were: "Yes," "No," and "Not applicable." This was done in an attempt to quantify the expected use of information gained by program attendees compared to the self-reported use of information by these attendees to the 90-day PES. Results from the past five VTCs are shown here. Expected Information Use Reported (%) by Attendees to VTCs vs. Actual Use Reported (%) by Respondents to 90-Day PES (Code: VTC = Video teleconference; EU = Expected Information Use Reported by VTC Attendees; AU = Actual Use of VTC Information Reported by 90-Day Post Event Survey Respondents) VTC1: EU=70.7%, AU=75.7%; VTC2: EU=46.3%, AU=59.6%; VTC3: EU=40.2%, AU=62.9%; VTC4: EU=67.9%, AU=69.3%; VTC5: EU=76.7%, AU=73.2%. Data gathered from both event and PES instruments show that AU% is larger than EU% in four of the five VTCs AU% indicat-

ing a greater use of information when in actual practice. Only in VTC5 the opposite is true.

### **MENTORING PHD STUDENTS IN GERONTOLOGY: THE INTERDISCIPLINARY RESEARCH IMPERATIVE**

L. Benefield, B.J. Holtzclaw, J.S. Wilson, K. Buckwalter, *University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

NIH and IOM imperatives to promote interdisciplinary research are based on assumptions that healthcare issues transcend disciplinary or professional boundaries, multi-causal problems require integrative approaches, and advances in intervention require theoretical, technical, and clinical expertise. The Reynolds Center of Geriatric Nursing Excellence and the University of Oklahoma College of Nursing created a unique mentoring and development plan for PhD in Nursing students aimed at engaging students in solving real-world problems via interdisciplinary inquiry. Didactic coursework includes a course in Translational Science, in which students study the concept of interdisciplinarity, the culture and language of disciplines, and role of interdisciplinary understanding in scientific translation. An annual Interdisciplinary Translational Geriatric Research Institute provides a "research incubator" for students and established investigators from a variety of disciplines to develop ideas around presented topics. Sequenced key activities during the program of study include 1) early-in-program experiences to establish an interdisciplinary perspective with national scholars, 2) engagement in provider and consumer input to frame an area of research inquiry and 3) early involvement in interdisciplinary research teams as doctoral students. Outcome examples document the benefits and accelerated student development in interdisciplinary team formation and faculty collaboration across professions as a result of the student engagement. Faculty and student partnered products include grant preparation, presentations, and publications.

### **SUSTAINING COMMUNITY PARTNERSHIPS FOR INTERDISCIPLINARY TRAINING IN HEALTHCARE FOR OLDER ADULTS**

J. Ilardo, J.D. Yonker, *College of Human Medicine, Michigan State University, East Lansing, Michigan*

This presentation will describe the necessary and sufficient conditions for sustaining community-based interdisciplinary geriatric training. The Geriatric Education Center of Michigan (GECM) invited 8 communities to become partners in its interdisciplinary geriatric health professions trainings as community teams during the 2007-2010 grant cycle. The goals of the teams were to conduct needs assessments identifying specific interdisciplinary geriatric continuing education opportunities and to provide trainings using a curriculum developed by GECM core faculty. By 2010 when the grant cycle ended and the next proposal was developed, 4 of the teams had coalesced to the extent that the GECM was able to build upon their accomplishments and expand their efforts in the 2010-2015 project cycle. The teams were assessed to determine their sustainability based on a set of necessary and sufficient conditions. The necessary conditions include 1) respect, trust, inclusiveness and openness among the members; 2) motivation for working together; and 3) the ability to collaborate for the good of the community rather than to compete over turf issues. The sufficient conditions include 1) successful collaborative leadership; 2) effective management structures; and 3) attainment of a pivotal place in their communities for their efforts. To determine what sustains each of these 4 distinctive GECM community teams, we employed a toolkit to assess 1) strategies used to recruit and retain members; 2) how each team determined its specific mission by examining its goals and activities; and 3) strategies used to monitor team's progress and outcomes.

## NEUROSCIENCE &amp; NEURODEGENERATIVE CONDITIONS

## MULTI-MODAL MRI MARKERS OF CNS INTEGRITY ARE ASSOCIATED WITH DEPRESSIVE SYMPTOMS IN THE ELDERLY

H.J. Aizenstein<sup>1</sup>, D.L. Tudorascu<sup>1</sup>, T. Harris<sup>2</sup>, S.B. Kritchevsky<sup>3</sup>, A.B. Newman<sup>1</sup>, K. Yaffe<sup>4</sup>, C. Rosano<sup>1</sup>, 1. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *National Institutes of Health, Bethesda, Maryland*, 3. *Wake Forest, Winston-Salem, North Carolina*, 4. *University of California, San Francisco, San Francisco, California*

**INTRODUCTION:** Late-Life Depression (LLD) is one of the leading causes of decreased quality of life in the elderly. Characterizing the brain imaging correlates of depressive symptoms is essential for understanding the biological mechanisms of LLD, as well as for optimizing prevention and treatment. This study uses multiple MRI sequences to quantify CNS integrity. **METHODS:** Data were from 276 participants (mean age=83.0 SD=2.7) at the Pittsburgh site of the Health, Aging, and Body Composition Study, an epidemiologic study of well-functioning adults. Depression was assessed with the CES-D scale. Neuroimaging markers were grey matter volume (GMV), white matter hyperintensity volume (WMH), and mean WM fractional anisotropy (wmFA), derived from T1-weighted, T2-weighted FLAIR, and DTI sequences, respectively. Since CES-D scores were not normally distributed, a proportional odds model was used, with four groups. Age, gender, and minimal state exam score (MMSE) were examined as co-variables. **RESULTS:** In models co-varying for age, gender, and MMSE, increased CES-D was associated with lower normalized GMV (odds ratio .87,  $p<.004$ ), higher normalized WMH (OR 1.85,  $p<.0001$ ), and lower wmFA (OR 0.79,  $p<.0038$ ). In a full model including all 3 neuroimaging markers, only the WMH remained significant (OR 1.67  $p<.003$ ); there was a trend for GMV (OR .92 ( $p<.084$ ), and no significant independent association with wmFA ( $p=.58$ ). **CONCLUSION:** GMV, WMH, and wmFA are each associated with severity of depressive symptoms. WMH is most associated with depression, and is the only marker independently associated with CES-D. These findings highlight the importance of WMH in elderly mood disorders. *Acknowledgements: NIA/NINDS (R01 AG029232, PI: Rosano, C.) and Pittsburgh Older Americans Independence Center-Claude D. Pepper Center (P30AG024827)*

## BLOOD-BRAIN BARRIER (BBB) BREAKDOWN AND BRAIN-REACTIVE AUTOANTIBODIES AS A TRIGGER FOR CNS DISEASES

R.G. Nagele, N.K. Acharya, M. Han, C. DeMarshall, M.C. Kosciuk, E.P. Nagele, *Univ. of Medicine & Dentistry of NJ - School of Osteopathic Medicine, Stratford, New Jersey*

The integrity of the BBB helps to maintain brain homeostasis by preventing the influx of plasma components into brain tissue. Recent studies have demonstrated the widespread presence of brain-reactive autoantibodies in the blood, some of which bind to neurons during the pathogenesis of CNS diseases such as Alzheimer's disease (AD). Here, we tested the possibility that binding of blood-borne autoantibodies can target specific neuronal subtypes and drive neuronal pathology. Western analysis and human protein microarrays were used to detect brain-reactive autoantibodies in human sera. Immunohistochemistry revealed selective binding of autoantibodies to neurons in regions of AD pathology and BBB breakdown. We tested the effects of autoantibodies on intraneuronal deposition of exogenous amyloid beta1-42 peptide (Abeta42) in adult mouse neurons in brain slice cultures. Binding of human serum autoantibodies and commercial antibodies targeting neuronal surface proteins dramatically increased intracellular Abeta42 deposition in neurons populating the mouse cerebral cortex and hippocampus, regions vulnerable to AD. Protein microarrays revealed the

presence of disease-specific autoantibodies in human sera that may exacerbate disease pathology and contribute to long-term disease progression. Results suggest that BBB breakdown and brain-reactive autoantibodies may act together to trigger aging-associated neurodegenerative diseases like AD and Parkinson's diseases. Additionally, the specific type of CNS disease and its severity may be dictated in part by the location and extent of the BBB breach and the identity of brain-reactive autoantibodies in the blood. This work was supported in part by the Alzheimer's Association and the State of New Jersey Governor's Council on Autism.

## GENE EXPRESSION ASSOCIATIONS WITH MMSE SCORES: PHAGOCYTOSIS OF CNS BETA AMYLOID?

D. Melzer<sup>1</sup>, L. Harries<sup>1</sup>, D.J. Llewellyn<sup>1</sup>, S. Bandinelli<sup>2</sup>, J.M. Guralnik<sup>4</sup>, L. Ferrucci<sup>3</sup>, 1. *Epidemiology and Public Health, University of Exeter, Exeter, United Kingdom*, 2. *Geriatric Unit, Azienda Sanitaria, Firenze, Italy*, 3. *National Institute on Aging, Baltimore, Maryland*, 4. *University of Maryland, Baltimore, Maryland*

**Introduction** Circulating inflammatory markers may play an important role in cognitive impairment at older ages. Mice deficient for the chemokine (C-C motif) receptor 2 (CCR2) develop an accelerated Alzheimer's-like pathology. To identify human gene transcripts most closely associated with Mini Mental State Examination (MMSE) scores we undertook a genome-wide and inflammation specific transcriptome screen in circulating leukocytes from a population-based sample. **Methods** We measured in-vivo transcript levels by microarray analysis in 691 subjects (mean age 72.6 yrs) in the InCHIANTI study. We assessed expression associations with MMSE score at RNA collection and prior 9 year change in MMSE score in linear regression models. **Results** In genome-wide analysis, raised CCR2 expression was cross-sectionally the most strongly associated transcript with lower MMSE score (beta=-0.16,  $p=5.1 \times 10^{-6}$ , False discovery rate 'FDR'  $q=0.077$ ). Amongst inflammatory transcripts, only CCR2 expression was associated with both MMSE score and accelerated decline in score over the preceding 9 years (beta=-0.16,  $p=5.1 \times 10^{-6}$ ,  $q=0.003$ ; and beta=-0.13,  $p=5.5 \times 10^{-5}$ ,  $q=0.03$ ; respectively). CCR2 expression was also positively associated with ApoE e4 Alzheimer's disease risk haplotype. **Conclusions** We show for the first time that CCR2 expression is associated with lower MMSE scores in an older human population. Laboratory models of Ccr2-mediated beta-amyloid removal and regulation of neurogenesis affecting cognitive function may be applicable in humans. CCR2-mediated pathways may provide a possible focus for intervention to potentiate protective reactions to Alzheimer's pathology in older people, including for people with adverse ApoE haplotype.

## MARKERS OF CHOLESTEROL TRANSPORT ARE ASSOCIATED WITH AMYLOID DEPOSITION IN THE BRAIN (CNS)

T.M. Hughes<sup>1</sup>, O.L. Lopez<sup>1</sup>, M. Kamboh<sup>1</sup>, W.E. Klunk<sup>1</sup>, J. Williamson<sup>2</sup>, L.H. Kuller<sup>1</sup>, 1. *Epidemiology, University of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *Wake Forest University, Winston-Salem, North Carolina*

**Background:** Cholesterol levels and factors related to its homeostasis are implicated in the development of late onset Alzheimer's disease (AD) in observational and genetic studies. Recent advances in positron emission tomography (PET) allow for the visualization of amyloid deposition in vivo using the Pittsburgh Compound B (PiB). We hypothesized that plasma and genetic markers of cholesterol homeostasis would also be associated with the presence of amyloid deposition measured by PiB-PET. **Methods:** Plasma and genetic biomarkers were available on 182 participants from the Gingko biloba Evaluation of Memory Study (GEMS) who were cognitively normal or had mild cognitive impairment (MCI) and received neuroimaging at the end of the trial. **Results:** High amyloid deposition was: significantly associated with having a lower mini-mental state exams score ( $<27$ ,  $p=0.04$ ), having MCI

( $p < 0.01$ ), high systolic blood pressure ( $p = 0.04$ ), APOE- $\epsilon 4$  genotype ( $p < 0.01$ ), lower plasma apoE levels ( $p = 0.02$ ) and variation in the ABCA7 gene ( $p = 0.02$ ); marginally associated with low plasma apo J ( $p = 0.10$ ), HDLc ( $p = 0.17$ ) and variation in the ABCA1 gene ( $p = 0.24$ ); but not associated with total cholesterol ( $p = 0.91$ ), LDLc ( $p = 0.73$ ), triglycerides ( $p = 0.48$ ), 24S-hydroxycholesterol ( $p = 0.65$ ), 27-hydroxycholesterol ( $p = 0.47$ ) and variation in the CLU gene ( $p = 0.95$ ). Conclusions: Plasma and genetic factors relating to cholesterol transport were associated with amyloid deposition in the brain of non-demented elderly adults. Concurrent lipid measures and oxidized cholesterol metabolites do not appear to be related to amyloid deposition in cohort. Cholesterol transport may be a potential target for the prevention of amyloid deposition in the brain.

### **IDENTIFYING NEW DRUG TARGETS TO DELAY COGNITIVE AND CNS AGING**

P.A. Dacks, D.W. Shineman, H. Fillit, *Alzheimer's Drug Discovery Foundation, New York, New York*

Age is a major risk factor for several forms of cognitive decline ranging from cognitive aging and age-related memory impairment to severe neurodegenerative disorders including Alzheimer's and other causes of dementia. For virtually all age-related cognitive decline, effective therapeutic interventions do not exist. One attractive approach, termed the "longevity dividend," is to delay the onset of age-related cognitive decline by decelerating the rate of aging. In animal models, treatments that can slow the rates of aging and cognitive decline include dietary restriction and rapamycin, a calorie restriction mimetic that inhibits the nutrient sensor mTOR. Although dietary restriction and rapamycin, in their current form, are inappropriate for use by most humans, they provide proof-of-concept that aging rate can be modified particularly by systems-level treatments that coordinate numerous pathways. In this presentation, we will discuss the potential promise and risks of proposed drug targets to delay age-related cognitive decline. Potential targets include calorie restriction mimetics, omega-3 polyunsaturated fatty acids (eg. DHA), improved glucose and insulin homeostasis, anti-oxidant therapies, and mild hormetic stresses that could upregulate protective response pathways. We will also discuss some of the regulatory and logistical difficulties in developing treatments for humans including the need for reliable and cost-effective biomarkers for aging in the human brain and other tissues.

## **SESSION 1635 (SYMPOSIUM)**

### **APPLYING NARRATIVE GERONTOLOGY TO RESEARCH AND PRACTICE**

Chair: *K. de Medeiros, Miami University, Oxford, Ohio*

Co-Chair: *P. Saunders, Georgetown University, Washington, D.C., District of Columbia*

Discussant: *P. Carder, Portland State, Portland, Oregon*

"Narrative gerontology" broadly describes the use of personal stories to better understand experiences of aging. While much of the work to date has focused on narratives and aging from a theoretical and somewhat abstract perspective, there are many examples of narrative gerontology in research and practice. The purpose of the symposium is to first ask the question, when does story telling become research and then to explore applications of narrative gerontology in settings such as community-based participatory research; in practice, such as narrative medicine; and in new approaches to narrative analysis. The first paper suggests boundaries through which narrative research can be more firmly structured and considered. The second paper introduces how community-based participatory research and focus group discussions uncovered historical experiences of African Americans; and how these experiences were perceived as affecting intent to write advance directives. Findings can help practitioners be better listeners. The third paper presents narrative medicine in action, where doctors/practitioners consider how narrative shapes personal experience and how the writing process

supports this process of self-reflection. The final paper present a new way to examine narrative interview data by tracking the patterns through which informants tell their stories. Overall, this symposium introduces many key concepts and strategies related to narrative research in gerontology.

### **REFINING THE NARRATIVE TURN: WHEN DOES STORY-TELLING BECOME RESEARCH?**

A.S. Barusch, *1. University of Utah, Salt Lake City, Utah, 2. University of Otago, Dunedin, New Zealand*

The narrative turn in gerontology has generated considerable interest and a range of methodological approaches that claim to represent narrative research. Some of these can only be generously termed "research," while others give little more than a nod to "narrative." As narrative research matures, its boundaries must be more clearly defined. This paper examines definitional issues and proposes three criteria for good narrative research, arguing first that in-person data collection should use appropriate initiating prompts while giving the story-teller sufficient time and freedom to present a coherent narrative; second, that data analysis should address not only the content, but also the form of the narrative; and third, that interpretation of data should acknowledge the context of the story-telling, as well as its narrative intent. The process of boundary definition will be further clarified by exploring the possibility of co-authorship between researcher and story-teller and the treatment of the researcher's own narrative.

### **AFRICAN AMERICAN SENIORS' AND ADVANCE CARE PLANNING: IDENTIFYING YOUR WORLDVIEW IN COMMUNITY RESEARCH**

S.K. Crump, *Bioethical Solutions, Minneapolis, Minnesota*

Health practitioners often see research as disconnected and therefore not clearly transferable to clinical practice. If research is to be relevant to practitioners, it is important to be clear about the worldview and paradigm in which the research is conducted, and how this transfers to practice. In this research conducted with African American seniors, the researcher identified the critical theory – constructivism paradigm, which lead to conducting Community-Based Participatory Research (CBPR) with a virtue ethics framework. This approach lead to equitable collaboration on a topic of importance to the community, aimed at improving health and eliminating disparity, guided by a community advisory board. The Tuskegee Nurse's role is explored. Unexpected findings from focus groups were that examining personal relationships can be painful, and the perception that racism and the history of slavery influence the decision to write advance directives. Recommendations are made about having future discussions about advance care planning.

### **HOW NARRATIVE MEDICINE MAKES BETTER HEALERS**

P. Saunders, *Neurology, GUMC, Washington, DC, District of Columbia*

Narrative Medicine (NM) is a burgeoning field that teaches narrative and writing to clinical professionals. The first program was started at Columbia University in 1995 by Dr. Rita Charon, an internist with a doctorate in literature. This program, through narrative training, teaches healthcare professionals to improve the effectiveness of their clinical interactions by developing the capacity for attention, reflection, representation, and affiliation with patients and colleagues. Currently Georgetown University offers an elective in NM. The course teaches concepts of narrative (e.g., life stories, personal narratives, illness narratives). Using a workshop format, instructors facilitate close examination of the writing and reflection process, thus giving students a better understanding of themselves and their practice of medicine. The field of NM is an application of how narrative can be used to help clinicians to become better healers. The long-term goals include improvement in clinical practice as well as patient health outcomes.

## **NARRATIVE RESPONSE TYPE AND INTERVIEW DATA: SOME NEW CONSIDERATIONS FOR ANALYZING NARRATIVE DATA**

K. de Medeiros, *Miami University, Oxford, Ohio*

Although there are many ways in which to make sense of narrative interview data, I propose a new analytical approach based on data from a large qualitative study on the meaning of suffering in old age. In this study, participants used three basic response strategies: reflective, refractive, and chaotic. Reflective describes reportable events which seem to reflect back upon narrator although the narrator remains the subject of the story. The “refractive” narrative is characterized by a gradual movement away (refraction) from the narrator to some other character in the story. Chaotic describes a narrative in which clauses are thematically linked but which lack a linear progression or clear tie to the narrator. Overall, systematically diagramming narrative response strategies led to a deeper interpretation of emerging themes and while avoiding the pitfalls of being either too structural or too interpretive without adequate grounding.

## **SESSION 1640 (SYMPOSIUM)**

### **CIVIC ENGAGEMENT AT DIFFERENT STAGES OF LIFE: HOW, WHY AND WHERE?**

Chair: *A. Domaradzka-Widla, Institute for Social Studies, University of Warsaw, Warszawa, Poland*

Co-Chair: *T. Antonucci, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Discussant: *J. James, Boston College, Boston, Massachusetts*

This symposium addresses the roles, mechanisms and reasons for volunteering at different stages of life from an interdisciplinary and international perspective. Invited researchers present psychological and sociological analyses, based on both quantitative and qualitative data. This broad, interdisciplinary approach will permit the identification of a comprehensive perspective outlining different factors explaining civic engagement across life cycle. Antonucci, Ajrouch and Webster, using data from the Social Relations, Age and Health Study, consider social and human capital as factors influencing the likelihood and frequency of volunteering in later stages of life. Domaradzka analyses the Polish women’s motivation to engage in social activity during the pre and post-retirement periods. She studies the benefits of engagement at the individual level, using both quantitative and qualitative data. Lenart discusses the multifaceted role Polish Universities of the Third Age play in integrating elderly back into society and analyses UTAs’ approach towards older adults’ education and civic engagement. Finally, using qualitative data on elderly community involvement in the US, Martinson discusses the ethical implications of promoting normative ideas of lifelong productivity as a necessary condition of being “a good old citizen”. The underlying focus of the symposium is twofold. One is to discuss the possible positive impact of volunteering on the well-being of people in later stages of life. The other is to bring attention to the growing importance of involving older people in activities that can be beneficial for them and for the society, thus creating or tapping into an additional public resource.

### **VOLUNTEERISM: THE ROLE OF HUMAN AND SOCIAL CAPITAL**

T. Antonucci<sup>1</sup>, K.J. Ajrouch<sup>2</sup>, N.J. Webster<sup>1</sup>, *1. Institute for Social Research, University of Michigan, Ann Arbor, Michigan, 2. Eastern Michigan University, Ypsilanti, Michigan*

Participation in volunteering activities by older persons increased dramatically in the last few decades. We examine effects of education and social convoys on the likelihood and frequency of volunteering. Data come from two waves of the Social Relations and Mental Health over the Life Course Study. Regression analyses indicated those with higher education levels (human capital) were more likely to volunteer,

though education did not predict the number of hours respondents reported volunteering per year. Convoys (social capital) do not amplify or substitute for the effect of human capital on the likelihood of volunteering, yet interact with education level to predict volunteer frequency. For example, when geographic proximity of network members decreased over time, those with more education volunteer more hours per year than those with low education. The ways in which convoys and education influence volunteerism are discussed to understand more clearly the contexts in which older adults volunteer.

### **BRIDGING THE GAP? VOLUNTARY ENGAGEMENT AMONG WOMEN IN PRE AND POST-RETIREMENT PERIOD**

*A. Domaradzka-Widla, Institute for Social Studies, University of Warsaw, Warszawa, Poland*

This paper examines the role of social engagement in the pre and post-retirement periods. Quantitative analyses based on World Values Survey data provide background description of the nature of social engagement among Poles and show the difference between positive and negative motivation for activism depending on age, gender and socio-economic status. Qualitative data explains these differences further, using data obtained from 50 individual in-depth interviews with leaders of women’s organizations in Poland. Most of the respondents were 50+ and described their civic engagement as a coping mechanism, enabling them to deal with the transition to retirement. Both analyses allowed for the creation of a typology of volunteers explaining the role of social activism at the individual level in later stages of life. Results indicate that reasons for volunteering are personal and driven by the need for self-fulfillment and interactions with other people that often increase in later stages of life.

### **UNIVERSITIES OF THE THIRD AGE IN POLAND. THE SPACE OF EDUCATION, ACTIVITY AND ENTERTAINMENT OF THE ELDERLY**

*M. Lenart, University of Warsaw, Warszawa, Poland*

Rapidly growing popularity and widening range of activities place Universities of the Third Age as the most important institutions dedicated to the education and engagement of the elderly in Poland. Here we analyze the multifaceted role Polish UTAs play in integrating elderly back into society and their approach towards the education and social activity of the older adults. The results we present specifically focus on understanding how UTAs address the needs of the elderly in three areas: 1) giving opportunities of self-realization and creative development; 2) activating their members and creating the infrastructure necessary to engage and use their potential and 3) strengthening the social capital of their members, also in the perspective of compensation for the lost relations from family and work life. Findings allowed to evaluate the importance of Polish UTAs and form conclusions, referring both to UTAs and general situation of the elderly in Poland.

### **CONSIDERING ELDERS’ COMMUNITY ENGAGEMENT THROUGH A LENS OF EQUAL REGARD**

*M. Martinson, Health Education, San Francisco, California*

Martinson explores the ethically troubling implications of promoting normative ideals of healthy aging that suggest lifelong productivity is a necessary condition to be “a good old person” and “a good old citizen.” An alternative framework of equal regard is presented that emphasizes creating the environmental conditions that support health equity, dignity, and fulfillment for elders. This framework is used to contextualize the results of a qualitative study that explored the lived experiences of community involvement among a diverse sample of 22 elders, and in particular elders’ subjective meanings of community work and healthy aging. Key findings revealed that community involvement and healthy aging are not individual acts or static states, but rather reflect reciprocal interactions between individual, interpersonal and broader

social, political and economic contexts. An equal regard framework is considered in making recommendations for how to best support “healthy aging” in light of these findings.

## SESSION 1645 (SYMPOSIUM)

### CULTURE CHANGE: REVISITING A NEW TOPIC

Chair: *N. Fishman, Robert Wood Johnson Foundation, Princeton, New Jersey*

Discussant: *P. Reed, Pioneer Network, Chicago, Illinois*

Changing the culture of care in long-term care settings to a more person-centered system is an increasingly important goal of providers and policymakers alike, and data are starting to amass regarding culture change adoption and its outcomes. This symposium will present new descriptive research on the current state of culture change in U.S. nursing homes, provide new information regarding the evidence of culture change efficacy, and present preliminary results on the Green House model of culture change as well as upcoming research plans. Points to be discussed include correlates of culture change adoption, noting that state policies themselves relate to and so can promote culture change. Further, environmental redesign is a common component of culture change, and is associated with other systemic changes. While literature on culture change is growing, results from a comprehensive literature review will indicate that overall, more evidence is needed regarding the efficacy of culture change. Finally, one presentation will focus on a specific model of culture change, discussing the process and outcomes of the Green House model and next steps for research. Our discussant, Dr. Peter Reed, CEO of the Pioneer Network, will reflect on the symposium presentations in the context of his organization’s work and the future of culture change. After attending this session, participants will have a better understanding of which settings are more likely to embrace culture change, the manner in which they are likely to adopt it, and the research that is needed and ongoing to establish the related evidence base.

### ADOPTION OF NURSING HOME CULTURE CHANGE

S. Zimmerman<sup>1</sup>, D. Grabowski<sup>3</sup>, A. Elliot<sup>2</sup>, B. Leitzell<sup>4</sup>, *1. Univ North Carolina Chapel Hill, Chapel Hill, North Carolina, 2. Pioneer Network, Chicago, Illinois, 3. Harvard, Boston, Massachusetts, 4. Pennsylvania State University, University Park, Pennsylvania*

One directive of the Affordable Care Act is to transform long-term services and supports into a more person-centered system. In nursing homes, culture change is central to this philosophy, and policymakers must understand factors associated with its adoption. We examined the adoption of culture change including the Green House model among all U.S. nursing homes from 2004-2011, using data from the Pioneer Network, the Online Survey Certification and Reporting system, Medicare cost reports, and the Minimum Data Set. Findings indicated that culture change adopters were more likely to be nonprofit, faith-based, independently-owned, in urban areas, and larger; have fewer minority residents, lower Medicaid census, and lower acuity; and fewer survey deficiencies, more RN staffing, and less relative debt. States experienced greater adoption when they rewarded it in the state pay-for-performance system, had a culture change coalition, and paid a higher Medicaid per diem. Implications for policy will be discussed.

### GREEN HOUSE MODEL: EVIDENCE AND REMAINING QUESTIONS

B. Bowers<sup>1</sup>, S. Sharkey<sup>2</sup>, S.D. Horn<sup>3</sup>, *1. University of Wisconsin-Madison, Madison, Wisconsin, 2. Health Management Strategies, Inc., Austin, Texas, 3. International Severity Information Systems, Inc., Salt Lake City, Utah*

Green House homes were designed to improve both quality of life and quality of care for elders needing skilled nursing care. The model has become increasingly popular, now numbering 120 homes with an

additional 100 in development. While there are promising data on quality of life improvements for elders and their families, more evidence is needed to determine the nature and extent of care practice improvements, clinical outcomes, and costs. This paper will summarize published and unpublished findings from Green House research, including variations in implementation, more direct care time for residents, less decline in resident activities of daily living over time, and improved resident quality of life ( $p < .05$ ). It also will provide an overview of the THRIVE research collaborative, funded by the Robert Wood Johnson Foundation, which is currently addressing some important remaining questions about the Green House model.

### ENVIRONMENTS OF CULTURE CHANGE: FINDINGS FROM THE THRIVE SURVEY OF CULTURE CHANGE ADOPTERS

A. Elliot<sup>2</sup>, L.W. Cohen<sup>1</sup>, S. Sharkey<sup>3</sup>, K. Nolet<sup>4</sup>, S. Zimmerman<sup>1</sup>, *1. Univ North Carolina Chapel Hill, Chapel Hill, North Carolina, 2. Pioneer Network, Chicago, Illinois, 3. Health Management Strategies, Inc., Austin, Texas, 4. University of Wisconsin-Madison, Madison, Wisconsin*

Culture change in nursing homes aims to promote a person-centered culture through transformations related to care practice, workplace, and a homelike atmosphere. While the importance of environmental redesign in overall culture change transformations has yet to be determined, adopters maintain that a smaller physical environment designed for fewer residents is critical to person-centered practice. Since the majority of U.S. nursing homes were designed as larger, more institutional settings, analyzing culture change implementation in the context of the physical environment contributes to the current discourse regarding long-term care policy and practice. To explore this issue, we surveyed over 300 nursing homes identified by national experts as those engaged in sustained culture change adoption. Findings indicate that most adopters engage in environmental redesign and that the extent of adaptation is positively associated with systemic implementation of individualized care and workplace practices. Implications for practice and policy will be discussed.

### WHAT DOES THE EVIDENCE REALLY SAY ABOUT CULTURE CHANGE?

V. Shier<sup>2</sup>, D. Khodyakov<sup>2</sup>, L.W. Cohen<sup>1</sup>, S. Zimmerman<sup>1</sup>, D. Saliba<sup>2</sup>, *1. Univ North Carolina Chapel Hill, Chapel Hill, North Carolina, 2. RAND, Santa Monica, California*

Although nursing home (NH) culture change efforts are becoming more widespread, the empirical evidence supporting culture change efficacy is not well described. We searched peer-reviewed and grey literature databases to identify intervention evaluations that addressed at least one previously defined culture change domain. Of 3,993 titles identified, 529 underwent full text review. Of these, 27 peer-reviewed and 12 grey literature publications met inclusion criteria for data abstraction. Studies varied widely in their scope and examined outcomes. Most studies addressed more than one culture change domain; resident direction, home environment, and close relationships were most common. Studies suggested a range of facilitators and barriers. Few studies adequately described how and to what degree culture change was actually implemented, adding to the challenge of drawing conclusions about culture change efficacy. Although only a few studies reported adverse outcomes, there was no consistent evidence on the efficacy of culture change in NHs.

## SESSION 1650 (SYMPOSIUM)

### GLOBAL ISSUES IN SOCIAL EXCLUSION

Chair: *K. Walsh, Irish Centre for Social Gerontology, National University of Ireland Galway, Galway, Ireland*

As a term, social exclusion has become a key feature of international policy, practice and research discourse. There has also been an increas-



ing prevalence of theoretical and policy perspectives on inclusion, and social, economic and civic deprivation. This growing focus on social exclusion, and its constituent elements, is set against significant upward trends in global aging demographics. There are, therefore, questions around how exclusion and aging patterns intersect in different global contexts and what this means for older people living in these settings. Meanings associated with aging and exclusion are often ambiguous, particularly when viewed from a global perspective, and are compounded by competing interpretations of different disciplines and a lack of cross-comparative conceptualization. The heterogeneity of older populations, global and macro-economic trends, and dimensions of place and the life-course are elements that add to this complexity. Consequently, it is difficult to appreciate the key global issues in social exclusion, the areas of life where people can experience exclusion, and the underlying forces that combine to construct exclusion. This symposium addresses these knowledge deficits by bringing together speakers from the U.S., Canada, the UK and Ireland. The presentations of Dr Adele Hayutin (Stanford University), Professor Norah Keating (University of Alberta), Professor Vanessa Burholt (Swansea University) and Dr. Kieran Walsh (National University of Ireland Galway) will provide insight into: (1) the connections between global aging patterns and exclusion; (2) current knowledge on the conceptualization of age-related exclusion; and (3) the impact of exclusion in different place and jurisdictional settings.

**SOCIAL COHESION IN RURAL COMMUNITIES OF SOUTH WEST ENGLAND AND WALES: THE INVISIBLE IMPACT OF SOCIAL EXCLUSION ON OLDER PEOPLE**

V. Burholt<sup>1</sup>, T. Scharf<sup>2</sup>, B. Winter<sup>1</sup>, *1. Centre for Innovative Ageing, Swansea University, Swansea, United Kingdom, 2. National University of Ireland, Galway, Galway, Ireland*

Social deprivation and poverty can create a class of secondary citizenry confined to subordination as well as social and political exclusion. Szalai (2008) has noted that ‘such a fault line in civil society might deeply endanger social cohesion.’ However, the debate on the link between multiple disadvantage and social cohesion is usually confined to discourse on inner-cities, youth (disengaged, alienated, consumerist) culture, immigration or ethnic diversity. The 2011 riots in the UK (London, Birmingham, Liverpool, Manchester and Bristol) were used by the media to illustrate these fault-lines in society. However, this paper demonstrates that the link between multiple disadvantage and social cohesion extends beyond urban populations and is observed in relatively ethnically homogenous rural areas of England and Wales and experienced by older people. Furthermore, in rural areas this relationship can be mediated by elements of social capital: local concerns, institutional trust, civic participation and social belonging.

**SOCIAL EXCLUSION OF OLDER RURAL PERSONS: CONFRONTING THE RURAL IDYLL**

K. Walsh, E. O’Shea, T. Scharf, *Irish Centre for Social Gerontology, National University of Ireland Galway, Galway, Ireland*

Rural ageing can sometimes be viewed as a dichotomy of experiences, with rural older people either considered as a needs-based group, living in a problematic environmental context, or a set of individuals living an idyllic life-style in supportive communities. It is therefore unsurprising that the complex and contested construct of social exclusion has rarely been explored or understood in rural settings. Yet, such a construct may offer potential for capturing the complex realities of rural older people’s lived experiences. This paper explores potential inequities, challenges and opportunities of rural ageing, in a study of social exclusion in village, near-urban, dispersed, remote and island communities in Ireland and Northern Ireland. 106 semi-structured interviews with older people and 10 focus group discussions with community stakeholders were completed. The cross-jurisdictional findings, which indicate exclusion is both multidimensional and multilayered,

are discussed in reference to notions of the ‘rural idyll’ and ‘problematised rural’.

**CONCEPTUALIZING SOCIAL EXCLUSION OF OLDER PERSONS**

N. Keating<sup>1</sup>, T. Scharf<sup>2</sup>, *1. University of Alberta, Edmonton, Alberta, Canada, 2. National University of Ireland, Galway, Ireland*

Exploration of global issues relating to aging and social exclusion has resulted in convergences of theoretical perspectives and substantive understandings but also regional differences in the relative importance of the domains of exclusion. In this presentation, we present an overview of the domains and drivers of social exclusion, based on a forthcoming book, “From Exclusion to Inclusion in Old Age: A Global Challenge”. This global perspective fosters a positioning of domains of exclusion that are broader than the European roots in which much of the theoretical work concerning social exclusion is grounded. Three domains predominate—exclusion from social relations, material resources and civic engagement. We highlight regional differences in the salience and important components of these domains, calling for increased critical exploration of inequalities among older adults and in the methodological rigour that is a precursor to filling knowledge gaps around domains of exclusion and the risks for experiencing them.

**GLOBAL TRENDS IN POPULATION AGING: EXACERBATING SOCIAL EXCLUSION?**

A. Hayutin, *Center on Longevity, Stanford University, Stanford, California*

The global shift toward older age brackets makes social inclusion of older adults an increasingly important consideration for well-being. While aging is a global phenomenon, population aging differs dramatically across countries and regions largely due to differences in the timing and pace of fertility declines and longevity gains. Most countries face dramatic long-term changes in their age structures and many will be unable to adapt their social, economic, and political infrastructures to the enormous demographic changes that are already surfacing. Moreover, the speed of these changes will make effective adjustment even more challenging. This presentation will provide a broad comparative perspective on patterns of aging across countries, highlighting trends that might exacerbate social exclusion or foster inclusion, including demographic and economic factors such as dependency ratios, labor force participation, gender, migration patterns, living arrangements, and family size.

**SESSION 1655 (SYMPOSIUM)**

**INDIGENOUS PERSONS AND DEMENTIA: COLLABORATIVE RESEARCH TO UNDERSTAND DEMENTIA AND IMPROVE ELDERS CARE**

Chair: *W. Hulko, Social Work, Thompson Rivers University, Kamloops, British Columbia, Canada, University of British Columbia, Vancouver, British Columbia, Canada*

Discussant: *S. Levkoff, University of South Carolina, Charleston, South Carolina*

Increasing attention is being paid to dementia amongst Indigenous persons, particularly First Nation communities in Canada, Native Americans in the United States, and Australian Aboriginal people. This is largely due to the increase in life expectancy for Indigenous persons and the prevalence of dementia risk factors linked to colonization such as diabetes, low socio-economic status, obesity, cardiovascular disease, and low levels of formal education. However, few research studies adopt a decolonizing approach and represent meaningful collaborations with the communities and people under investigation. Through describing and analyzing the process and results of several research projects with Indigenous persons in the area of dementia, this symposium will advance understandings of both the substantive topic of dementia and the design

and execution of a collaborative research project with a historically disadvantaged community and/or a population considered to be vulnerable. Hulko and colleagues will describe the methodology of their collaborative research with Secwepemc Nation Elders and decision-makers in British Columbia and analyze the extent to which decolonization and cultural safety are incorporated. The paper by H. Henderson and C. Henderson will delineate interpretive cultural narratives on impending death among certain American Indian tribes experiencing death with dementia. Jacklin and colleagues will present results from their participatory research on dementia with Aboriginal communities in Ontario suggesting that culturally safe dementia care for Aboriginal people needs to be regionally and/or community specific. The discussant will address the implications of these collaborative research projects for critical gerontological approaches to dementia and aging research with marginalized communities.

#### **USING PARTICIPATORY APPROACHES TO EXPLORE ABORIGINAL UNDERSTANDINGS OF DEMENTIA AND DEMENTIA CARE**

K. Jacklin<sup>1</sup>, W. Warry<sup>2</sup>, J. Pace<sup>2</sup>, 1. *Human Sciences, Northern Ontario School of Medicine, Sudbury, Ontario, Canada*, 2. *McMaster University, Hamilton, Ontario, Canada*

Alzheimer's disease and dementia were identified as an emerging health issue by Aboriginal communities in Ontario Canada in 2007. The authors engaged with communities to develop a comprehensive research strategy to investigate dementia in diverse Aboriginal communities. This paper explores findings from the resulting research program concerning Aboriginal peoples' understanding of and experiences with dementia. We used a participatory research framework working with Aboriginal community organizations and leadership. Semi-structured in-depth interviews (n= 113) were carried out with people with dementia, caregivers, health care providers, elders, and traditional healers at six geographically and culturally diverse research sites in Ontario, Canada. Drawing on this data, we report study findings concerning how dementia and dementia care are experienced by Aboriginal people in diverse settings, and where opportunities exist to improve cultural safety in dementia care. We conclude that culturally safe dementia care models for Aboriginal people need to be regionally and/or community specific.

#### **WORKING TOGETHER TO UNDERSTAND DEMENTIA AND IMPROVE NURSING CARE FOR FIRST NATION ELDERS**

W. Hulko<sup>1,2</sup>, C. Varcoe<sup>2</sup>, S. Mahara<sup>3</sup>, 1. *Social Work, Thompson Rivers University, Kamloops, British Columbia, Canada*, 2. *University of British Columbia, Vancouver, British Columbia, Canada*, 3. *Thompson Rivers University, Kamloops, British Columbia, Canada*

This paper addresses the process of doing research in collaboration with multiple stakeholders, including First Nation Elders, health authority decision-makers, and nursing practitioners. It is based on a completed grounded theory study of First Nation perspectives on dementia and an ongoing community-based research project on culturally safe dementia care that aims to improve nursing care for First Nation Elders with memory loss through the use of traditional storytelling and Indigenous Cultural Competency training. This paper describes measures taken to ensure meaningful collaboration, including the appointment of elder advisors to the research, signing of research agreements with participating communities, and co-authoring of publications and presentations, and some of the challenges encountered along the way. Through analyzing the extent to which this collaborative research program reflects a commitment to decolonization and serves the interests of the various stakeholders, we engage critically with theoretical and methodological developments in Dementia Studies and Indigenous Studies.

## **SESSION 1660 (SYMPOSIUM)**

### **POLICY SERIES: NATIONAL ADULT VACCINATION PROGRAM: CHARTING NEW FRONTIERS ACROSS THE AGING CONTINUUM**

Chair: *G. Douglas, Weill Cornell Medical College, New York City, New York*

Co-Chair: *S. Gravenstein, Alpert Medical School of Brown University, Providence, Rhode Island*

Discussant: *B. Resnick, University of Maryland School of Nursing, Baltimore, Maryland*

This session will feature a call to action policy framework based on findings from a NAVP 2012 April Scientific Summit in Washington DC. These findings will be the foundation for a 2013 invitational conference on vaccinations for adults that will showcase promising and best practices in improving adult vaccination rates. Workgroup members include: R. Gordon Douglas, MD Weill Cornell Medical College Stefan Gravenstein, MD, MPH Alpert Medical School of Brown University Paul Etkind, DrPH, MPH National Association of County and City Health Officials Walter A. Orenstein, MD Emory University School of Medicine Emory Vaccine Center William Schaffner, MD Vanderbilt University School of Medicine The Edward Jenner Society Barbara Resnick, PhD, RN, CRNP, FAAN, FAANP University of Maryland School of Nursing

## **SESSION 1665 (SYMPOSIUM)**

### **THE 2010 NATIONAL SURVEY OF RESIDENTIAL CARE FACILITIES (NSRCF): SELECTED RESULTS AND FUTURE DATA COLLECTION ACTIVITIES**

Chair: *L. Harris-Kojetin, National Center for Health Statistics, Hyattsville, Maryland*

Co-Chair: *P. Carder, Portland State University, Portland, Oregon*

Discussant: *S. Zimmerman, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*

The 2010 National Survey of Residential Care Facilities, conducted by the Department of Health and Human Services, is the first nationally representative survey of assisted living and other residential care communities (RCCs) as small as 4 beds. Using a probability-based sampling design to select RCCs and current residents, interviews were completed with 2,302 communities. There were 31,100 RCCs with 971,900 licensed beds nationwide. This symposium presents findings on topics important to long-term care (LTC) providers, policy makers, researchers and consumers. The first, on medication management practices, found that most RCCs store and administer medications, 45% administer medications via injections, and only 8% administer IV medications. The second paper describes dementia care. About 17% of RCCs had dementia specific units (DSUs), and compared to non-DSU RCCs, those with DSUs had more beds and were more likely to be purpose-built. Among residents with dementia, those in DSUs were more likely to be white and more physically impaired, but less likely to be Medicaid beneficiaries. The third paper reports baseline data on RCC use of electronic health information; 57% of RCCs reported computerized capabilities to record resident health information, and 16% had computerized capabilities to exchange health information with providers. Each of these three papers reports results comparing community and resident characteristics. The fourth paper introduces a new national study of nursing home, home health, hospice, RCC and adult day services centers providers that will regularly produce information to help monitor the evolving LTC landscape and inform future LTC policy and practice.

## DEMENTIA CARE IN RESIDENTIAL CARE COMMUNITIES

E. Park-Lee, M. Sengupta, L. Harris-Kojetin, *CDC/NCHS, Hyattsville, Maryland*

Dementia care is increasingly becoming an important service provided in assisted living and other residential care communities (RCCs). RCC residents with dementia can be in dementia-specific units (DSUs), either in stand-alone dementia-specific communities or in dementia special care units within larger assisted living buildings, or mixed in with residents without dementia. Using data from 2010 NSRCF, this study presents a descriptive overview of dementia care in RCCs. Comparisons of RCCs with and without DSUs were made relative to facility and resident characteristics. About 17% of RCCs had DSUs. Compared to non-DSU RCCs, RCCs with DSUs had a greater number of beds and were more likely to be purposely built as a RCC. Among residents with dementia, those in DSUs were more likely than those in non-DSUs to be white and more physically impaired, but less likely to be Medicaid beneficiaries.

## MEDICATION MANAGEMENT IN RESIDENTIAL CARE COMMUNITIES

L.L. Dwyer<sup>1</sup>, P. Carder<sup>2</sup>, L. Harris-Kojetin<sup>1</sup>, *1. Division of Health Care Statistics, National Center for Health Statistics, Hyattsville, Maryland, 2. Portland State University, Portland, Oregon*

Medication management is a critical service offered to residents by residential care communities. It includes assisting residents with self-medication and directly administering medications to them. This study examines patterns in medication management in a nationally representative sample of U.S. residential care communities. In the 2010 NSRCF, more than two-thirds of residential care communities assisted residents by delivering pre-packaged unit doses to them (69%) and handing them water to take medications (68%). More than 80% of communities provided a central location for medication storage (94%), cued residents to ensure medication ingestion (91%), administered drops or topical ointments (88%), handed correct doses (82%), and gave medication reminders (80%). Approximately 8% of residential care communities administered intravenous medications, while 45% administered injections to residents. Communities differed by size, ownership, age, chain status, and Medicaid certification status, and provision of skilled nursing services in the medication management tasks they offered to residents.

## ADOPTION BY RESIDENTIAL CARE COMMUNITIES OF COMPUTERIZED CAPABILITIES FOR RECORDING, MAINTAINING, AND EXCHANGING HEALTH INFORMATION

C. Caffrey, E. Park-Lee, *National Center for Health Statistics, Hyattsville, Maryland*

There is little information on the adoption and use of computerized capabilities in residential care communities (RCCs). Using 2010 NSRCF data, this study provides results on RCC adoption of computerized capabilities to record and exchange health information on residents. Among the 31,100 RCCs in 2010, 57% had computerized capabilities to record health information on residents, and one-third of them had five or more of these capabilities. Records of resident demographics, medical provider information, individual service plans, and medication lists were the most common computerized capabilities. In 2010, 16% of RCCs had computerized capabilities to exchange health information on residents with different providers, and almost 10% of them had two or more of these capabilities. Exchange with pharmacies, physicians, and corporate offices were the most common capabilities. This study provides baseline information that may be useful to policymakers, providers, and consumer advocates as they plan for future long-term care needs.

## INTRODUCTION TO THE NATIONAL STUDY OF LONG-TERM CARE PROVIDERS (NSLTCP)—A NEW RESOURCE ON ASSISTED LIVING, RESIDENTIAL CARE COMMUNITIES AND OTHER PAID, REGULATED LONG-TERM CARE PROVIDERS

L. Harris-Kojetin, *National Center for Health Statistics, Hyattsville, Maryland*

The National Center for Health Statistics recently launched the National Study of Long-Term Care Providers. NSLTCP will replace NCHS' periodic National Nursing Home Survey and National Home and Hospice Care Survey, and the one-time National Survey of Residential Care Facilities. Intended to help monitor the evolving LTC landscape, NSLTCP data will be used to produce an overview report on the supply and use of the major types of paid, regulated LTC. The report is currently planned to be updated every two years. NSLTCP will: (1) use only administrative data for providers for which they are available (nursing homes, home health agencies, and hospices); (2) conduct surveys of providers for which national administrative data do not exist (residential care communities, adult day services centers); and (3) provide national, and when possible state-level, information on a small set of provider and user characteristics. We highlight the NSLTCP goals, features, challenges, and opportunities.

## SESSION 1670 (PAPER)

### DEMENTIA CARE INTERVENTIONS IN THE COMMUNITY AND RESIDENTIAL SETTINGS

#### THE WORK OF THE CARE-BASED HAIR SALON: SUPPORTING PEOPLE WITH DEMENTIA TO MAINTAIN THEIR APPEARANCE IN CARE

R. Ward, S. Campbell, *University of Manchester, Manchester, United Kingdom*

While dementia care has been subject to intense scrutiny in recent years many of its more mundane and routine aspects remain overlooked. In particular, it would seem that body work has been relegated to the 'back-stage' of dementia care. Yet, at the heart of much paid care provided to older people lies a tension between provision of tightly defined and regulated 'body-focused' care tasks, and the need to promote opportunities for social engagement, self-expression and the support of personhood. This paper explores that dilemma, grounded in the concrete example of a widespread and yet largely un-researched feature of many dementia care settings - hairdressing. The Hair and Care project is a two-year ethnographic study of the working practices and relationships involved in supporting people with dementia to maintain their appearance and presentation in care settings. Through a focus on appearance-related practices in care we have explored and documented the social, interactional and embodied aspects of these encounters using a mix of qualitatively-driven methods. This paper will focus upon the labour that is involved in the provision of such help and support, drawing particularly upon debates on body work and emotional labour to explore the differing dimensions of this work. Our aim is to make visible the skills involved in this complex, effort-intensive labour alongside the outcomes for service users. Our findings indicate the potential value of integrating hairdressing into the therapeutic work of dementia care and highlight the distinctive contribution that hairdressers can make to care settings.

#### DEMENTIA AND FRIENDSHIP: THE QUALITY AND NATURE OF THE RELATIONSHIPS THAT REMAIN

P.B. Harris, *Sociology, John Carroll University, Cleveland, Ohio*

Friendships are an integral part of the human experience. Yet, dementia often takes a toll on social relationships, and many friends withdraw. This research however, focuses on friendships that remain, despite a

diagnosis of dementia. It examines the quality of the friendships of people with dementia and long-term friendships. Data were collected through two focus groups interviews with people with early stage dementia and their care partners; and through interviews with designated friends (N=23). The findings show that people with dementia do have friends that remain and they have a wide variety of friendships, from those based on one shared activity to those of multifaceted deep relationships. The long-term friendships, which last across the various stages of dementia, appear to fall into two types: one, where the person with dementia has become more like a family member than a friend; and the other where the diagnosis of dementia was the impetus for the relationship to become closer. Practice recommendations to nurture such friendships will be discussed.

#### **TRAINING NEEDS OF DEMENTIA CARE AMONG COMMUNITY MENTAL HEALTH PRACTITIONERS IN BEIJING, CHINA**

H. Hsiao, I. Chi, *Social Work, University of Southern California, Los Angeles, California*

**Background and Purpose:** In China, one of the four hospitals is located in rural areas with more than half of the national population. There are major discrepancies existing between rural and urban areas in terms of financial and medical resources. Due to the lack of trained medical professionals, the problem of caring dementia older adults in rural China is greater than in urban areas. The purposes of this study are: (1) to describe the mental health service delivery in China; and (2) to understand the differences in knowledge of dementia and training needs for dementia caregivers among community mental health practitioners in urban areas versus rural areas. **Method:** Using purposeful sampling method, the present study collected data through conducting focus group discussions around 90 minutes among 40 mental health workers whose major responsibilities are delivering mental health services in clinic centers in Daxing (rural) and Xicheng (urban) districts in Beijing, China in June 2011. Participants mainly included community “doctors” (32%), hospital doctors (20%), and nurses (22%). Fifty percent of them were women and the mean age was 35.72yrs. Ninety two percent had college degrees with mean tenure of 14 years. **Results:** Findings show that compared to mental health practitioners in urban areas, mental health practitioners in rural areas had very limited knowledge about causes, symptoms, and treatment of dementia as well as communication skills with family caregivers. Furthermore, 78% of mental health practitioners in both areas indicated unfamiliarity with caregiving for people with dementia. Lack of specific training in dementia among mental health practitioners in both areas and support from the government led to mental health intervention of the people with dementia less effective. **Conclusion:** This study indicates training needs of dementia care among mental health practitioners in community-based clinical centers in Beijing and provides implications for research and practices. Official institutions should take more active roles in long-term planning and providing training programs for dementia care, especially among rural mental health practitioners and their family caregivers, to enhance the quality of life for people with dementia.

#### **NARRATIVE PRACTICE INSIGHTS FROM A DYADIC DEMENTIA INTERVENTION**

K. Scherrer<sup>1</sup>, B. Ingersoll-Dayton<sup>2</sup>, B. Spencer<sup>2</sup>, *1. Rutgers University, New Brunswick, New Jersey, 2. University of Michigan, Ann Arbor, Michigan*

Memory loss and dementia can be devastating for both caregivers and care recipients. Narrative therapeutic approaches offer promise, as well as challenges, for social interventions with couples where one partner has dementia. The Couples Life Story Approach is a recently-developed method by which practitioners work with such couples to help them narrate the story of their life together. This narrative approach is augmented by mementos (e.g., photos, cards) that are collected by the

couple during the intervention. Significant memories are elicited from both partners and developed into a Life Story Book. Drawing on data from this clinical research intervention with 20 older couples, we ask: What are some of the challenges of conducting narrative based therapeutic interventions with older couples with memory loss? Clinical themes were identified in weekly clinical team meetings, and six of the most prominent themes are presented here. Specifically, 1) How to construct a narrative from disparate stories, 2) How to tell a mutual story, 3) How to tell a story of a couple that hasn't been together as long, 4) How to incorporate others in the story, 5) How to incorporate difficult life moments, and, 6) How to end the story. Within each theme, we utilize case examples to illuminate relevant issues and describe strategies that were developed to resolve these dilemmas. Implications for practitioners and clinical researchers who are engaged in dyadic interventions will be discussed.

#### **EXPERIENCING RELATIONALITY IN AN ARTS-BASED CONTEXT FOR PERSONS WITH DEMENTIA**

L. Meschino<sup>1</sup>, S. Dupuis<sup>1</sup>, C. Dowhaniuk<sup>2</sup>, *1. Murray Alzheimer Research and Education Program, University of Waterloo, Waterloo, Ontario, Canada, 2. Alzheimer Society Kitchener-Waterloo, Kitchener, Ontario, Canada*

Gather at the Gallery is a collaborative art program and research project between the Alzheimer Society Kitchener-Waterloo, the Murray Alzheimer Research and Education Program (University of Waterloo), local artists and art educators in Canada. Inspired by the Meet Me at MoMA model, Gather at the Gallery is a weekly, community-based art-looking and art-making program for people with dementia and their care partners. As a research project, its purposes are: 1) to use a phenomenological approach to describe experiences of meaningful engagement with visual art for persons with dementia and their care partners; 2) to raise awareness of how creative arts can serve an experience of continued companionship and social integration and 3) to expand our understanding of relationship-centred care outside the clinical/medical context. Spanning five 10-week modules, each program module brings together a diverse group of 10-16 participants (5-8 persons with dementia; 5-8 care partners), varying in age (50 - 80 years old), relationship dynamic (husbands and wives; mothers and daughters), stage of dementia (early-stage; mid-stage), prior experience with art, and expectations for the program. The purpose of this paper is to provide detailed descriptions of participants' subjective experiences of relationship-building in the context of the art program. Furthermore, interpretations of lived human relation (relationality) are explored, focussing on participants' connection to self, others, a creative process, as well as, engagement with new learning and with community spaces. Finally, key aspects of the program are identified that can sustain experiences of meaningful relationships and continued engagement in the community.

#### **SESSION 1675 (SYMPOSIUM)**

##### **TRANSLATING BASIC BIOLOGY INTO FUNCTIONAL THERAPEUTICS FOR HUMAN HEALTHSPAN: PROGRESS AND PROSPECTS WITH THE FOXO3 GENE**

Chair: *B. Willcox, Kuakini Medical Center, Honolulu, Hawaii, University of Hawaii, Honolulu, Hawaii*

Co-Chair: *A. Kahn, University of California, San Francisco, California*

Discussant: *E. Hadley, National Institute on Aging, Bethesda, Maryland*

FOXO3 is generally recognized as a pivotal gene in aging since its association with longevity has been replicated in model organisms and multiple human populations. While the functional variant is unidentified, coding variants have been ruled out as playing a major role in longevity. This suggests that the regulation of FOXO3 may be more important in longevity than variations in the primary structure of the

protein. In general, FOXO transcription factors affect numerous aging-related biological functions including apoptosis, cell proliferation and differentiation, energy metabolism, and insulin signaling. They have also been identified as tumor suppressors and activators of stress resistance and detoxification genes. Targeting of FOXO transcription factors has been proposed for the treatment of aging-related dysfunctions, including diabetes, immunological disorders and neurodegeneration, even aging itself (through maintenance of hematopoietic stem cells). To better understand the potential of FOXO3 as a therapeutic target in aging and aging-related diseases we need to better understand the molecular mechanism(s) by which FOXO3 is regulated. In this symposium we will: provide an overview of FOXO function and aging in *C. elegans* and other model organisms, present human sequencing results from targeted areas of functional interest, consider the role of FOXO3 in aging tissues, and consider how genomic variation might help in predicting drug response. The program will end with a discussion of future goals and challenges, including options for identifying potential interventions and therapeutic targets. Supported by NIA grants 2R01AG027060-05A2, 1R01AG038707-01A1, and 2U19AG023122-06A1.

#### FUNCTIONAL GENOMICS OF C.ELEGANS FOXO3/DAF-16

H. Tissenbaum, *University of Massachusetts Medical School, Worcester, Massachusetts*

In *C. elegans*, a single FOXO transcription factor, DAF-16, functions as a central mediator of longevity. Similar to other systems, DAF-16/FOXO function as the downstream target of a conserved, well-characterized insulin/IGF-1 signalling pathway. We have shown that multiple well-conserved signalling pathways intersect with the IIS pathway as well as impinge on DAF-16 for their regulation of lifespan. In turn, this regulation modulates the ability of DAF-16 to regulate its many direct target genes. We will give an overview of regulation of lifespan by DAF-16 including its multiple isoforms and how DAF-16 directly binds to many genes to modulate longevity.

#### HUMAN FOXO3 SEQUENCING: UPDATED ON AREAS OF FUNCTIONAL INTEREST

T. Donlon, Q. He, J.S. Grove, K. Masaki, A. Elliott, B. Willcox, *Timothy Donlon, Timothy Donlon, Honolulu, Hawaii*

FOXO3 is a promising molecular target for enhancing human healthspan through pharmacologic intervention since it is intimately involved in longevity and healthy aging. Common variants are associated with significant difference in lifespan. The actual functional variant (SNP) responsible for longevity has yet to be identified. Therefore, targeted sequencing efforts are being carried out on long-lived subjects of American-Japanese ancestry who are enriched for a longevity phenotype. Thus far, no protein coding sequence variants are implicated in human longevity. Our current efforts are targeting non-coding areas, most notably in intron 2. We will present results on the identification, annotation, and prioritization of DNA sequence variants in regulatory elements in this region, in order to identify candidate variants for functional genotype-phenotype studies of the FOXO3 gene and healthy human aging.

#### THE ROLE OF FOXO IN TISSUE AGING

A. Kahn, *California Pacific Medical Center, San Francisco, California*

Evidence from model systems and humans indicates that FOXO transcription factors are major participants in fundamental biological processes that influence aging and lifespan. Precisely how FOXO affects the latter is uncertain but in *Drosophila*, FOXO/4E-BP works through the autophagy/lysosome system to control proteostasis and delays muscle atrophy, extending lifespan. Mouse upstream regulators of FoxO activity are essential for muscle growth and regeneration, and response to mechanical load. FOXO also appears to mediate the osteoblast response to oxidative stress, osteoblast proliferation and skeletal homeostasis. In the adult CNS, stem cell maintenance, proliferation and neu-

ronal differentiation appear regulated by microRNAs controlled, at least in part, by FoxO3. Importantly, FOXO3 is expressed in major human adult organs and tissues including brain, heart, lung, liver, skeletal muscle, kidney, pancreas, testis, ovary, small intestine and colon. Overall, these findings provide a rational basis for understanding how genetic change in FOXO3 might affect aging and longevity.

#### GENOMIC VARIATION AND PREDICTING DRUG RESPONSE

N.J. Schork, 1. *The Scripps Research Institute, La Jolla, California*, 2. *Molecular and Experimental Medicine, La Jolla, California*, 3. *Scripps Translational Science Institute, La Jolla, California*

Genomic variation is known to influence response to pharmacotherapies. For example, naturally occurring DNA sequence variants in relevant genes or genetic networks can influence both the pharmacodynamic activity of a drug as well as the pharmacokinetic (i.e., metabolism) properties of the drug. As another example, differential gene expression patterns and pathway perturbations that distinguish diseased individuals from non-diseased individuals can indicate potential drug targets for treating those diseased individuals. We describe how genetic variation can be exploited to both identify and validate drug targets as well as predict drug responsiveness. We further consider how genomic variation can be studied specifically in the context of treating age-related diseases as well as in possibly crafting anti-aging therapeutics. After attending this presentation, attendees will be able to identify the major sources of genomic variation that influence drug responsiveness and that should be considered when assessing drug responses, both in vitro and in vivo.

#### SESSION 1680 (SYMPOSIUM)

##### CHARTING NEW FRONTIERS: EXPLORING POST-GRADUATION OPPORTUNITIES ACROSS DISCIPLINES. INSIGHTS FROM THE EXPERTS

Chair: *K.S. Hall, Geriatric Research, Education, and Clinical Center, Veterans Affairs Medical Center, Durham, North Carolina, Duke University, Durham, North Carolina*

Co-Chair: *C. Brown, Virginia Commonwealth University, Richmond, Virginia*

Now, more than ever, junior scholars in the area of aging will pursue a vast array of professional opportunities following graduation. Such opportunities vary as a function of discipline, training, and personal preference. Recognizing the heterogeneity of the post-graduation experience, the ESPO, AGHE, and Task Force on Mentoring have collaborated to create a two-part professional development symposium that will explore 'new frontiers' as it relates to post-graduation career paths. Specifically, a panel of experts has been assembled to speak to 1) the different expectations and opportunities in research-intensive institutions vs. undergraduate teaching institutions; 2) identifying and pursuing industry positions; 3) post-doctoral training opportunities and strategies for getting the most out of the experience; 4) professional opportunities for aging experts in civilian and Veterans Affairs medical settings; and 5) professional considerations for international scholars. This session is designed to aid GSA junior scholars in identifying potential next steps following graduation and strategies for how best to prepare for such endeavors. As such, this session is designed to be interactive, with an emphasis on Q&A so as to allow members to benefit from the insights of this expert panel.

## **OPPORTUNITIES FOR EXPERTS IN AGING WITHIN THE CLINICAL SETTING**

T.M. Johnson, *Geriatrics, Atlanta VA/Emory, Decatur, Georgia*

Both civilian and Veterans Affairs (VA) medical centers offer a wide variety of training and professional opportunities for individuals interested in careers in aging. While many opportunities within teaching hospitals are open only to clinicians with licensure, several initiatives are more broadly open. The goal of this paper is to educate junior scholars on the many opportunities the clinical setting has to offer, including for those who are behavioral scientists, physical/occupational therapists, and social workers, and psychologists. An overview of the opportunities that exist, along with licensing requirements and expectations, will be presented. Discussion will focus on clinical research opportunities including fellowship programs such as the VA Special Fellowship in Advanced Geriatrics, and the VA career development award mechanism. Time will also be devoted to discussing non-research positions (e.g., social work, PT/OT) and strategies for identifying such positions in civilian and VA medical centers.

## **TITLE: OPPORTUNITIES FOR BIOLOGY OF AGING EXPERTS IN PRIVATE INDUSTRY**

E. Blasi, J. Heyen, *Pfizer, San Diego, California*

Title: Opportunities for Biology of Aging Experts in Private Industry Speaker: Eileen Blasi, MS Co-Author/Co-Speaker: Jon Heyen, MS Professional organizations such as the GSA are a valuable resource for emerging scholars to gain insight into potential career paths. While many of these efforts focus on opportunities within academia, opportunities in private industry receive less attention. The decision to pursue a position in private industry varies by both discipline and personal preference. Individuals specializing in the biology of aging and/or pathophysiology of aging patients in the therapeutic settings of oncology, cardiovascular, diabetes, inflammation, bone degeneration, etc. are particularly well-equipped to pursue a position in industry. This session will present the potential benefits and pitfalls of conducting research in an industry setting. Training and education experiences/requirements for such positions and strategies for identifying available aging positions in industry will be presented.

## **DETERMINING THE BEST FIT: A CLOSER LOOK AT UNDERGRADUATE TEACHING INSTITUTIONS**

R.L. Beard, *Department of Sociology & Anthropology, College of the Holy Cross, Worcester, Massachusetts*

Institutional fit remains an age-old question that all emerging scholars must confront. For those interested in a future in academia, the choice of whether to pursue a position at a research-intensive academic institution or an undergraduate teaching institution can be challenging. This session seeks to shed light on the expectations in terms of training background, teaching, mentoring, independent funding, service, and scholarship at an undergraduate teaching institution. This is followed by a frank discussion of the pros/cons of this type of institution/faculty appointment in terms of job security, research productivity, professional fulfillment, opportunities for advancement and work-life balance. Finally, important details relative to the application process and related materials (e.g., content of job talk, teaching demo), along with tips to ensuring a competitive curriculum vitae when applying to undergraduate teaching institutions, will be discussed.

## **EXPECTATIONS, DEMANDS, AND POTENTIAL AT RESEARCH-INTENSIVE ACADEMIC INSTITUTIONS**

E. McAuley, *University of Illinois, Urbana, Illinois*

Institutional fit is a perplexing issue that countless emerging scholars face. For those interested in a future in academia, the choice of whether to pursue a position at a research-intensive academic institution or an undergraduate teaching institution can be challenging. This session focuses on the expectations relative to training background,

teaching, mentoring, independent funding, public engagement, and scholarship at a research-intensive institution. This is followed by a discussion of the pros/cons of this type of institution/faculty appointment in terms of job security, research productivity, professional fulfillment, and opportunities for advancement; particularly, in the current environment of uncertainty regarding grant funding. Finally, important details relative to the application process and related materials (e.g., content of research talk), along with tips to ensuring a competitive curriculum vitae when applying to a research-intensive academic institution, will be discussed.

## **POSTDOCTORAL FELLOWSHIPS: HOW DO I DECIDE?**

D.T. Gold, *Sociology, Duke, Durham, North Carolina*

Increasing competition for academic jobs that are diminishing in number because of fiscal problems has contributed to an increase in doctoral candidates and new PhDs seeking postdoctoral training. While such important is essential in many disciplines, it may not be the best choice for everyone. I will begin this presentation by reviewing criteria that should be used in deciding whether postdoctoral training is appropriate for individuals and will review potential benefits and liabilities of formal postdoctoral training. For those who decide that postdoctoral training is appropriate, I will also consider how those seeking postdoc slots should identify relevant opportunities and select research mentors. I will review how institutional postdoctoral programs evaluate applicants and monitor their success during the training. Finally, I will discuss different postdoctoral opportunities: federally funded programs (institutional or individual), industry funded programs, and non-government grant programs.

## **SESSION 1685 (SYMPOSIUM)**

### **DRIVING ASSESSMENTS FOR OLDER ROAD USERS: THE OLD, THE NEW AND THE INNOVATIVE**

Chair: *S. Classen, Univ of Florida, Gainesville, Florida*

Discussant: *F. Carroll, Univ of Florida, Gainesville, Florida*

The determination of older driver safety is dependent on accurate and reliable screening and assessment tools. This symposium will address, through five presentations, innovative screening and assessment tools to identify older drivers who are medically-at-risk or who are unfit to drive. Screening or assessment tools will include those drawn from self/proxy assessment, clinical batteries of tests, simulated driving performance, on-road performance and naturalistic methods. Specifically, we will focus on (1) an innovative valid and reliable web-based screening tool that has been developed for completion by a proxy reporter to detect at-risk older drivers. The screening has a web-based clinical output form that serves the purpose of facilitating conversations about driving between the older adult and his/her caregiver; of providing an entry point for occupational therapy intervention; and portraying the risk profile of the older driver to health care professional for risk management. We will (2) show findings of older drivers' self-awareness on driving situations that demand a quick response to critical incidents, by using simulated driving assessments. In addressing (3) neurological disorders we will (a) draw from qualitative interviews with occupational therapists/ geriatricians/ stroke consultants to identify the characteristics influencing the decisions of clinicians on fitness to drive following stroke; and (b) determine, from a sample of 100 drivers with Parkinson's disease (PD) the clinical tests that are predictive of pass/fail outcomes via an on-road test for drivers with PD. Finally we will reveal (4) strategies for retention used in assessment of driving performance in the CanDrive naturalistic study.

## THE SAFE DRIVING BEHAVIOR MEASURE FOR AT-RISK OLDER DRIVERS: STEPS IN TRANSLATION

S. Classen, *Univ of Florida, Gainesville, Florida*

This research overviews the main phases to develop the Safe Driving Behavior Measure (SDBM), a web-based tool to detect at risk older drivers. We used a prospective mixed methods research design. From North-Central Florida and Ontario, Canada, driving evaluators completed the SDBM, clinical tests and on-road testing on older drivers (N=200) who also rated their own driving performance and whose family members/ caregivers (N=200) rated their driving performance via the SDBM. We conducted reliability and validity studies on the tool. The findings suggest that the SDBM may be useful for: (1) family members/ caregivers to identify at-risk older drivers and to follow logical next steps based on the clinical output recommendations; (2) occupational therapists to identify an entry point for further interventions; and (3) evaluators to develop realistic and targeted intervention goals to promote safe driving, or suggests options for community mobility, if driving no longer is an option.

## FORMATIVE FACTORS INFLUENCING THE CLINICAL DECISION TO REFER FOR DRIVING ASSESSMENT FOLLOWING STROKE

T. Stapleton, *Occupational Therapy, Trinity College Dublin, Dublin, Ireland*

Off-road driving assessment practices typically focus on quantitative assessment at the operational levels of driving with generally less emphasis on assessment at the strategic level of driving. The focus of this presentation is on the formative factors predetermining a referral for formal driving assessment. Qualitative interviews with 17 senior occupational therapists and 7 geriatricians/ stroke consultant highlighted observable behaviours that influenced the clinical decision making process and stratification of the patient's suitability to drive following stroke. Observable strategic level behaviors such as; awareness/insight, risk taking behaviors, overall response to rehabilitation, family impressions, as well as the overall 'gut feeling' of the therapist or medical doctor, were more influential than scores on standardized tests in the determination of suitability to return to drive. A period of prolonged contact to allow for observation of possible deficits in these strategic level behaviors during functional based activity was considered essential in the stratification process.

## USING THE SIMULATOR AS A TOOL FOR SELF AWARENESS?

A. Dickerson, *Occupational Therapy, East Carolina University, Greenville, North Carolina*

Older drivers believe they are competent drivers. Even medically-at-risk drivers are reluctant to give up driving and fail to recognize why they may be unsafe. Although the on-road driving evaluation is the gold standard for determining fitness-to-drive, those who perform the evaluations cannot ethically put their clients in critical situations to demonstrate fitness. With a driving simulator, a "driver" can be in a critical situation that may result in a crash. This self-awareness experience can be used to discuss the person's "fitness-to-drive". Discussion will be on the results of a study that used simulation scenarios with critical incidents as a tool for self-awareness for medically-at-risk drivers. Subjects were referred by a geriatrician, participated in cognitive testing, and used simulation with feedback. Results suggest that individuals with cognitive impairment found that even with repeated crashes on simulation, the older adults continued to believe they were safe drivers. Caregiver feedback and comparisons to cognitive testing will be discussed.

## CANDRIVE: RECRUITMENT AND RETENTION STRATEGIES FOR A LONGITUDINAL STUDY OF OLDER CANADIAN DRIVERS

S. Marshall<sup>1</sup>, M. Man-Son-Hing<sup>1</sup>, M. Bedard<sup>2</sup>, *1. Ottawa Hospital Research Institute, Ottawa, Ontario, Canada, 2. Lakehead University, Thunder Bay, Ontario, Canada*

Background: The CIHR Team in Driving in Older Persons (Candrive II) Research Program is a prospective study of older Canadian drivers. An objective is to develop a clinical decision rule to assist in identifying at-risk drivers. With this study at the midway point, the focus is on retention. Methods: Potential participants were recruited through stakeholders and the media. We reviewed the literature to identify retention best practices. The team developed a retention plan which involved incorporating educating study personnel, providing non-financial benefits, focusing on minimizing participant study burden, and creating study identity for participants. Results: 933 older drivers were recruited across 7 Canadian sites. To date, 849 participants remain in the study with 11 deaths and 23 voluntarily stopping driving; only 51 discontinued participation for non-medical reasons. Discussion: The prospective study is progressing well and retention is excellent. This will maximize the validity of the clinical decision rule.

## PREDICTORS OF ON-ROAD PASS/FAIL OUTCOMES IN PARKINSON'S DISEASE

A.M. Crizzle, S. Classen, D.N. Lanford, *Occupational Therapy, University of Florida, Gainesville, Florida*

Prior study findings in drivers with Parkinson's disease (PD) are difficult to interpret due to the small and heterogeneous samples. This has limited development of policies and procedural practices for physicians and licensing authorities to determine fitness to drive in PD. Ultimately, the development of evidence based guidelines require Class I studies yielding sample sizes of 100 participants or larger. From our current database of 100 drivers with PD, this study will determine the predictors of on-road driving performance in PD. We will determine what clinical (e.g., visual, cognitive and motor) and neuropsychological tests are predictive of on-road pass/fail outcomes, as assessed by a certified driving rehabilitation specialist, by conducting multiple regression and receiver operating characteristics curves. As this study will prospectively analyze the on-road driving performance of 100 drivers with PD, our findings may inform the development of fitness to drive guidelines.

## SESSION 1690 (SYMPOSIUM)

### EVIDENCE-BASED SCREENING FOR MENTAL HEALTH PROBLEMS IN PRIMARY CARE

Chair: *C.E. Gould, GRECC, VA Palo Alto, Palo Alto, California*

Discussant: *D. Gallagher-Thompson, Stanford University School of Medicine, Department of Psychiatry and Behavioral Sciences, Palo Alto, California*

A majority of older adults present to primary care clinics with mental health problems first, yet depression, anxiety, suicide ideation, and cognitive impairment often are undetected by primary care providers. There is a dire need for improved detection of these problems as cognitive disorders, anxiety disorders, and depressive disorders are the three most prevalent late-life mental health problems. Furthermore, about 75% of individuals who complete suicide had contact with their primary care providers in the past year (Luoma, Martin, & Pearson, 2002). In our symposium, we will address these pressing mental health issues. Specifically, we focus on the assessment of cognitive impairment, anxiety, depression, and suicide. Aligned with the theme of "Charting New Frontiers in Aging," we will integrate new research findings that highlight improved approaches to the detection of mental health problems and evaluate existing assessment approaches used with older patients.

Additionally, we will identify improvements that can be made to primary care clinics and will highlight successful programs, such as the BRIGHTEN program. In the final presentation, data on older adults' follow through with mental health referrals and their accessing of mental health treatment will be discussed. Evidence-based recommendations for the detection of mental health problems and for facilitating follow-up care will be presented and directed at a broad multidisciplinary audience. Our discussant, Dr. Dolores Gallagher-Thompson will consider the implications of these findings for diverse older adults.

#### **ANXIETY SCREENING IN OLDER ADULTS WITH VARYING COGNITIVE ABILITIES**

S.A. Beaudreau<sup>1,3</sup>, C.E. Gould<sup>2</sup>, 1. *Sierra Pacific Mental Illness, Research Education and Clinical Centers (MIRECC), Palo Alto VAHCS, Palo Alto, California*, 2. *Geriatric Research Education and Clinical Center (GRECC), Palo Alto VAHCS, Palo Alto, California*, 3. *Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, California*

This presentation addresses issues associated with anxiety screening in older adults with varying cognitive abilities—normal, mild impairment and dementia—a salient clinical consideration given the ubiquity of cognitive impairment in late-life. Preliminary analyses from community-dwelling older adults (projected final sample  $n = 80$ ), who completed a psychiatric and neuropsychological battery, indicate that memory was not associated with anxiety severity on the Geriatric Anxiety Scale (GAS;  $n = 69$ ) or Geriatric Anxiety Inventory (GAI;  $n = 60$ ) ( $p > .05$ ). However, poorer language was associated with elevated anxiety on the GAS ( $r = -.28, p = .027$ ), but not the GAI ( $r = .07, p = .62$ ). Internal consistency and construct validity of the GAI and GAS in low vs. high language performance will be compared. Concrete suggestions for use of these and other anxiety screens will be provided for clinicians working with older adults in primary care and other settings.

#### **SCREENING FOR DEPRESSION IN PRIMARY CARE**

E.E. Emery, *Rush University Medical Center, Chicago, Illinois*

Approximately 10% of older adults in primary care meet criteria for major depression, with an additional 16% reporting symptoms that cause functional impairment. Primary care providers routinely fail to recognize depression, particularly among older adults. This is even in the context of primary care physicians being the most common health care provider that older adults bring mental health concerns to. Thus, screening in primary care is critical for the identification of depression among older adults. Screening measures will be reviewed, with recommendations based on setting and population. In the BRIGHTEN program, cut-points for the Geriatric Depression Scale -15 item ( $\geq 5$ ); the Patient Health Questionnaire-2 ( $\geq 3$ ) with multiple response formats; and Patient Health Questionnaire-9 ( $\geq 8$ ) were used to detect depression in a primary care sample for optimal sensitivity and specificity. Comparisons with the depression screening literature, along with acceptability, feasibility, and response formats for older adults will be discussed.

#### **SCREENING FOR SUICIDE RISK AMONG OLDER ADULT PRIMARY CARE PATIENTS**

A. Fiske, *Psychology, Morgantown, West Virginia*

Older adults are at an elevated risk of death by suicide. Primary care settings may provide a particularly valuable opportunity for detection of suicide in this age group, given the fact that the majority of older adults who die by suicide are in contact with a primary care provider within the month prior to the death (Luoma, Martin & Pearson, 2002). Nonetheless, there are numerous challenges associated with screening for suicide risk in these settings and suicidal behavior remains under-recognized in older primary care patients. This presentation will provide an review of suicide risk screening instruments and procedures

that have been evaluated in primary care settings. Implications for referral and treatment will also be discussed.

#### **COMPREHENSIVE SCREENING FOR BEHAVIORAL HEALTH PROBLEMS AMONG OLDER ADULTS WITHIN THREE INTEGRATED MODELS OF CARE**

B. Kaskie, *University of Iowa, Iowa City, Iowa*

Purpose: We examined symptoms identified by a comprehensive screen administered within three integrated models of behavioral health care. Data/Methods: Screenings were completed by 711 older adults who presented in three primary health care clinics over a six month period. Item analysis was used to describe symptomatology among those who scored positive. Results: Positive screens occurred among slightly more than 30% of all older patients. Analysis of 225 positive screens revealed 97 individuals (43%) individuals experienced symptomatology related to a single diagnostic condition: 48 featured two or more symptoms of cognitive impairment, 31 depression, 17 anxiety and 1 substance misuse. The remaining 127 individuals (57%) presented mixed symptomatology, as indicated by a combination of at least one or more cognitive, depression, anxiety, or substance misuse symptoms. Conclusion: Behavioral health problems presented by older adults in primary care are varied and complex. Integrated models that focus exclusively on one set of symptoms are insufficient and should be expanded.

#### **EVALUATING COGNITIVE FUNCTION IN ELDERS BY USING COMPUTERIZED NEUROPSYCHOLOGICAL BATTERY**

P.C. Heyn<sup>1</sup>, R.A. Tang<sup>2</sup>, 1. *University of Colorado Denver Anschutz Medical Campus, Denver, Colorado*, 2. *University of Houston, Houston, Texas*

Because neuropsychological assessment is often a time-consuming procedure, methods to simplify and accurately detect Cognitive Function (CF) in the elderly are needed. This study evaluated older adults' CF using a Computerized Neuropsychological Battery (CNB). The Central Nervous System Vital Signs™ was used to evaluate CF on a diverse sample of older adults ( $N=286$ ). 55 percent of the participants showed at least one abnormal score on selected CF (Stroop, RTT, SAT, CPT). We also found moderate association between race and tests of CF; CPT ( $r=.23; p=.007$ ), SAT ( $r=.23, p=.007$ ), CAT ( $r=.28, p=.003$ ), and cognitive flexibility ( $r=.26, p=.005$ ) indicating that race can explain some of the cognitive variability in the sample. However, when we controlled for education, age, and gender the association was present only on the test of cognitive flexibility ( $r=.22, p=.03$ ). These findings suggest that CNB can be an effective screening tool to identify CF in the elderly.

#### **SESSION 1695 (SYMPOSIUM)**

##### **EXPANDING FRONTIERS OF EVIDENCE IN COMMUNITY-BASED DEMENTIA CARE: ADULT DAY SERVICES**

Chair: *R.G. Logsdon, Psychosocial & Community Health, University of Washington, Seattle, Washington*

Discussant: *S.H. Zarit, Penn State University, University Park, Pennsylvania*

More than 70% of Americans currently diagnosed with dementia live at home in the community. They are able to do so largely due to the support they receive from family members and friends. To facilitate continued care at home, these individuals and their families need access to a range of supportive services. Adult Day Services (ADS) can be a cost-effective approach to providing emotional and health support for individuals with dementia, as well as providing respite to their family caregivers. Despite their potential for improving community-based dementia care, variations in programming and lack of objective evidence for their efficacy have contributed to limitations in funding and availability of these programs. This symposium presents quantitative and qualitative research examining the benefits of adult day services for both individ-



uals with dementia and family caregivers. Dr. Anderson will lead off the discussion with findings from the MetLife National Study, conclusions from a recent think tank, and an updated review of ADS research. Dr. Logsdon will present outcome data from a quasi-experimental investigation of Memory Care and Wellness ADS in Washington State. Dr. Gaugler will describe a mixed methods study to identify respite-enhancing elements and therapeutic activities of ADS and their association with key outcomes. Dr. Sabat will present qualitative data illustrating how ADS participation facilitates social identities and supportive social relationships among people with dementia. Dr. Zarit will conclude with a discussion of the state of the science regarding ADS and recommendations for research to further develop this valuable community-based resource.

### **THE STATE OF ADULT DAY SERVICES: PAST RESEARCH, CURRENT PRACTICES, AND FUTURE DIRECTIONS**

H. Dabelko-Schoeny, K.A. Anderson, *College of Social Work, The Ohio State University, Columbus, Ohio*

Adult day services (ADS) is one of the fastest growing sectors within long-term care, yet research on ADS has lagged behind this growth. In this presentation, the researchers review findings from the MetLife National Study, summarize recent research on ADS, and discuss findings from the national ADS Next Steps Think Tank. In addition to growth, ADS has evolved over the past decade. ADS participants currently have higher acuity levels and present with more complex needs. ADS providers now offer more targeted and specialized services delivered by professional staff. Recent research has also become more advanced and has moved from focusing on ADS attendance, to examining specific interventions. This is a critical step in the development of evidence-informed practices and the notion of ADS as a platform for delivering interventions for costly health care conditions. Building this body of knowledge is essential to the continued expansion of this unique service provider.

### **MEMORY CARE AND WELLNESS: EFFICACY OF SPECIALIZED DEMENTIA CARE IN ADULT DAY SERVICES**

R.G. Logsdon<sup>1</sup>, K.C. Pike<sup>1</sup>, L. Korte<sup>2</sup>, C. Goehring<sup>2</sup>, *1. Psychosocial & Community Health, University of Washington, Seattle, Washington, 2. Washington State Department of Social and Health Services, Olympia, Washington*

This investigation evaluated participant and caregiver outcomes of an innovative new program of dementia-specific adult day services (Memory Care and Wellness Services: MCWS). The objectives of this quasi-experimental investigation were to evaluate whether MCWS improved quality of life, mood, or behavior for participants with dementia and whether caregivers experienced decreased stress, burden, or depression, compared with a no-treatment comparison group. At baseline, mean age of participants was 80 years (range 53-97) and mean MMSE score was 13.74 (sd=6.7). After 6 months, MCWS participants exhibited significantly fewer depressive symptoms ( $p < .05$ ) and a trend toward fewer total behavior problems ( $p < .10$ ), and MCWS caregivers exhibited significantly less distress over behavior problems ( $p < .05$ ) than comparison dyads. Caregivers were highly satisfied with the services. MCWS provides a model of a community-based dementia adult day services, and results provide support for continuing to formalize and expand the MCWS program.

### **ADULT DAY SERVICE UTILIZATION AND OUTCOMES: USING A QUALITATIVE RESEARCH STRAND TO INFORM A MULTI-LEVEL ANALYSIS**

J.E. Gaugler, *University of Minnesota, Minneapolis, Minnesota*

Relying on a sequential exploratory design, the current statewide study of Minnesota adult day service (ADS) programs is in the process of identifying respite-enhancing elements and therapeutic activities of

ADS programs that reduce family caregiver stress, enhance clients' psychosocial well-being, and delay institutionalization over a 12-month period. This presentation will examine how various sources of qualitative information (e.g., participant observation, semi-structured family and ADS staff interviews in a rural and urban ADS setting) will serve to inform subsequent measurement and interpretation of a subsequent, multi-level, longitudinal analysis that will determine whether the respite-enhancing elements and therapeutic activities are linked to caregiver stress, client well-being, and institutionalization in a statewide sample of ADS programs. By providing qualitative and quantitative refinement to a conceptual model of ADS utilization, this presentation will offer important guidance in ascertaining how ADS programs can exert the greatest benefits for clients and their family caregivers.

### **THE ROLE OF THE ADULT DAY CENTER IN FACILITATING EXPRESSIONS OF SELFHOOD AND FRIENDSHIP AMONG PEOPLE DIAGNOSED WITH DEMENTIA**

S.R. Sabat, *Psychology, Georgetown University, Washington, District of Columbia*

Biomedical approaches to understanding people with dementia include the notion, captured in the DSM-IV, that social relationships among people with dementia are negatively affected by the disease process. In addition, in the literature describing the pathology of dementia, it is alleged that due to memory dysfunction, those diagnosed lose aspects of their selfhood. In recent years, both notions have been challenged and it has become clear that the environment in which a person is engaged can be of significant importance. Adult Day Centers can constitute a facilitative social environment for the expression of aspects of selfhood in and for the development of friendships among people diagnosed with dementia. The case study described herein will present qualitative evidence of this important feature of an Adult Day Center environment and propose that such Centers offer invaluable non-pharmacological support for people with dementia and their carers.

## **SESSION 1700 (SYMPOSIUM)**

### **INCREASING THE GERIATRIC HEALTH WORKFORCE ACROSS DISCIPLINES AND LEVELS OF TRAINING**

Chair: *E. Woodhead, GRECC, VA Palo Alto Health Care System, Palo Alto, California*

Discussant: *E.E. Emery, Rush University Medical Center, Chicago, Illinois*

The population of older adults is projected to increase 36 percent in the next decade (Administration on Aging [AoA], 2009). Despite this projected increase, there is a shortage of health care professionals trained to work with older adults (Qualls et al., 2002). Additionally, there are limited opportunities for students to pursue training specific to older adults, as training programs are lacking in both geriatric education and geropsychology training opportunities. Previous research suggests that student training experiences with older adults increase interest in working with this population (Hinrichsen, 2000). Therefore, there is a need to understand how aging content is integrated into the curriculums of psychology students and allied health professionals, as well as how exposure to aging-related topics impacts subsequent attitudes and behavior with regard to working with older adults. The goals of the symposium are to present data on current practices with regards to integrating aging content into the training of psychology undergraduate and graduate students, as well as the training of allied health professionals. This symposium will also highlight ways to enhance aging-related coursework through the use of web-based class activities. We will discuss the importance of introducing aging content early in training and focusing on a lifespan perspective, as well as implications for increasing the geriatric health workforce across disciplines.

## RAISING AWARENESS AT THE UNDERGRADUATE LEVEL: FACILITATING ENGAGEMENT AND REFLECTION ON NURSING HOMES

N.A. Pachana, A. Cody, A. Bakharia, T. Scott, *Psychology, University of Queensland, Brisbane, Queensland, Australia*

Ageing is under-represented within undergraduate psychology curricula, even within developmental courses (Whitbourne & Cavanaugh, 2002). Yet arguably it is difficult to interest students in pursuing work with older adults if prior exposure is lacking. A fourth year undergraduate seminar was designed to encourage facilitation and reflection on a focused ageing topic ("Residential Aged Care: Positive Possibilities", PSYC4341, University of Queensland, Australia). The model of simple custom-designed interactive webpages with blogging tools, integrated into Blackboard and facilitating assignments incorporating students' reflections about the course materials, is presented. This is a Web2.0 solution, allowing tagging of content of diary reflections, as well as allowing for qualitative analyses of diary entry text using the Leximancer (version 3.5) data mining tool (Smith, 2000). Concept maps produced from three cohorts (N=58) revealed a shift over the semester from negative stereotyped themes ("sickness", "lonely", "sad") to more positive complex themes ("staff training", "quality of life", "opportunity").

## EXPOSURE AND EXPERIENCE WITH GEROPSYCHOLOGY CONTENT IN GRADUATE TRAINING: AN EXAMINATION OF STUDENT COMPETENCIES AND CAREER DECISION MAKING

E. Woodhead<sup>1</sup>, E.E. Emery<sup>2</sup>, N.A. Pachana<sup>3</sup>, C. Konnert<sup>4</sup>, B. Edelstein<sup>5</sup>, 1. GRECC, VA Palo Alto Health Care System, Palo Alto, California, 2. Rush University Medical Center, Chicago, Illinois, 3. The University of Queensland, Brisbane, Queensland, Australia, 4. University of Calgary, Calgary, Alberta, Canada, 5. West Virginia University, Morgantown, West Virginia

Geropsychology training experiences may increase interest in working with older adults and help to address the shortage of geropsychologists. Clinical and counseling graduate students in the U.S. (N=376), Canada (N=224), Australia (N=139), and New Zealand (N=25) completed the Pikes Peak Geropsychology Knowledge and Skill Assessment Tool and a geropsychology training questionnaire. Most participants (79.7%) reported that they plan to work with older adults in the future; these individuals had more geropsychology practicum hours ( $p = 0.02$ ), though did not differ on amount of aging-related coursework. Geropsychology knowledge and skills were positively associated with aging-related coursework ( $r = 0.50 - 0.55$ ), practicum hours with older adult clients ( $r = 0.29 - 0.41$ ), and more faculty with aging-related interests ( $r = 0.47 - 0.51$ ). We conclude that practicum experiences are more likely than coursework to interest students in geropsychology, and that geropsychology knowledge and skills are more strongly related to coursework than practicum experiences.

## DEMENTIA SAVVY BUT AGEING NAIVE?

E. Beattie, *Queensland University of Technology, Brisbane, Queensland, Australia*

In response to increases in dementia diagnosis more attention is being given to stand alone dementia-specific postgraduate education. Although timely and necessary, models of dementia education typically assume fundamental gerontology knowledge in students and/or take the view that dementia is a discrete knowledge domain not requiring underpinning by broad ageing-centric knowledge, skills and attitudes. Both positions are arguably flawed given that the inclusion of ageing-focused content in undergraduate health discipline education has been eroded in recent years, aging content is frequently taught by non-gerontology educated and experienced faculty, and dementia is primarily a complex aged-related issue. In this presentation models of how dementia-specific education can be solidly grounded in gerontology and considera-

tion be given to the evaluation of, or pre-requisite, gerontology knowledge are offered. Educators leading development of postgraduate dementia training need to be mindful of these issues to ensure the production of a skilled and responsive dementia specialist cadre.

## SESSION 1705 (SYMPOSIUM)

### LIFE EXPERIENCES, WISDOM, AND WELL-BEING

Chair: M. Ardel, *University of Florida, Gainesville, Florida*  
Discussant: G.E. Vaillant, *Harvard Medical School, Boston, Massachusetts*

This symposium explores the relation between life experiences, wisdom, and well-being through four studies that use both qualitative and quantitative methods. The first two presentations employ samples of younger and older Canadian and US adults to test whether wisdom is positively related to life satisfaction. Qualitative analyses reveal that in contrast to low wisdom scorers, high wisdom scorers tended to be more effective in using autobiographical reasoning to articulate their understanding of wisdom and its contribution to their life satisfaction. They also tended to value perspective-taking and learning from experiences and from others more than low wisdom scorers who tended to mention self-centered attributes as wisdom characteristics. The next presentation provides a test of the MORE wisdom model, which proposes that individuals' with greater Mastery, Openness, Reflection skills, and Emotion regulation are more likely to learn from experiences and grow in wisdom. Indeed, analyses showed that wisdom nominees exhibited higher levels of the four MORE resources than matched control participants with lower wisdom scores when talking about difficult events in their life. The last presentation attempts to explain the pathway between wisdom and well-being. Using a random sample of 1006 older adults and structural equation models with well-being as a latent variable, analyses show that the relationship between wisdom and subjective well-being is completely mediated by resilience, a sense of mastery, and less perceived stress. Overall, the studies suggest that the development of wisdom benefits older adults' subjective well-being through an increase in eudaimonic well-being.

### AUTOBIOGRAPHICAL REASONING AS CONTRIBUTING TO WISDOM AND WELL-BEING

M. Ferrari, N.M. Weststrate, *University of Toronto, Toronto, Ontario, Canada*

The relationship between wisdom and well-being depends in part on how these constructs are measured. In this study, Pavot and Diener's Life Satisfaction Scale was used as a general measure of well-being, and Ardel's 3D-Wisdom Scale (3D-WS) as a measure of wisdom. A Canadian sample of 50 younger (21-30) and 32 older (65-85) adults, equally divided by gender, participated in the study. Participants completed the two scales and were also asked to speak about wise moments in their lives and about wise people they knew. Wisdom score, but not age, was significantly related to life satisfaction. A follow-up qualitative analysis with the 2 highest and 2 lowest scoring participants on the 3D-WS in each age group found no difference in the wisdom stories of these participants, but a striking differences in how effectively they used autobiographical reasoning to articulate their understanding of wisdom and its contribution to their life satisfaction.

### WISDOM IN LIFE: AN EXTREME CASE ANALYSIS FOR UNDERSTANDING THE POSITIVE HUMAN DEVELOPMENT

H. Oh, *University of Florida, Gainesville, Florida*

This study sought to illustrate and clarify how and to what extent wisdom characteristics were understood differently between the top-10 and bottom-10 wisdom scorers on the Three-Dimensional Wisdom Scale in a sample of 50 young (age 21-30) and 50 older (age 65+) adults. The two groups were compared regarding the characteristics of their

wisdom nominees and subjective perception of wisdom. A mixed-method design adopted a nonparametric method, content analysis, and social network analysis for quantitative configuration and qualitative confirmation. The result showed that the top scorers were primarily older people with higher life satisfaction and better health status than the lower scorers. Moreover, the bottom group identified more self-centered attributes as wisdom characteristics, whereas people in the top appreciated the virtue of perspective-taking and learning from experiences and others. Content analysis and network analysis confirmed these distinctions, indicating the importance of altruistic, reciprocal attributes as prerequisites for wisdom development.

#### **LIFE EXPERIENCES AND WISDOM: TESTING A DEVELOPMENTAL MODEL**

J. Glueck, S. Koenig, K. Naschenweng, L. Dorner, I. Strasser, *Alpen-Adria University Klagenfurt, Klagenfurt, Austria*

It is probably undisputed among wisdom researchers that life experience is a necessary ingredient of wisdom. But how exactly do life experiences foster wisdom, and why do the same experiences lead some people to become wiser but not others? The MORE wisdom model (Glück & Bluck, in press) proposes that four personal resources influence how individuals appraise, deal with, and reflect upon life experiences. People high in these resources grow even from difficult challenges. In a first test of the model, wisdom nominees were compared to an age- and gender-parallel control group. They were interviewed about difficult events in their life; transcripts were rated according to the four MORE resources. Wisdom nominees who also scored high on wisdom measures showed higher levels of all four MORE resources than control participants with low wisdom scores. Thus, wisdom seems to develop in individuals oriented toward eudaimonic rather than hedonic well-being.

#### **EXPLAINING THE PATHWAY BETWEEN WISDOM AND WELL-BEING: MEDIATING EFFECTS OF RESILIENCE AND MASTERY**

M. Ardel<sup>1</sup>, D. Jeste<sup>2</sup>, 1. *Sociology and Criminology & Law, University of Florida, Gainesville, Florida*, 2. *University of California, San Diego - Stein Institute for Research on Aging, Department of Psychiatry, Department of Neurosciences, San Diego, California*

Past studies have shown that wisdom, measured as a combination of cognitive, reflective, and compassionate personality qualities, tends to be positively related to subjective well-being in old age. It is not clear, however, what the psychological mechanisms are that might account for this association. We examined the possible mediating effects of resilience, sense of mastery, and perceived stress on the wisdom and well-being relationship, using a randomly selected sample of 1006 older adults ( $M = 77$  years) from the Successful Aging Evaluation Study and structural equation models with well-being as a latent variable. LISREL results confirmed that resilience, mastery, and perceived stress mediated the relationship between wisdom and subjective well-being. Wisdom appears to strengthen older adults' resiliency, sense of control, and ability to cope with aging-related losses, which tend to reduce feelings of stress and increase subjective well-being. Hence, wisdom seems to be a valuable psychological resource in old age.

### **SESSION 1710 (SYMPOSIUM)**

#### **MIXED FEELINGS, MIXED RESEARCH? A DECADE REVIEW OF RESEARCH ON INTERGENERATIONAL AMBIVALENCE**

Chair: *M.J. Hogerbrugge, Faculty of Social and Behavioral Sciences, Utrecht University, Utrecht, Netherlands*

Co-Chair: *J.P. Lendon, University of Southern California, Los Angeles, California*

Discussant: *K. Lüscher, University of Konstanz, Konstanz, Germany*

A decade ago, the Journal of Marriage and Family published a collection of essays on ambivalence in intergenerational relations (i.e. the

psychological and sociological contradictions of family ties). Extending the works of Merton and Barber, Coser, Smelser, and prompted by a pivotal article by Luescher and Pillemer (1998), the special issue discussed the utility and importance of understanding ambivalence in family relations. This 2002 debate on ambivalence stimulated an abundance of excellent research by scholars from all over the U.S. and Europe. The decennial of the JMF publications has inspired the organizers of this symposium to synthesize the past 10 years of research, discuss the empirical and theoretical contributions of ambivalence, and explore future research directions. Bringing together both established – including some of the original contributors of the special issue of JMF – and emerging experts on intergenerational relationships, the symposium will particularly focus on the following questions: What do we know about ambivalence in family relations that we did not know ten years ago? What are the determinants for and consequences of experiencing ambivalence for both parents and children? What progress has been made regarding its conceptualization and measurement? How does the current stream of research and understanding compare to the original theoretical considerations by Luescher and Pillemer, and the 2002 debate initiated by Ingrid Connidis and Julie McMullin? Finally, what gaps in our knowledge remain to be investigated?

#### **DISAGGREGATING THE EFFECTS OF POSITIVE AND NEGATIVE DIMENSIONS OF AMBIVALENCE ON PSYCHOLOGICAL WELL-BEING**

M. Gilligan<sup>1</sup>, J. Sutor<sup>1</sup>, K. Pillemer<sup>2</sup>, 1. *Purdue University, West Lafayette, Indiana*, 2. *Cornell University, Ithaca, New York*

Direct and indirect measures of intergenerational ambivalence have been used to capture the simultaneous positive and negative feelings of parent-adult child relations. The implicit assumption has been that these measures can be used almost interchangeably; however, recent research calls into question whether they are, in fact, measuring the same phenomenon. In this paper we examine whether the effect of indirect intergenerational ambivalence on psychological well-being captures the effect of contradictory feelings, or may instead measure only the negative component of the relationship. Using data from the Within-Family Differences Study, we investigate this question by disaggregating the positive and negative dimensions commonly used to create indirect ambivalence measures to examine what effect adding positive feelings to negative feelings has on mothers' and adult children's psychological well-being. Analyses support the hypothesis that the negative component of the indirect ambivalence measure is, in fact, driving these associations.

#### **INTERGENERATIONAL AMBIVALENCE: IS IT DISTINCT FROM NEGATIVE RELATIONSHIP QUALITY?**

C.S. Hartnett<sup>1</sup>, K. Birditt<sup>1</sup>, K. Fingerman<sup>2</sup>, S.H. Zarit<sup>3</sup>, 1. *University of Michigan, Ann Arbor, Michigan*, 2. *University of Texas, Austin, Texas*, 3. *Pennsylvania State University, State College, Pennsylvania*

Indirect ambivalence is defined as the experience of simultaneously high positive and negative relationship quality with or without awareness of those feelings. Researchers often combine positive and negative relationship ratings to form an indirect ambivalence score. Because there is typically little variation in positive quality and more variation in negativity, indirect ambivalence scores may reflect negative relationship quality. This study examines associations among relationship quality (positive, negative, ambivalence), parent and child characteristics (e.g., demographic characteristics, health, life problems), and well-being to establish whether indirect ambivalence represents a distinct construct. Participants ages 40 to 60 ( $N = 633$ ; 53% women) reported their relationship quality with up to three of their adult children and their parents. Findings revealed that indirect ambivalence scales may reflect variability in negative quality. We propose using a categorical assessment of ambivalence which has distinct associations (compared to negative quality) with individual characteristics and well-being.

### DOES AMBIVALENCE MATTER? INTERGENERATIONAL AMBIVALENCE AND DEPRESSION OVER THE ADULT LIFE COURSE OF OLDER PARENTS

J.P. Lendon, M. Silverstein, *Gerontology, USC, Los Angeles, California*

Research examining intergenerational ambivalence, mixed feelings between adult children and older parents, have found interesting associations between ambivalence and psychological well-being. However, few studies have been able to test the long-term causal relationships. Thus, we investigate the mutual interplay between parents' ambivalence and depression over ten years of their life course. Ambivalence may lead to increases in depression, but being more depressed may increase ambivalence between parents and children. Bivariate dual change score models were used to analyze 900 parent-child dyads from five waves (1988-2005) of the Longitudinal Study of Generations. The best model, both statistically and theoretically, ( $\chi^2=370$ ,  $df=177$ ,  $RMSEA=.035$ ) indicates parents with greater levels of depression experienced a subsequent decline in ambivalence, when controlling for gender, self-rated health, and parent-child similarity and contact. This research provides unexpected evidence for a dynamic link between depression and its influence on the quality of relationships between aging parents and adult children.

### SHIFTS IN INTERGENERATIONAL RELATIONS OVER TIME: A BEHAVIORAL, TYPOLOGICAL, AND LONGITUDINAL APPROACH TO AMBIVALENCE

P.A. Dykstra, N. Schenk, *Sociology, Erasmus University Rotterdam, Rotterdam, Netherlands*

This paper focuses on shifts in adult child-parent relationship type using the first two waves of the Netherlands Kinship Panel Study (NKPS). We employed Latent Transition Analysis to determine the prevalence and predictors of shifts. Ties with a high probability of exchanges of emotional and practical support together with a relatively high probability of conflict over material and personal issues were identified as ambivalent. Less than 5% of all dyads shifted to a different type. Over a period of three years, there is considerably more continuity in adult child-parent relationships than change. Insofar shifts took place, they were most likely from the ambivalent type, as hypothesized. Relationships with mothers and with daughters were more likely to shift from the ambivalent than were relationships with fathers and with sons, which is contrary to Connidis and McMullin's (2002) argument that women face greater constraints managing ambivalence. Moving away prompted a shift from the ambivalent type, which is consistent with the notion that moving away serves as an escape option.

### AMBIVALENCE IN FAMILY TIES OVER THE LIFE COURSE: PROGRESS AND PROSPECTS

I.A. Connidis, *Sociology, University of Western Ontario, London, Ontario, Canada*

Since the publication of the exchange on ambivalence in *Journal of Marriage and Family*, under the Editorship of Alexis Walker, the concept of ambivalence has enjoyed a remarkable degree of attention. In this paper, I review the ways in which the concept of ambivalence has been applied. This review considers both empirical and conceptual applications of the concept, the family relationships and issues to which ambivalence has been applied, and the extent to which the focus has been on psychological versus sociological ambivalence. I conclude my remarks with some thoughts on future prospects for the concept of ambivalence in the study of family ties across the life course. Objectives: Participants will learn about the multi-dimensional uses of the concept of ambivalence. Participants will learn how the concept of ambivalence can be applied to particular family relationships, to families as social domains, and to structured social relations.

### PSYCHOLOGICAL WELL-BEING IN THE OLDEST OLD

Chair: Y. Gondo, *Osaka University, Osaka, Japan*

Co-Chair: D.S. Jopp, *Fordham University, Bronx, New York*

The oldest-old is a largest growing segment of population in developed countries. The research interests however, had been focused mainly on the biological (longevity) and medical (health and illness) dimensions. The purpose of the symposium is shade light on the psychological aspect, especially emotional well-being of oldest-old. Interestingly, some previous studies reported well maintained psychological well-being in oldest old and centenarians, regardless of their decline of physical function and health condition. Still two questions are remains; (a) whether this paradoxical phenomenon is a globally observed; and (b) what are the mechanism and background characteristics responsible for it. At this symposium several papers from different countries will be presented and discuss the mechanisms.

### PSYCHOLOGICAL WELL-BEING IN THE OLDEST OLD AND IT CORRELATION WITH DEVELOPMENT OF GEROTRASCENDENCE

Y. Gondo<sup>1,2</sup>, Y. Masui<sup>2</sup>, H. Inagaki<sup>2</sup>, H. Iwasa<sup>2</sup>, *1. Osaka University, Osaka, Japan, 2. Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

The purpose of this study is to test cross-sectional differences and longitudinal change in physical function and psychological well-being for young-old (N=775), old-old (N=419) an oldest-old (N=150). Cross-sectional results showed larger age-related decrease in grip strength, IADL and health status relative to longitudinal results. Smaller or null differences were observed in morale and subjective health. Longitudinal data also showed that decline in psychological well-being variables was smaller in oldest old. Physical function variables predicted psychological well-being variables in young-old and old-old, but not in oldest old. New sample for oldest-old (N=155) showed individual with high scores on the gerotranscendence scale showed higher psychological well-being, regardless of their lower functional status. These findings indicate that the oldest old maintain their psychological well-being and development of gerotranscendence is important contributor for higher psychological well-being.

### DISTAL AND PROXIMAL PREDICTORS OF COGNITIVE STATUS AMONG CENTENARIANS

G.D. da Rosa<sup>1</sup>, P. Martin<sup>1</sup>, I.C. Siegler<sup>2</sup>, L. Poon<sup>3</sup>, *1. Human Development and Family Studies, Iowa State University, Ames, Iowa, 2. Duke University, Durham, North Carolina, 3. University of Georgia, Athens, Georgia*

The purpose of this study was to investigate distal and proximal influences on centenarians' mental status. Using data from the Georgia Centenarian Study, 239 centenarians were interviewed about childhood information, and their mental status was assessed. Proxies provided information about centenarians' education and their personality traits. Results from the structural equation model indicates that the model had an acceptable fit,  $\chi^2$  ( $df = 7$ ) = 17.649,  $p = .0001$ ,  $RMSEA = .07$  and  $SRMR = .06$ . Mother's education ( $\beta = .19$ ,  $p < .05$ ), centenarians' education ( $\beta = 1.06$ ,  $p < .001$ ), and Conscientiousness ( $\beta = .08$ ,  $p < .01$ ) were significantly associated with mental status. Education mediated the relationship between parents' education and mental status, Conscientiousness significantly mediated the relationship between father's education and mental status and education status of centenarians and mental status. In sum, two distal predictors and two proximal predictors positively predicted cognitive functioning in centenarians.

**PREDICTORS OF WELL-BEING IN CENTENARIANS:  
PRELIMINARY RESULTS FROM THE FORDHAM  
CENTENARIAN STUDY**

D.S. Jopp<sup>1</sup>, M. Park<sup>1</sup>, A. Cavanagh<sup>1</sup>, Y. Meschian<sup>1</sup>, M.M. De Feo<sup>1</sup>,  
M.E. Paggi<sup>1</sup>, M. Tropea Fane<sup>2</sup>, S. Raghavan<sup>1</sup>, 1. *Psychology, Fordham  
University, Bronx, New York, 2. Teachers College, New York, New  
York*

Research on very old individuals often focuses on which factors are linked to longevity, but rarely investigates what contributes to well-being at this age. This study examined personal resources (i.e., sociodemographic, financial, social, health) and their link to aging satisfaction (Lawton, 1975). Data included 58 participants of the Fordham Centenarian Study (Mage = 98; range 95-102 years). Reflecting gender differences in survival, 70% of participants were women. Correlational analysis indicated that education was unrelated to aging satisfaction. Income was unrelated, but the ability to afford bills and medications was linked to aging satisfaction. Number of living children was the only social predictor. Health played a central role for well-being, as indicated by strong correlations for number of diseases, pain, fatigue and health restrictions. In sum, when testing the importance of personal resources for well-being, findings suggest that satisfaction with aging in centenarians is most strongly associated with positive health conditions.

**"I AM NOT TIRED OF LIFE" - CENTENARIANS BETWEEN  
THE WILL TO LIVE AND THE END OF LIFE**

K. Boch<sup>1</sup>, C. Rott<sup>1</sup>, V. d'Heureuse<sup>1</sup>, K. Boerner<sup>3</sup>, D.S. Jopp<sup>2,1</sup>, 1. *Institute of  
Gerontology, Heidelberg University, Heidelberg, Germany, 2.  
Fordham University, Bronx, New York, 3. Jewish Home Lifecare,  
Research Institute on Aging, New York, New York*

Being 100 years old is a challenging situation, not only because of physical restrictions, cognitive deficits and (often times) reduced social participation, but also because of being so close to the end of life. In the present study, we investigated what centenarians think about death and dying and how they deal with their own finitude. Data from 35 centenarians of the ongoing Second Heidelberg Centenarian Study was used. Participants were asked a series of open questions and we used content analysis to evaluate their answers. The majority of centenarians were prepared for their end (78%), and 67% believed in a life after death. At the same time, 88% indicated that they would have no desire to die. In sum, the preliminary data suggests that the centenarians actively deal with their impending end, but none of the respondents indicated that the end of life was threatening.

**THE ROLE OF THE APOE4 GENE AND FATIGUE  
INFLUENCING LONELINESS: FINDINGS FROM THE  
GEORGIA CENTENARIAN STUDY**

R.B. Hensley<sup>1</sup>, P. Martin<sup>2</sup>, S. Jazwinski<sup>3</sup>, L. Poon<sup>4</sup>, 1. *Psychology, The  
College of Saint Scholastica, Duluth, Minnesota, 2. Iowa State  
University, Ames, Iowa, 3. Tulane University, New Orleans, 4.  
University of Georgia, Athens, Georgia*

The purpose of this study was to analyze the role that the APOE4 gene as well as fatigue played in participants in the Georgia Centenarian Study. These variables were analyzed to determine whether they predicted loneliness. Blocked regression analyses were utilized in this study. In the first block, we included gender, ethnicity, current marital status, and past schooling. In our second block, we added the APOE4 allele, followed by a fatigue summary score in the third block. Results indicated that APOE4 was significantly predicted loneliness,  $\beta = .277$ ,  $p < .05$ . In addition, fatigue was a significant predictor of loneliness,  $\beta = .40$ ,  $p < .01$ . The more fatigued centenarians were, the higher the level of loneliness. These results not only add to our understanding of the link between a genetic-based variable (APOE4) and loneliness, but also provide new insight into how fatigue influences loneliness as well.

**SESSION 1720 (SYMPOSIUM)**

**QUALITY OF CARE FOR PEOPLE WITH DEMENTIA  
ACROSS CARE SETTINGS: INTERNATIONAL  
PERSPECTIVES**

Chair: A. Pot, *Netherlands Institute of Mental Health and Addiction, Utrecht, Netherlands, VU University, Amsterdam, Netherlands*  
Co-Chair: M. Downs, *Bradford Dementia Group, Bradford University, Bradford, United Kingdom*  
Discussant: B. Bowers, *University of Wisconsin-Madison, Madison, Wisconsin*

Quality of care for people with dementia is now an international priority. It is widely recognized that quality of care for people with dementia requires attention to interactions between care staff and residents and engagement in meaningful activities. This in turn requires a supportive environment and an adequately prepared workforce. It is now timely to adopt a critical perspective on the methods we use both to assess and to develop the quality of care provided across a range of settings. This symposium draws on research on quality of care for people with dementia conducted in two countries: the Netherlands and England. The first presentation challenges the way we study the effects of small-scale, home-like nursing home settings and proposes that it is more meaningful to talk in terms of small scale care characteristics rather than small scale care home settings. The second presentation examines the relationship between small scale care characteristics and residents' involvement in activities. The third presentation challenges us to take a more sophisticated approach to examining interactions in care settings such that we move beyond counting the number of interactions and assess the extent to which these interactions address psychological needs. The fourth presentation examines an emerging area of interest in dementia care, workforce development in dementia care for hospital staff, exploring staff perspectives on the appropriateness of training.

**FOCUS ON SMALL-SCALE CARE FOR PEOPLE WITH  
DEMENTIA**

A. Pot<sup>1,2</sup>, B.M. Willems<sup>1,2</sup>, D. Smit<sup>1,2</sup>, J.D. Lange<sup>1</sup>, 1. *Program on Aging, Netherlands Institute of mental health and Addiction, Utrecht, Netherlands, 2. VU University, Amsterdam, Netherlands*

Small-scale care refers to care in a home-like environment, focusing on residents' psychological well-being rather than on physical needs. The question that will be discussed in this presentation is: To what extent is small scale care provided in different types of long-term care facilities for people with dementia? Data from the Netherlands Living Arrangement for people with Dementia (LAD) study are used. The LAD-study is an ongoing monitor in a variety of living arrangements on staff ratio, characteristics of the organization of care, quality of care, residents' quality of life, and well-being of care staff. Measurement cycles are repeated once every two years, those in 2009 and 2011 are completed. Results show that there is much variation in the amount of small scale care provided within the same type of long-term care facilities. There is also much overlap between the amount of small scale care provided by different long-term care facilities for people with dementia. Some regular nursing homes provide even more small scale care as some group living homes do. We will discuss the importance and consequences of this finding, not only for scientific research but also for daily practice.

**SMALL SCALE DEMENTIA CARE AND ACTIVITY  
INVOLVEMENT PEOPLE WITH DEMENTIA**

D. Smit<sup>1,2</sup>, B.M. Willems<sup>1,2</sup>, J.D. Lange<sup>1</sup>, A. Pot<sup>1,2</sup>, 1. *program on aging, Netherlands institute of mental health and addiction, Utrecht, Utrecht, Netherlands, 2. VU University, Amsterdam, Netherlands*

Long term dementia care is increasingly organized in small-scale care settings. In these settings a homelike environment is created, and activities are organized around daily household routines. While some

family caregivers are enthusiastic about this activity approach, others wonder whether residents receive less options for activity involvement. The purpose of this study was to look into the relationship between indicators of small scale care and activity involvement, using data of 1327 residents of 136 living arrangements for people with dementia received from the LAD-study. Both general activity involvement, involvement in preferred activities, and involvement in different types of activities were studied. A positive relationship between small scale care and activity involvement was found, as well as a serious lack of activity involvement of older, male and dependent residents in small and larger scale care.

#### **THE EXTENT TO WHICH STAFF INTERACTIONS ADDRESS PEOPLE WITH DEMENTIAS' NEEDS AND EFFECT THEIR WELLBEING**

B.M. Willems<sup>1,2</sup>, D. Smit<sup>1,2</sup>, L. Arnold<sup>1</sup>, J.D. Lange<sup>1</sup>, A. Pot<sup>1,2</sup>, *1. Program on aging, Netherlands institute of mental health and addiction, Utrecht, Netherlands, 2. VU University, Amsterdam, Netherlands*

There is a growing awareness that long term care for people with dementia should be centered around fulfilling their needs for attachment, comfort, inclusion, identity, and occupation to provide high quality of care. The day-to-day interactions with care staff are crucial to these needs being met. The aim of this study therefore was to explore the extent to which interactions of healthcare staff with people with dementia address these needs and how this effects residents' well-being. Data were used from the LAD-study, including 53 people with dementia in 9 arrangements in the Netherlands. This study showed that some needs of people with dementia are more often addressed by care staff than others. While the needs that are less often met, such as the need for identity, attachment, and inclusion, seem to have a more positive impact on residents' wellbeing. Consequences for care staff training and daily practice will be discussed.

#### **IMPROVING QUALITY OF ACUTE HOSPITAL CARE FOR PEOPLE WITH DEMENTIA: A MODEL FOR WORKFORCE DEVELOPMENT**

C. Surr, J. Crossland, E. Malet, J. Robins, M. Downs, *Bradford Dementia Group, University of Bradford, Bradford, United Kingdom*

People with dementia occupy a significant proportion of acute care beds. Acute care staff often lack knowledge and skills to care for them. As a result people with dementia experience prolonged hospital stays and may be prescribed antipsychotic drugs. Staff education and training is therefore vital. This pilot study implemented an acute workforce development model in two National Health Service general hospitals. Seventy-five ward staff across the two hospitals received Foundation level training, 50 received additional Intermediate level training and were developed as learning facilitators. Focus groups were conducted with those trained. The sample was primarily female and comprised of nurses. They discussed perceived impact of the training on their knowledge and skills to deliver person-centered dementia care and its implementation in their everyday practice. After attending this session participants will be able to discuss a model for acute workforce development and its perceived impact on staff knowledge and skills.

### **SESSION 1725 (SYMPOSIUM)**

#### **THE AGE-RELATED POSITIVITY EFFECT: PAST, PRESENT, AND FUTURE PERSPECTIVES**

Chair: *A.E. Reed, Department of Psychology, Stanford University, Stanford, California*

Discussant: *M. Mather, University of Southern California, Los Angeles, California*

Mounting evidence supports the notion of an age-related positivity effect in attention and memory, whereby processing biases shift across adulthood from negative toward positive information. However, key

questions regarding the contours and moderators of the effect remain unanswered. This symposium will address these issues through cutting-edge empirical investigations and a meta-analytic perspective. We will present novel research on the roles of health and culture, the neural correlates, and the generalizability and robustness of the positivity effect. First, English and Carstensen will discuss the influence of health status on the positivity effect in decision making. In their study, healthy but not unhealthy older adults showed age-related positivity effects while reviewing information for health-related decisions. However, health did not moderate positivity for non-health decisions. Then, Luong and Charles will present research on the positivity effect for memories of emotion-inducing social interactions in European-Americans versus Chinese-Americans, revealing that the recall of positive versus negative emotions depends critically on the interaction between age and culture. Next, Ford and colleagues will present an event-related functional neuroimaging study that demonstrates age differences in recruitment of prefrontal and posterior brain regions during the retrieval of positive versus negative autobiographical memories. Reed and colleagues will then present a meta-analysis of the positivity effect literature, illustrating that while the positivity effect is robust and generalizable, the size of the effect is moderated by attentional constraint, experimental paradigm, and older-versus-younger age disparity. To conclude, Mather will discuss these findings with respect to the existing literature, and suggest future research directions.

#### **DOES POSITIVITY OPERATE WHEN STAKES ARE HIGH?: THE ROLE OF HEALTH IN OLDER ADULTS' DECISION-MAKING**

T. English, L. Carstensen, *Psychology Department, Stanford University, Stanford, California*

Past research suggests that older adults prioritize emotional goals when making health-related decisions, and therefore they tend to show positivity in their information processing. However, it is not clear whether these results generalize to less healthy samples. Unhealthy older adults may be more motivated to make effective health related decisions because their choices may have more immediate and serious consequences. As a result, they may review health information in a more balanced manner. We examined the role of health status in older adults' review of information in hypothetical decision scenarios. As expected, unhealthier adults showed less age-related positivity than healthier adults when reviewing information during health related decisions. However, health status was not related to positivity for non-health related decisions. These results are consistent with a motivational account of the positivity effect and suggest that older adults can temporally override their chronic emotion focus in response to situational demands.

#### **AGE AND CULTURAL DIFFERENCES IN POSITIVELY-BIASED EMOTIONAL MEMORIES FOR A NEGATIVE SOCIAL EXCHANGE**

G. Luong, S.T. Charles, *Psychology and Social Behavior, University of California, Irvine, Irvine, California*

The current study examined age and cultural differences in emotional memories for a negative social interaction with a confederate in a sample of 159 adults [80 younger (18-28 years old), 79 older (60-88 years old)]. We also examined how appraisals of the task and confederate changed after one week. Results showed that European Americans displayed a positivity bias not present among Chinese Americans. Moreover, the positivity bias varied by age among European Americans: older European Americans remembered experiencing less negative emotions than were actually reported and younger European Americans recalled experiencing more positive emotions than were actually reported during the interaction. There were no age differences in changes in the appraisals of the task, but European Americans appraised the task more favorably and Chinese Americans appraised the task less favorably after

one week. Both older adults and Chinese Americans appraised the confederate less favorably across the week.

### **AGE-RELATED CHANGES IN THE NEURAL CORRELATES OF POSITIVE AND NEGATIVE AUTOBIOGRAPHICAL MEMORY RETRIEVAL**

J.H. Ford<sup>1</sup>, K.S. Giovanello<sup>2</sup>, E. Kensinger<sup>1</sup>, *1. Dept. of Psychology, Boston College, Chestnut Hill, Massachusetts, 2. University of North Carolina, Chapel Hill, Massachusetts*

Research suggests that significant age-related changes are apparent in autobiographical memory retrieval when the qualitative content of the memories is examined. One such change is a tendency for older adults to rate personal events as more positive than young adults (the positivity effect). However, this effect has not been shown consistently in the autobiographical memory literature. The current studies were conducted to identify circumstances where the positivity effect does and does not emerge. Additionally, event-related functional neuroimaging studies were used to examine the neural networks recruited by emotional autobiographical memory retrieval in healthy young and older adults. Compared to young adults, older adults recruit the medial prefrontal cortex to a greater extent during emotional relative to neutral memory retrieval. Understanding how healthy aging influences older adults' autobiographical memory retrieval provides valuable insight into how memory representations and emotion regulation change with time and experience.

### **META-ANALYSIS OF THE AGE-RELATED POSITIVITY EFFECT**

A.E. Reed<sup>1</sup>, L. Chan<sup>1</sup>, J. Mikels<sup>2</sup>, *1. Department of Psychology, Stanford University, Stanford, California, 2. DePaul University, Chicago, Illinois*

Increasing evidence points to an age-related positivity effect, which refers to a shift across adulthood in the ratio of positive-to-negative information processed in attention and memory. Many empirical studies have examined the positivity effect, but their inconsistent findings have raised questions about the effect's robustness, reliability, and moderators. To address these issues, we conducted a meta-analysis of 59 separate empirical studies (total N = 4390) selected from peer-reviewed journal articles incorporating age comparisons of memory and/or attention for positive and negative stimuli. Results indicate that the positivity effect is reliable and robust, with a small-to-medium overall effect size, though moderated by various methodological factors: The positivity effect size is relatively larger for studies with unconstrained (versus constrained) attention, wider (versus narrower) age comparisons, and measures of memory (versus attention). These results have direct implications for theoretical and empirical perspectives on lifespan developmental changes in the processing of emotional information.

## **SESSION 1730 (SYMPOSIUM)**

### **THE EXPERIENCES OF DIRECT CARE WORKERS: QUALITY OF CARE AND WORKFORCE ISSUES**

Chair: *K. Boerner, Jewish Home Lifecare/Mount Sinai School of Medicine, New York, New York, Mount Sinai School of Medicine, New York, New York*

Discussant: *C. Beck, University of Arkansas, Little Rock, Arkansas*

This symposium focuses on the experience of direct care workers (i.e., certified nursing assistants in the nursing home and home health aides in the community). The three presentations each provide a unique perspective on how front-line staff respond to work-related challenges, and contribute to identifying aspects that can become barriers to a positive work experience. This knowledge has important implications for delivery and quality of elder care, as well as for employment satisfaction and stability among direct care workers in nursing home and home care settings. Lack of attention to

and support for dealing with work-related challenges may contribute to the extremely high turnover rate in this population. The first presentation by Patricia Parmelee and colleagues focuses on nursing assistants in nursing home settings, and delineates race/ethnicity-related differences and similarities in communications between nursing staff and residents during daily care routines. In the second presentation, Sandy Butler and Mark Brennan-Ing concentrate on stresses and challenges experienced by home care aides and identify characteristics of both aide and the home care agency as predictors of job retention in this group. The third presentation by Kathrin Boerner includes both nursing home and homecare staff, and centers on direct care workers' responses to patient death. Findings depict grief symptoms experienced by staff, and show associations between grief- and employment-related outcomes. Quality of care and workforce implications as well as recommendations for how to better meet staff support needs will be discussed.

### **RACIAL/ETHNIC DIFFERENCES IN CNAS' COMMUNICATION WITH RESIDENTS DURING CARE ROUTINES**

P.A. Parmelee<sup>1</sup>, R.S. Allen<sup>1</sup>, T. Stem<sup>1</sup>, L. Burgio<sup>2</sup>, *1. Center for Mental Health & Aging, The University of Alabama, Tuscaloosa, Alabama, 2. University of Michigan, Ann Arbor, Michigan*

Resident-staff relationships are a key aspect of overall quality of long-term care. There is some evidence, largely qualitative, that race/ethnicity can influence nursing assistants' (NAs') interactions with residents in complex ways. This presentation is an exploratory look at that question in quantitative fashion. Using data from an intervention targeting NAs' verbal communication skills, we analyzed observer ratings of staff-resident interactions during daily care routines. Although overall rates of communications did not differ, Non-Hispanic White NAs used significantly more specific (care-related) communications; African Americans (AAs) tended toward more general, non-care-related statements. Overall differences in rated quality of communication were minimal but some effects emerged for number and rate of positive vs. unhelpful statements. We found few differences as a function of resident race, but were limited by the relatively small number of AA residents. Discussion will address implications for quality of care, NAs' work experience, and staff training approaches.

### **A MIXED-METHOD ANALYSIS OF JOB RETENTION AMONG HOME CARE AIDES**

S. Butler<sup>1</sup>, M. Brennan-Ing<sup>2</sup>, *1. University of Maine, Orono, Maine, 2. AIDS Community Research in America, New York City, New York*

People prefer to age in place. With increasing numbers of elders needing personal care, the demand for home care aides is expanding at the same time that home care agencies face high turnover rates. Based on data from a longitudinal, mixed-method study, this paper explores the experiences of 261 home care aides in a rural state. Six factors predicted longer job tenure (R<sup>2</sup>=.363): older age, living rurally, higher wages, higher autonomy and personal accomplishment scores, and lower physical function. Discriminant function analysis revealed significant differences between workers at for-profit compared to not-for-profit companies; workers at the former tended to be younger, have shorter job tenures, and higher personal accomplishment scores. Thematic analysis of telephone interviews revealed significant differences (p<.05) in reported experiences for short-term versus long-term workers, with low compensation and agency communication being more problematic for the former. Implications for improving job conditions and increasing retention will be highlighted.

## **WHEN A PATIENT DIES: RESPONSES OF FRONT-LINE STAFF IN NURSING HOMES AND HOMECARE**

K. Boerner<sup>1</sup>, O.R. Burack<sup>1</sup>, S.E. Mock<sup>2</sup>, 1. *Jewish Home Lifecare/Mount Sinai School of Medicine, New York, New York*, 2. *University of Waterloo, Waterloo, Ontario, Canada*

This study examined how direct care workers respond to patient death and the types of support they may need. Participants were 100 certified nursing assistants (CNAs) and 70 home health aides (HHAs) who lost a patient in their care about two months before. Data collection involved comprehensive semi-structured in-person interviews. Findings demonstrate that experiences of CNAs and HHAs reflect many of the core grief symptoms and expressions typically reported by family caregivers. They further show that experiencing more intense grief is related to: a closer relationship with the patient, a more meaningful work experience, depersonalization, and taking sick days around the time of death. Findings suggest that close relationships and grieving the loss of a patient are important features of a meaningful work experience, and that burnout symptoms and absenteeism can be negative side effects when staff bereavement following patient death is not addressed and supported in the work place.

## **SESSION 1735 (SYMPOSIUM)**

### **GSA 2012 SYMPOSIUM SUBMISSION TRANSLATION SCIENCE: IMPLEMENTING SOCIAL-BEHAVIORAL INTERVENTIONS FOR ELDERLY AND THEIR CAREGIVERS IN THE "REAL WORLD"**

Chair: *L.D. Burgio, University of Michigan, Ann Arbor, Michigan*  
Discussant: *E. Wethington, Cornell University, Ithaca, New York*

Translational research in the social sciences is at a crossroad in several respects. One is the burgeoning number of evidence-based interventions available for a host of physical and emotional problems. Second is the increasing demand by federal agencies, community-based health systems, and clinicians for evidence-based interventions that can be used in the real world. However, the cross in the road, and the main barrier, is the absence of commonly accepted strategies for translating interventions for use in the community. Presenters in this session will discuss the translational strategies used in their attempts to implement social-behavioral interventions for Elders and their caregivers in real world settings. The first two presenters will discuss translation and implementation of comprehensive AD caregiver support programs (REACH OUT and NYUCI) to Area Agencies on Aging. The third presenter will discuss the efficacy and potential for large-scale translation of programs to improve the care of elders in assisted living facilities (STAR-ALR). This presenter will focus on adherence to the RE-AIM model of translation. The fourth presenter will discuss a home-based tailored activity program (TAP) designed to reduce agitation and improve the quality of life of dementia patients. In this study, normalization process theory was used to adapt the program for use in a chronic care hospital. The fifth presenter will discuss the translation of an evidence-based collaborative care model to address the needs of both AD patients and their caregivers (PREVENT) for feasible use in a primary care clinic. All of the presenters will include discussion of treatment fidelity and barriers to implementation.

### **LESSONS LEARNED FROM TRANSLATING THE NYU CAREGIVER INTERVENTION INTO THE COMMUNITY**

M.S. Mittelman, *Psychiatry, NYU Langone School of Medicine, New York, New York*

The NYU Caregiver Intervention (NYUCI) was evaluated with a randomized controlled trial that demonstrated that improving social support conveyed multiple benefits for both the spouse-caregiver and the person with Alzheimer's disease. The structure of the NYUCI permits flexibility of content, making it ideal for diverse cultures. The NYUCI is now being replicated in community settings with training and ongoing

consulting by the original research team. Translating an intervention from the research environment to the community posed unforeseen challenges. It was not possible to adhere to the original eligibility criteria or the time frame – 6 counseling sessions within 4 months, and agencies were unrealistic about the number of caregivers they could enroll and the clinical skills necessary. The lack of control groups in the demonstration projects makes it difficult to draw quantitative conclusions, although caregivers reported satisfaction, improvement in coping and reduced strain due to positive involvement of family members.

### **PROVIDING CARE TO THE CAREGIVER: IMPLEMENTING THE PREVENT MODEL IN A MEMORY CARE CLINIC**

M. Austrom<sup>1,2,3</sup>, C.A. Alder<sup>2</sup>, C. Callahan<sup>1,3</sup>, M. Boustani<sup>1,3</sup>, A. Perkins<sup>3</sup>, H.C. Hendrie<sup>1,3</sup>, G. Sachs<sup>1,3</sup>, 1. *Indiana University School of Medicine, Indianapolis, Indiana*, 2. *Indiana Alzheimer Disease Center, Indianapolis, Indiana*, 3. *Indiana University Center for Aging Research, Indianapolis, Indiana*

Effective management of AD requires comprehensive care for both patients and caregivers. The PREVENT study, a randomized control trial in primary care at Wishard Health Services (WHS), demonstrated the effectiveness of collaborative care to address the needs of AD patients and caregivers. In 2007, an interdisciplinary team using complex adaptive theory and the reflective adaptive process translated the PREVENT model into a locally sensitive and self-sustaining clinical program at WHS. The team distilled the PREVENT intervention to its essential components in order to adapt the model to clinical care at WHS while maintaining fidelity to the proven intervention. The Healthy Aging Brain Center (HABC) was developed and began delivering care in 2008. With ongoing support of WHS leadership, implementation of the PREVENT model in HABC has resulted in effective patient management and care and reduced caregiver burden. Support provided by IP-RISP R24MH080827. Dr. Austrom was also supported by NIH-P30AG10133.

### **TRAINING STAFF IN ASSISTED LIVING RESIDENCES TO IMPROVE DEMENTIA CARE: IT DOESN'T GET ANY MORE "REAL WORLD" THAN THIS**

L. Teri<sup>1</sup>, G. McKenzie<sup>2</sup>, D.M. La Fazia<sup>1</sup>, K.C. Pike<sup>1</sup>, J. vanLeynseele<sup>1</sup>, 1. *U. Washington — School of Nursing, Seattle, Washington*, 2. *Oregon Health Sciences University, Ashland, Oregon*

The Seattle Protocols, a series of evidence-based programs to improve the care of older adults with dementia, have been implemented throughout the US and abroad. This presentation provides new data on STAR, Staff Training in Assisted-living Residences, recently investigated in 20 Assisted living residences (130 resident-staff dyads) in a two-pronged trial to examine STAR efficacy and potential for large-scale translation. Results include: (1) How each STAR-ALR met treatment fidelity criteria (program design, training, delivery, receipt and enactment) and (2) How STAR met criteria for implementation and dissemination (RE-AIM): Reach: enrolled sites were representative of U.S. ALRs; Effectiveness: statistically significant improvement on resident depression, behaviors and anxiety; staff satisfaction and skill; Adoption/Implementation: STAR skills were consistently used by staff; 89% reported that dementia care improved with use of STAR; and Maintenance: 100% recommended STAR training and intended continue use. Our findings support further dissemination and large-scale translation of STAR.

### **TRANSLATING THE TAILORED ACTIVITY PROGRAM IN A CHRONIC CARE HOSPITAL FOR DEMENTIA PATIENTS: CAN WE IMPROVE STANDARD CARE WITH AN EVIDENCE-BASED PROGRAM**

L. Gitlin, *Hopkins University, Baltimore, Maryland*

The Tailored Activity Program (TAP), a home-based intervention for dementia patients can reduce agitation and improve life quality. TAP



involves identifying preserved capabilities, interests and deficits from which activities are matched to patients' profiles. We apply Normalization Process Theory (NPT) to describe TAP's translation for delivery in a chronic care hospital specializing in geropsychiatric conditions for which behavioral disturbances are common and difficult to manage. NPT identifies 4 factors for successful integration of interventions into practice: coherence (making sense of TAP), team composition/engagement; collective action enabling implementation, and reflexive monitoring (benefit/cost appraisals). Clinical team members did not initially differentiate TAP from current practice (low coherence) yet commitment and engagement was high. Understanding how TAP affected daily work and staffing patterns involved collective action to evaluate compatibility, training needs, and costs. Additional challenges included translating TAP from an 8 session/4-month intervention for delivery in 21 days and initiating TAP upon admission.

### **THE REACH OUT CAREGIVER SUPPORT PROGRAM: DISSEMINATION AND CULTURAL ADAPTATION**

L.D. Burgio, *University of Michigan, Ann Arbor, Michigan*

REACH OUT is a comprehensive AD caregiver support program tailored for use in Area Agencies on Aging (AAAs). The program is a translation of the REACH II clinical trial protocol that emerged through a partnership between The Alabama Department Of Senior Services and The University Of Alabama in 2005. Since the publication of the original REACH OUT translation trial in 2009 the program has been implemented in North Carolina, Vermont and Puerto Rico. The presentation will focus on adaptations of the program made at each of the three sites, with emphasis placed on modifications made to the program due to significant cultural differences at the Puerto Rico site.

## **SESSION 1740 (PAPER)**

### **COGNITIVE PROCESSES**

#### **DO WE NEED TO WAIT FOR 9 YEARS? — REPEATED ASSESSMENTS OF COGNITIVE FUNCTIONS WITHIN ONE DAY VS. OVER 9 YEARS**

H.H. Dodge<sup>1,2</sup>, C. Wang<sup>2</sup>, A.I. Ford<sup>3</sup>, J. Heidebrink<sup>2</sup>, R. Albin<sup>2</sup>, B. Giordani<sup>2</sup>,  
1. *Oregon Health & Science University, Portland, Oregon*, 2. *University of Michigan, Ann Arbor, Michigan*, 3. *Louisiana Tech University, Ruston, Louisiana*

Background: Detecting subtle cognitive changes during the pre-symptomatic phase of dementia is often difficult by using traditional neuropsychological tests and could require a long duration of follow-up before any changes are observed. Computerized neuropsychological tests administered multiple times one day have been proposed to be more sensitive to subtle cognitive changes and thereby aid in detecting pre-symptomatic dementia. Objective: We assessed whether trajectories of cognitive functions obtained over 9 years using traditional neuropsychological tests are associated with trajectories of repeated assessments conducted during one day using Cogstate computerized tests. Methods: 83 community volunteers free from dementia at baseline were followed on average 7.39± 0.40 years with annual assessments. At the end of the follow-up, subjects completed subtests of Cogstate computerized battery 4 times during one day. Joint latent trajectory models were used to examine associations between trajectories of cognitive test scores collected over 9 years and those collected within one day. Results: We identified three latent trajectories of CERAD delayed recall scores as the best model using 9 years of data and three latent trajectories of Cogstate paired associate learning error scores (CPAL, visual memory) for the data collected within one day. Subjects who showed the greatest learning effects and the highest baseline delayed recall scores predominantly (99.9%) belonged to the trajectory of the lowest error scores in CPAL. Conclusions: Administration of computerized tests at multiple times within a day could be a cost effective means of identi-

fying past longitudinal trajectory of cognitive performance and aid in detecting pre-symptomatic dementia.

### **LEARNING FROM ONE'S MISTAKES: EFFECTS OF AGE AND ERROR PROCESSING**

N.D. Anderson<sup>1,2</sup>, A. Cyr<sup>1,2</sup>, 1. *Rotman Research Institute, Baycrest, Toronto, Ontario, Canada*, 2. *University of Toronto, Toronto, Ontario, Canada*

Most of us believe that we learn from our mistakes, but neuropsychological research, including our own, shows that errors hinder older adults' memory for target information and recommends that errors be avoided during learning. However, we also have evidence that committing errors during episodic learning can be beneficial to older adults' memory performance. Here, we introduce our theoretical framework of error processing in episodic learning that accounts for the conflicting behavioural findings noted above. Inspired by the work of Craik and of Braver on age-related differences in cognitive control, we argue that the learning context can invoke either self-initiated control processes to gate errors from further processing, or reactive control processes to use errors to aid memory for correct information; moreover, younger and older adults differ in how they process errors during learning, with older adults relying more on reactive control, in contrast to younger adults who can flexibly deploy both modes of control. We describe two studies in which we manipulate the learning context and correspondingly the degree to which learning errors benefit later memory for correct information in younger and older adults. We argue that learning errors that serve as 'stepping stones' to correct information, thereby invoking reactive control processes, support memory, while other errors only cause interference needing to be inhibited via self-initiated error control. These results turn memory rehabilitation practice on its head by identifying the contexts in which learning errors should be harnessed in the service of memory.

### **CARDIOVASCULAR AND PSYCHOSOCIAL INFLUENCES ON COGNITIVE FUNCTION IN THE S.O.C.A. STUDY**

R.C. Sims<sup>1</sup>, D.T. Mwendwa<sup>2</sup>, 1. *University of Delaware, Newark, Delaware*, 2. *Howard University, Washington, District of Columbia*

Research that has explored differences in cognitive function between African American (AA) older adults and their White counterparts has largely ignored variability in cognitive function within the AA population. Evidence suggests that AAs may experience accelerated cognitive aging as a function of biological, psychological, and social factors. This biopsychosocial perspective supports the notion that cognitive function among AAs may be influenced by factors such as cardiovascular risk and poor psychosocial outcomes. An understanding of the role of each of these influences is key to characterizing the trajectory of cognitive function for AAs across the lifespan. The HealthPARC Study of Cognitive Aging (S.O.C.A.) aims to explore variability in cognitive function among middle age and older AAs across a number of biological, psychological, and social factors. S.O.C.A. is a cross-sectional, community-based study of 200 middle age and older African Americans (mean age=59.31, SD=11.49) in the Washington, DC metropolitan area. Specifically, it was hypothesized that cognitive function among middle age AAs (40-59) and older AAs (60+) would not vary significantly due to existing cardiovascular and psychosocial risk factors in the middle age group. Participants completed cognitive and psychosocial measures, provided self-reported demographic and health information, as well as, measures of blood pressure and obesity. Preliminary results demonstrated no significant differences in cognitive function between age groups in the domains of verbal memory, working memory, and letter fluency. The influence of cardiovascular and psychosocial factors on cognitive performance for middle age participants will be discussed.

## COGNITIVE AND CEREBRAL RESERVE MODIFY THE RELATIONSHIP BETWEEN CEREBELLUM VOLUME AND COGNITION

E. Vuoksima<sup>1,2</sup>, M.S. Panizzon<sup>1</sup>, C.E. Franz<sup>1</sup>, L. Eyler<sup>1,3</sup>, C. Fennema-Notestine<sup>1</sup>, M.J. Lyons<sup>5</sup>, A. Dale<sup>1</sup>, W.S. Kremen<sup>1,4</sup>, 1. *University of California San Diego, La Jolla, California*, 2. *University of Helsinki, Helsinki, Finland*, 3. *VA San Diego Healthcare System, San Diego, California*, 4. *VA San Diego Healthcare System, La Jolla, California*, 5. *Boston University, Boston, Massachusetts*

Not many studies have investigated whether the effect of cognitive/cerebral reserve is evident before people become elderly and/or develop dementias. Also, the cerebellum has been studied primarily with respect to motor function, but it is understudied with respect to cognition. We studied the association between cerebellar gray matter volume and general cognitive ability and whether their association is modified by measures of cognitive and cerebral reserve among 516 middle-aged (51–60 y.) male twins. General cognitive ability at age 20 and at midlife was measured with Armed Forces Qualification Test (AFQT). We used age 20 AFQT as a measure of cognitive reserve and cortical gray matter volume as a measure of cerebral reserve. The outcome variable was midlife AFQT. All analyses were adjusted for family relatedness (twins within families), age, scanner effects, and intracranial volume. Rather than main effects, interactions are required for confirmation of the reserve hypotheses. A cortical gray matter volume X cerebellar gray matter volume interaction was a significant predictor of middle-age general cognitive ability. Also, the age 20 AFQT X cerebellar gray matter volume interaction term was a significant predictor of middle-age AFQT when we compared the upper and lower quartiles based on age 20 AFQT scores. These interactions showed that the size of cerebellum was related to midlife cognitive ability, but only among individuals with lower levels of cognitive or cerebral reserve. Thus, the effect of reserve can already be observed in non-elderly, middle-aged adults.

## AN ERP STUDY OF SUCCESSFUL EPISODIC RETRIEVAL: DIFFERENT BRAIN RESPONSES WITH MATCHED PERFORMANCES BETWEEN MILD COGNITIVE IMPAIRMENT AND NORMAL OLDER ADULTS

J. Li, *Institute of Psychology, Chinese Academy of Sciences, Beijing, China*

Introduction Mild Cognitive Impairment (MCI) is a transitional stage from normal aging to dementia. The objective of this study was to determine whether a source retrieval ERP is an effective neural marker for differentiating MCI from normal older adults while their behavioral performances were matched which may have implications for identifying seniors at risk for cognitive decline. Methods A source memory task was conducted on 16 aMCI and 15 healthy older adults. Event-Related Potentials (ERPs) were recorded during retrieval phase. Memory performances were matched between the two groups by manipulating the number of items presented for each study session. Results The behavioral results showed that both source memory and item memory performances were perfectly matched between aMCI group under easy condition and healthy elderly group under hard condition. While under such case, the ERP results showed remarkable differences between the two groups. First, the right-lateralized positive-going old new effect significantly decreased for aMCI group compared to control group, especially on the parietal sites. Second, the negative left-lateralized old new effect extended to the posterior sites of right hemisphere only in aMCI group but not in control group. Conclusions The results showed that source retrieval ERP is an effective neural marker for differentiating MCI from normal older adults even when they have matched task performances. The results also suggested that MCI brain may involve more regions to compensate their reduced efficiency of dedicated circuits so that they could behave like normal older adults.

## SESSION 1745 (PAPER)

### DEMOGRAPHY OF AGING

#### CHARTING NEW FRONTIERS FOR HEALTH AND PENSION REFORM UNDER THE PRESSURE OF AGING BABY BOOMERS: DISENTANGLING THE PARADOX OF APOCALYPTIC DEMOGRAPHY

A.V. Wister, *Gerontology, Simon Fraser University, Vancouver, British Columbia, Canada*

The aging of the large baby boomer cohorts has fuelled apocalyptic prophecies of the negative influence of population aging for health care, pensions, and social programs. We have observed the manufacturing of crises based on exaggerations of demographic patterns, such as arguing that health care systems will crumble under the weight of population aging, rates of dementia will spiral, or that the pension systems will run dry. Gerontologists have responded by debunking this ‘myth’ drawing heavily from studies that show that population aging has only contributed a modest amount to the rise in health care spending over the past few decades; and that pension systems can be retrofitted to accommodate aging baby boomers. However, there are several reasons why one should be careful to conclude that population aging in the future will not be a significant factor in health care and pension system resource formulae. First, analyses conducted at times when population aging was gradual may significantly underestimate the aging effect. Second, there may be shifts in the primary drivers of health care costs (e.g., hospital, pharmaceuticals, physician costs), which could affect the relative weight of population aging. Third, changes to pension eligibility without understanding its unanticipated consequences may create new problems for low income older persons. Fourth, regardless of the relative effect of population aging, there will be a significant increase in the absolute number of older persons requiring more intense health care and drawing on public pensions in the future. Finally, debates have tended to focus on the numbers of older people with little attention devoted to the unique characteristics of older boomers.

#### LOCAL POPULATION AGING AND INDIVIDUAL HEALTH TRAJECTORIES AT OLDER AGES

J. Raymo<sup>1</sup>, E.M. Vogelsang<sup>1</sup>, J. Liang<sup>2</sup>, E. Kobayashi<sup>3</sup>, T. Fukaya<sup>3</sup>, Y. Sugihara<sup>3</sup>, 1. *Sociology, Univ of Wisconsin, Madison, Wisconsin*, 2. *Univ. of Michigan, Ann Arbor, Michigan*, 3. *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

Are health trajectories at older ages associated with population aging at the local level? Japan is an ideal setting in which to address this question given the rapidity of population aging, tremendous regional variation in the pace of population aging, and relatively limited geographical mobility at older ages. Results of growth curve models based on six waves of data from a nationally representative sample indicate that population aging in respondents’ municipality of residence is associated with both the level and slope of health trajectories beyond age 60. We find that the predicted probability of fair or poor health at first observation is negatively associated with the proportion of the local population age 65 and over up to a point (about 14%), beyond which local-area aging is associated with worse health. This relationship becomes even more pronounced after controlling for population stability and economic well-being at the municipality level, both of which are associated with less favorable health outcomes at older ages. We also find that residence in more rapidly aging municipalities is positively associated with the pace of health decline across older ages, a relationship that is not explained by local-area demographic and economic characteristics. This presentation will provide participants with a theoretical and empirical basis for thinking about the ways in which

rapid change in local area age structure is associated with individual health at older ages. Participants will also be able to discuss features of rapidly aging municipalities that may underlie the relationships we summarize.

### **WHY HAS THE EDUCATIONAL GRADIENT OF MORTALITY RISK INCREASED AMONG U.S. WOMEN?**

J.K. Montez<sup>1</sup>, A. Zajacova<sup>2</sup>, 1. *Center for Population & Development Studies, Harvard University, Cambridge, Massachusetts*, 2. *University of Wyoming, Laramie, Wyoming*

The inverse association between educational attainment and mortality risk ("the educational gradient") in the United States is firmly established. Since the mid-1980s the gradient increased most noticeably among white women compared with white men, black women, and black men. However, little is known about underlying mechanisms. Here, we use the National Health Interview Survey Linked Mortality File to examine the increasing gradient across 1986-2006 among white women 45-84 years of age (N=230,692). This study moves beyond prior research in two ways: 1) examining the trends by cause of death and 2) assessing the potential contribution of a range of mechanisms including early-life conditions, marriage and spousal education, economic well-being, psychosocial well-being, and health behaviors. Results reveal that the gradient increased for deaths from heart disease, lung cancer, chronic lower respiratory disease, breast cancer, and diabetes; diverging trends in economic well-being and health behaviors between education levels contributed to the overall increase. Our findings suggest that maximizing the high-school graduation rate for all women and (re)designing work-family policies that allow women who want to work outside the home to secure (desirable) employment may reduce the widening mortality gap among U.S. women.

### **PATHS TO LONGEVITY: HEALTH AND FUNCTIONING PROFILES OF U.S. ADULTS WHO SURVIVE TO AGE 90 AND BEYOND**

J.A. Ailshire, H. Beltrán-Sánchez, E. Crimmins, *Andrus Gerontology Center, Univ Southern California, Los Angeles, California*

Reaching advanced old age is becoming an increasingly common experience in the U.S, yet there are very few studies of health and functioning of exceptionally long-lived individuals and little is known about the health trajectories of those who survive to extreme old age. The current study uses data from the ongoing, nationally representative Health and Retirement Study to examine variation in health and functioning trajectories over 17 years of follow-up for two groups of individuals, those who did and did not survive to ages 90 and older, as well as among survivors. Although the mean number of diseases and ADL limitations increased over time for both survivors and non-survivors, the survivors had fewer diseases and ADL limitations at every wave compared to non-survivors. Cognitive function also declined over time and did not initially differ by survivorship. However a gap emerged midway through the study period when mean cognitive function among non-survivors began to decline more rapidly than it did among survivors. Prior research on centenarians suggests that older adults can be classified as surviving to exceptional old age having escaped, delayed the onset of, or survived with disease and disability. However, we found distinct latent classes describing variability in health and functioning trajectories among those who reach very old age that suggest there are more varied pathways than those that have been previously identified. This study contributes to the growing body of research on extreme longevity in the U.S. and globally by highlighting the considerable variability in paths to longevity.

## **SESSION 1750 (PAPER)**

### **DISTRESS IN LATER LIFE**

#### **GENDER DIFFERENCES IN THE TRAJECTORIES OF DEPRESSION AND DEPRESSIVE SYMPTOMOLOGY IN THE YEARS LEADING TO DEATH**

R.A. Burns<sup>1</sup>, M.A. Luszcz<sup>2</sup>, P. Butterworth<sup>1</sup>, K. Kiely<sup>1</sup>, K.J. Anstey<sup>1</sup>, 1. *Centre for Research on Ageing, Health and Wellbeing, The Australian National University, Canberra, Australian Capital Territory, Australia*, 2. *Flinders Centre for Ageing Studies and Department of Psychology, Flinders University, Adelaide, South Australia, Australia*

Significant gender differences in rates of depression are reported. Females frequently report higher levels of depression. However, in older adults, this relationship changes approaching mortality, with males at increased risk of reporting depression. However, it is unclear to what extent these changes reflect increased clinical depression or increases in sub-syndromal depressive symptomatology as a consequence of other health related effects. We utilise Random Effects Models to compare the changes in depression between males and females on a measure of depressive symptomatology and a measure of probable clinical depression over a 16 year period. Participants (n = 3,300) were from the Dynamic Analyses to Optimise Ageing (DYNOPTA) project and aged between 45-103 years at baseline (M = 59.90; SD = 12.10) for whom mortality data was available. Results identified increased depressive symptomatology and likelihood of depression in the years preceding mortality. Whilst males reported the greatest change in depressive symptomatology, no gender differences were found in the increase in probable depression when approaching mortality. Increased depressive symptomatology is a particularly vulnerability for males and may reflect underlying illness or health related behaviours that places males at increased risk of depression.

#### **SUICIDAL IDEATION AND RESPONSE TO TREATMENT IN OLDER ADULTS WITH SOCIAL ANXIETY DISORDER**

A. Petkus<sup>1</sup>, J. Wetherell<sup>2,3</sup>, M.B. Stein<sup>3</sup>, M. Craske<sup>4</sup>, D. Chavira<sup>3</sup>, C. Sherbourne<sup>7</sup>, G. Sullivan<sup>5</sup>, P. Roy-Byrne<sup>6</sup>, 1. *San Diego State University / University of California, San Diego Joint Doctoral Program in Clinical Psychology, San Diego, California*, 2. *VA San Diego Healthcare System, San Diego, California*, 3. *University of California, San Diego, San Diego, California*, 4. *University of California, Los Angeles, Los Angeles, California*, 5. *University of Arkansas, Little Rock, Arkansas*, 6. *University of Washington, Seattle, Washington*, 7. *RAND Corporation, Los Angeles, California*

Anxiety disorders are common in older adulthood. Social Anxiety Disorder (SAD) in younger adults is associated with a number of negative outcomes, including suicide, yet little is known about SAD in later life. In this investigation, we examined age differences in characteristics and treatment outcomes of older (age 60 and older, n=35) and younger/middle-aged (age 18-59, n=368) participants with SAD from the Controlling Anxiety with Learning and Management (CALM) study. CALM was an 18-month effectiveness trial in primary care comparing treatment as usual to a collaborative care intervention which included medication management and/or cognitive behavioral therapy. The primary outcome for this current study was the social phobia inventory (SPIN). Secondary outcomes for this study included depression as measured by the Patient Health Questionnaire-8 (PHQ-8), the Anxiety Sensitivity Index (ASI), and BSI Anxiety scale. At baseline a higher proportion of older participants expressed suicidal ideation (40% vs. 25%; p=0.003) and intent (11.4% vs. 1.1%; OR=11.74, p=0.001) compared to younger adults. Linear mixed models examining treatment outcome over time found a significant age by intervention by time interaction on the SPIN (p=0.03), and ASI (p<0.01), but not on the PHQ-8 (p=0.19) or BSI Anxiety (p=0.33). Effect size estimates for the intervention on

SPIN symptoms at post treatment were substantially greater for younger ( $d=0.37$ ) than for older adults ( $d=0.05$ ). In sum, these findings suggest that older adults with SAD may be at higher risk for suicide and have a poorer response to a collaborative care intervention than younger adults.

#### CHRONICITY OF PTSD AND RISK OF DISABILITY IN OLDER AMERICANS

A.L. Byers<sup>1,2</sup>, T.C. Neylan<sup>1,2</sup>, K. Covinsky<sup>1,2</sup>, K. Yaffe<sup>1,2</sup>, 1. *University of California, San Francisco, San Francisco, California*, 2. *San Francisco VA Medical Center, San Francisco, California*

**Introduction:** Most studies have examined the impact of depression and generalized anxiety disorder (GAD) on disability in late life. The purpose of our study was to determine nationally representative estimates of the association of posttraumatic stress disorder (PTSD) to disability. **Methods:** We studied 3,314 participants aged  $\geq 55$  years (mean age (SD)=66.2 (8.7)) from the Collaborative Psychiatric Epidemiology Surveys (60.1% female; 34.1% White, 35.4% Black, 17.7% Hispanic, 12.8% Asian). PTSD was assessed over the lifespan using DSM-IV criteria; classified as no PTSD, early-life only (age  $< 55$ ), early-life with late-life (age  $\geq 55$ ) recurrence, and late-life only. Disability was defined by 5 domains (out of role, self-care, mobility, cognition, and social) using the WHO-DAS. Analyses included logistic regression, using weights and complex design-corrected statistical tests. **Results:** 1.9% of older adults had early-life PTSD only, 1.8% had recurrent PTSD in late-life, and 0.6% had late-life only, with rates higher for women (2.6%, 2.4%, and 0.7%) than men (1.0%, 0.9%, and 0.4%;  $p < 0.001$ ). Prevalence of disability increased going from no PTSD to late-life for all WHO-DAS domains ( $p < 0.001$  for trend). For example, prevalence of impairment in mobility was 22.3%, 49.0%, 58.9%, and 61.3%, respectively. After adjusting for demographics, medical conditions, depression, GAD, and substance abuse, early- and late-life PTSD significantly ( $p < 0.05$ ) increased odds of disability in all domains, except self-care, compared with no PTSD (early-life, odds ratios [ORs]=1.0-2.0; recurrent late-life, ORs=3.0-8.0; late-life, ORs=4.0-11.0). **Conclusions:** Disability in older Americans is highly influenced by PTSD over the lifespan, particularly PTSD that occurs or recurs in late life.

#### PHYSICIANS' DETECTION OF LATE-LIFE DEPRESSION: THE ROLE OF DEPRESSED MOOD AND COGNITIVE IMPAIRMENT

J.J. Gregg<sup>1</sup>, A. Fiske<sup>1</sup>, M. Gatz<sup>2</sup>, 1. *Psychology, West Virginia University, Morgantown, West Virginia*, 2. *University of Southern California, Los Angeles, California*

Depression in later life is associated with decreased cognitive functioning, increased social and functional impairment, and increased all-cause mortality. Thus, accurate assessment of late-life depression is a critical public health issue. The present study examined factors that may impede or facilitate physicians' detection of depression in later life. Participants included 344 adults from the Swedish Adoption/Twin Study of Aging (SATSA) aged 50 years and older at the time of the first project questionnaire. Physician detection of depression was determined by (1) outpatient medical records, (2) antidepressant prescription, or (3) inpatient hospitalization between 1986 and 1994. Depressive symptoms were measured by highest score on the Center for Epidemiologic Studies-Depression Scale (CES-D) completed as part of SATSA data collection; endorsement of depressed mood was examined using two items from the CES-D. The Mini-Mental State Examination (MMSE), also completed as part of SATSA, indicated cognitive impairment. Physician detection of depression was significantly related to CES-D score (OR=1.12, 95% CI=1.06-1.18). The CES-D item regarding feeling depressed significantly moderated this association, such that a one unit increase on the CES-D increased the likelihood of detection by 15% in the context of higher endorsement of the item stating that the person felt depressed. Neither the CES-D item related to feeling sad nor cognitive

impairment acted as a moderator. Findings suggest that physicians should routinely assess for other symptoms associated with late-life depression besides depressed mood (e.g., sleep problems, pain, psychomotor retardation), especially since non-dysphoric depression in later life also is related to significant negative health outcomes.

#### EFFECTS OF ACCULTURATION AND SOCIAL NETWORK SUPPORT ON DEPRESSION AMONG OLDER KOREAN IMMIGRANTS

B. Kim<sup>1</sup>, C. Sangalang<sup>2</sup>, L.B. Maradik Harris<sup>2</sup>, 1. *School of Social Work, University of Hawaii at Manoa, Honolulu, Hawaii*, 2. *UCLA, LA, California*

**BACKGROUND:** Acculturation and social network support have been identified as predictors of mental health for immigrant and older populations. The present study examined both independent and interactive effects of acculturation and social network support on depressive symptomatology among older Korean immigrants. **METHODS:** Self-reported measures included socio-demographic characteristics, acculturation, social network support, and depressive symptoms. This study used cross-sectional analysis of a community-based cohort. **RESULTS:** After controlling for the effects of demographic variables, a robust hierarchical regression model indicated that social network support was negatively associated with depressive symptoms. Also, the interaction between acculturation and social network was significantly associated with lower levels of depressive symptoms ( $\beta = -.29$ ,  $p < .05$ ). In other words, older Korean immigrants who had high levels of social network support and were highly acculturated exhibited lower levels of depression compared to those who had low support and were highly acculturated. **IMPLICATIONS:** Our findings call attention to the role of social network support in the mental health of elderly Korean immigrants. Service providers can develop strategies for decreasing depression in this population by increasing social network support, especially with family members.

#### SESSION 1755 (SYMPOSIUM)

##### YEARS RESEARCH AND STUDY PROGRAM ON GERIATRICS –FORSCHUNGSKOLLEG GERIATRIE

Chair: C. Becker, *Geriatric Rehabilitation, Robert-Bosch Krankenhaus, Stuttgart, Germany*

Discussant: A. Lukas, *Agaplesion Bethesda Krankenhaus, Ulm, Germany*

This symposium is performed in honor of the GSA President Prof. Laurence Z. Rubenstein and the work he has been doing for the Robert Bosch geriatric fellowship program (<http://www.bosch-stiftung.de/content/language2/html/13539.asp>) as chairman of the international selection board. Facing the demographic transition geriatric medicine plays an increasingly important role in health care. Academic geriatric medicine is still inadequately represented in many countries and in Germany in particular. To modify this situation, the "Forschungskolleg Geriatrie" was established. The aim of the research program "Forschungskolleg Geriatrie" is to train and provide further education for physicians aiming to achieve an academic leadership position in geriatric medicine in Germany, Switzerland or Austria. The program is conducted in cooperation with seven clinical academic centres in Germany and Switzerland. Fellows are employed by one of these geriatric centers for the entire funding period of four years. The midcareer program is funded by the Robert Bosch Foundation, one of large private charity organization in Germany dedicated to support aging research. Since ten years more than 30 candidates have successfully passed the program. In the meantime many of them have received leading positions in the geriatric field. The first aim of the symposium is to show the wide range of geriatric and gerontological research issues of alumni and current grant holders supported by this research and study program. The second aim is to

show new assessments and added values of existing assessments in different geriatric fields, investigated by grant holders.

### **CHRONIC PAIN AND DEPRESSION IN OLDER ADULTS: ONLY MEDIATION? RESULTS FROM THE ACTIFE ULM STUDY**

M.D. Denkinger<sup>1</sup>, A. Lukas<sup>1</sup>, T. Nikolaus<sup>1</sup>, S. Franke<sup>2</sup>, 1. *Agaplesion Bethesda Hospital, Ulm, Germany*, 2. *Siegen University, Siegen, Germany*

**Objectives** To analyze what dimensions of pain predict depressive symptoms in late. **Methods** Cross-sectional study in community dwelling older adults (mean age 76, n=1127) from southwest Germany. CGA including pain and depression (Hospital Anxiety and Depression Scale). Associations of pain (level, frequency, chronicity, painful body sites) and depression was assessed using multivariate methods and mediation models including bootstrapping. Results Association was strongest for the number of painful body sites (OR 1.20, CI 95% = 1.11 to 1.31, p<0.001), less for pain level and frequency (OR 1.12, CI 95% = 1.01 to 1.23, p=0.027 and OR 1.18, CI 95% = 1.01 to 1.37, p=0.033). Chronicity was not associated. However, these associations were mediated by comorbidity and loneliness with strong indirect effects and therefore disappeared in the full model. **Conclusions** The number of painful body areas was the best predictor of depression in older adults. Associations were mediated by comorbidity and loneliness.

### **EPIDEMIOLOGY OF PELVIC FRACTURES**

K. Rapp, *Gerontologic Rehabilitation Clinic, Robert-Bosch-Hospital, Stuttgart, Germany*

The literature about the epidemiology of pelvic fractures in old age is limited. An overview over the literature and new data with age- and sex-specific incidence rates in people with and without disability will be presented.

### **OBSERVER-RATED PAIN ASSESSMENT INSTRUMENTS IMPROVE BOTH THE DETECTION OF PAIN AND THE EVALUATION OF PAIN INTENSITY IN PEOPLE WITH DEMENTIA**

A. Lukas<sup>1</sup>, J.B. Barber<sup>2</sup>, S.J. Gibson<sup>2,3</sup>, 1. *AGAPLESION Bethesda Klinik Ulm, Ulm, Germany*, 2. *National Ageing Research Institute, Parkville, Melbourne, Victoria, Australia*, 3. *Caulfield Pain Management and Research Centre, Caulfield, Melbourne, Victoria, Australia*

**OBJECTIVE:** Proxy-rated pain assessment instruments are effective in identifying the presence of pain in dementia cases. The objective of this presentation, based on a study of nursing home residents, is to show that they also have utility in evaluating intensity of pain. **RESULTS:** Discriminant function analysis revealed: 1) that the use of proxy-rated instruments improved recognition of the presence or absence of pain by 28.5% (in dementia) and 33.3% (in cognitively intact adults) above chance; 2) the same instruments improved the classification of residents into the correct self-report rating group of pain intensity by 50.7% (in dementia) and 39.2% (in cognitively intact adults) above chance. **CONCLUSIONS:** The use of observer-rated behavioural pain assessment instruments to assess pain in elderly people with impaired ability to self-report enables carers to detect both the presence of pain and the severity of pain. Information thus acquired should lead to more effective pain management.

### **SUSTAINABILITY OF MOTOR TRAINING EFFECTS IN OLDER PEOPLE WITH DEMENTIA**

T. Zieschang, M. Schwenk, P. Oster, K. Hauer, *Geriatric Medicine, AGAPLESION Bethanien Hospital, Heidelberg, Germany*

Sustainability of motor training effects was evaluated in a RCT in persons with confirmed mild to moderate dementia. Participants underwent a 3-month progressive resistance and functional group training

specifically developed for patients with dementia (Intervention, n=62) compared to a motor placebo activity (Control, n=60). After nine months the gains in functional performance were sustained with significant group differences in the primary endpoint (5-chair-rise, relative change: IG:-8.54 (22.57) vs. CG:+10.70 (45.89) sec, p=0.014). Strength as measured by the primary endpoint 1-Repetition Maximum was still elevated (time effect for T1 vs. T4: 148.68 ± 57.86 vs. 172.79 ± 68.19 kg, p<0.001) but between group differences disappeared (relative change: maximal strength, IG: 22.75 (40.66) vs. CG: 15.60 (39.26), p=0.369). After attending this session, participants will have an overview of the literature on motor training in persons with dementia and will be able to appraise important characteristics of an efficient and sustainable training program.

## **SESSION 1760 (SYMPOSIUM)**

### **CARE FOR THE OLDER PERSONS: FOCUS ON PRESERVATION OF INDEPENDENCY AND AUTONOMY**

Chair: *J.G. Hoogerduijn, University of Applied Sciences Utrecht, Utrecht, Netherlands*

Co-Chair: *M. Schuurmans, University of Applied Sciences Utrecht, Utrecht, Netherlands*

Preservation of independency and autonomy in older persons is an important goal for all health care workers. Functional decline in older people is one of the greatest threats to independent living because it can lead to reduced mobility and autonomy and increased dependency. Functional decline is associated with an increased risk for mortality, readmission and increased health care costs. Therefore, early identification of persons at risk for functional decline may contribute to improve care for older patients. Additionally, several steps can be taken to prevent onset and adverse outcomes if identification is followed by a comprehensive geriatric assessment and targeted interventions. This symposium aims to highlight research evidence of various strategies to preserve independency. The first presentation focuses on identification of frailty, complex care needs and wellbeing in community-dwelling older people with polypharmacy. Problems related with polypharmacy create risk of hospitalization. The second presentation shows an instrument for early identification of drug related problems in older adults living in the community. Third presentation shows the development and validation of a four item instrument to identify older hospitalized patients at risk for functional decline. Fourth presentation shows interventions that effectively reduce postoperative problems that can result in functional decline, such as depression, infection and postoperative pulmonary complications in older elective cardiac surgery patients. All studies are conducted within the scope of nursing' contribution in preservation of functioning.

### **THE PREDICTION OF FUNCTIONAL DECLINE IN OLDER HOSPITALIZED PATIENTS**

J.G. Hoogerduijn<sup>1</sup>, B.M. Buurman<sup>3</sup>, J.C. Korevaar<sup>3</sup>, D.E. Grobbee<sup>2</sup>, S.E. de Rooij<sup>2</sup>, M. Schuurmans<sup>1,2</sup>, 1. *University of Applied Sciences Utrecht, Utrecht, Netherlands*, 2. *Utrecht University, Utrecht, Netherlands*, 3. *Academic Medical Center Amsterdam, Amsterdam, Netherlands*

30%-60% of older patients experience functional decline after hospitalization, associated with an increase in dependence, readmission, nursing home placement and mortality. In two cohorts studies (n=492) and (n=484) an instrument was developed and validated to predict functional decline in older (65+) hospitalized patients. Functional decline was defined as a decline of at least one point on the Katz ADL index at follow-up compared to pre-admission status. 35% of all patients in the development cohort and 32% in the validation cohort suffered functional decline. The model could accurately predict functional decline (AUC 0.71). Sensitivity, specificity, positive and negative predictive values were 87%, 39%, 43% and 85%, respectively. Pre-admission need

for assistance in instrumental activities of daily living, use of a walking device, need for assistance in traveling, and no education after age 14 are the predictors of a model to identify older patients at risk for functional decline following hospital admission.

### EARLY RECOGNITION OF DRUG RELATED PROBLEMS IN HOMECARE

C.G. Sino<sup>1</sup>, M.L. Bouvy<sup>2</sup>, I.M. Schop<sup>4</sup>, P.A. Jansen<sup>3</sup>, M. Schuurmans<sup>1,5</sup>, 1. *University of applied sciences, Utrecht, Netherlands*, 2. *Utrecht University, Division of Pharmacoepidemiology and Clinical Pharmacology, Utrecht, Netherlands*, 3. *University Medical Centre Utrecht. Department of Geriatrics and Expertise Centre Pharmacotherapy for Old Persons Utrecht. The Netherlands, Utrecht, Netherlands*, 4. *Utrecht University. The Netherlands, Utrecht, Netherlands*, 5. *University Medical Centre Utrecht, Department of Rehabilitation, Nursing Science and Sports. The Netherlands, Utrecht, Netherlands*

Home healthcare employees are particularly well positioned to act in a preventive way to recognize symptoms of potential Drug Related Problems (DRPs). The instrument of the Home Observation of Medication-related problems by homecare Employees (HOME) is an early recognition tool. In an observational study (N=115) the observations made by home healthcare employees were compared with the findings from an in-dept medication interview by a specialized nurse to assess concurrent validity of the instrument. The HOME instrument identified 470 potential DRPs (median 4.0; IQR 4.0) observations per patient. The medication interview identified 610 potential DRPs (median 5.0; IQR 4.0). The specificity of the HOME instrument was high (78%-99%) for thirteen of the fifteen subcategories. The sensitivity was moderate (63%, 63% and 67%) to high (81% and 86%) for five of the fifteen subcategories. This study shows that observations by home healthcare employees add to the early recognition of DRPs.

### THE PREDICTION OF FUNCTIONAL DECLINE IN OLDER HOSPITALIZED PATIENTS

J.G. Hoogerduijn<sup>1</sup>, B.M. Buurman<sup>3</sup>, J.C. Korevaar<sup>3</sup>, D.E. Grobbee<sup>2</sup>, S.E. de Rooij<sup>3</sup>, M. Schuurmans<sup>1,2</sup>, 1. *University of Applied Sciences Utrecht, Utrecht, Netherlands*, 2. *Utrecht University, Utrecht, Netherlands*, 3. *Academic Medical Centre Amsterdam, Utrecht, Netherlands*

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### FRAILITY, COMPLEX CARE NEEDS AND WELLBEING IN COMMUNITY-DWELLING OLDER PEOPLE WITH POLYPHARMACY

N. Bleijenberg<sup>1</sup>, V.H. ten Dam<sup>1</sup>, I. Drubbel<sup>1</sup>, M.E. Numans<sup>1</sup>, N. de Wit<sup>1</sup>, M. Schuurmans<sup>2</sup>, 1. *Julius Center for Health Sciences and Primary Care, Utrecht, Netherlands*, 2. *University Medical Centre Utrecht, Utrecht, Netherlands*

One of today's most challenges in health care is to provide care to older people with complex care needs. Although the level of frailty and their prevalence in older people is frequently reported, less attention has

been given to identify complex care needs in this population. Understanding their needs can contribute to provide optimal care on a patient needs approach. The aim of this study is to assess frailty (Groningen Frailty Indicator), complex care needs (Intermed-for elderly) and Well-being (Groningen Wellbeing Indicator) in community-dwelling older people with polypharmacy. In total, 1289 patients participated in this cross-sectional study. Mean age was 75 years (SD: 8.1). Most patients were female (58.1%), 851 patients (64.7%) were frail, 107 patients (8.3%) had complex care needs, and a moderate wellbeing was measured. Frail patients reported more complex care needs and a lower wellbeing than non-frail patients. Results on specific domains will be presented.

### PREADMISSION INTERVENTIONS PREVENTING POSTOPERATIVE COMPLICATIONS IN OLDER CARDIAC SURGERY PATIENTS: A SYSTEMATIC REVIEW OF THE LITERATURE

R. Ettema<sup>1,2</sup>, H. Koeven<sup>2</sup>, M. Schuurmans<sup>1,2</sup>, 1. *Faculty of Healthcare, University of Applied Sciences Utrecht, Utrecht, Utrecht, Netherlands*, 2. *University of Utrecht, Utrecht, Utrecht, Netherlands*

Objective(s): Literature on postoperative complications in cardiac surgery patients shows high incidences of delirium, depression, pressure ulcers, hospital infections, postoperative pulmonary complications and atrial fibrillation. These complications are associated with functional and cognitive decline and a decrease in the quality of life and well-being after discharge. It is unclear how older cardiac surgery patients can best be prepared for their hospital admission with cardiac surgery. Methods: We systematically reviewed the literature following the PRISMA statement guidelines. Results: Of 1,335 initial citations, 31 were subjected to critical appraisal. Finally, 23 studies were included, of which we derived a list of preventive interventions. These interventions have been shown to effectively reduce postoperative depression, infection and postoperative pulmonary complications in older elective cardiac surgery patients. Conclusions: Mainly comprehensive approaches prevent the occurrence of postoperative depression and postoperative pulmonary complications. Infection can be best prevented by combined disinfection with CHX and immune-enhancing nutritional supplement.

### SESSION 1765 (SYMPOSIUM)

#### DISSEMINATION RESEARCH IN FALLS PREVENTION: "STEPPING ON" IN A WISCONSIN COMMUNITY

Chair: *J.E. Mahoney, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*

Co-Chair: *J. Stevens, National Center for Injury Prevention & Control, Centers for Disease Control & Prevention, Atlanta, Georgia*

Discussant: *M.G. Ory, Program on Healthy Aging, Texas A&M Health Science Center School of Rural Public Health, College Station, Texas*

While a number of effective community-based fall prevention interventions exist, only a few have been translated into programs and widely implemented. Implementing effective programs requires skills and resources that many community organizations lack. Dissemination research is designed to bridge this program implementation gap. Stepping On is a group-based multifactorial falls prevention program that, in a randomized trial, reduced falls by 31%. This symposium describes the process and results of two evaluations of Stepping On: First, from a four-year dissemination research study funded by the CDC that was conducted in three Wisconsin communities; and second, from a statewide dissemination effort that enrolled over 2000 older adults in Stepping On over the same four-year time period. Presenters will discuss: 1) How key elements of Stepping On were determined through Delphi Consensus; 2) The lapses in fidelity that occurred

in a pilot implementation, and the use of root cause analysis to determine causes and solutions to these lapses; 3) Results from research that tested program implementation in three different settings (a parks and recreation center, a senior retirement community and a church) and using leaders from two different backgrounds (health professional vs. non-health professionals); and 4) pre-and post workshop fall outcomes from implementing Stepping On statewide. The symposium Co-Chair will highlight how this research informs CDC's agenda for fall prevention activities, and the Discussant will comment on the role of research in driving successful dissemination and additional questions related to translation of Stepping On for widespread community use.

#### **USE OF THE DELPHI CONSENSUS TECHNIQUE TO DETERMINE KEY ELEMENTS OF STEPPING ON**

V.L. Gobel<sup>1</sup>, A.E. Schlotthauer<sup>3</sup>, J.E. Mahoney<sup>1</sup>, L.M. Clemson<sup>2</sup>, K.A. Mack<sup>4</sup>, T. Shea<sup>5</sup>, S.F. Cech<sup>6</sup>, 1. *University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*, 2. *University of Sydney, Sydney, Queensland, Australia*, 3. *Medical College of Wisconsin, Injury Research Center, Madison, Wisconsin*, 4. *CDC/National Center for Injury Prevention and Control, Atlanta, Georgia*, 5. *University of Wisconsin Hospitals and Clinics, Madison, Wisconsin*, 6. *Greater Wisconsin Agency on Aging Resources, Inc., Madison, Wisconsin*

Translating interventions from experimental research studies to community programs is important for effective interventions to be broadly adopted into public health practice. This presentation describes how the Delphi consensus technique was used to elucidate the key elements of Stepping On, an evidence-based fall prevention intervention from Australia. Knowing the key elements is essential for maintaining fidelity and for developing training programs to successfully adapt the intervention for widespread use in the United States. Nineteen international content experts were identified, recruited, and surveyed using a three-round Delphi Consensus technique; 105 key elements were identified and guided decisions when adapting the program. Adaptations included improving the leader training program, developing criteria for who can be a successful leader, and techniques for monitoring fidelity. The key elements also helped guide decisions related to updating and adapting program content.

#### **USE OF ROOT CAUSE ANALYSIS TO IMPROVE FIDELITY WHEN IMPLEMENTING STEPPING ON**

T. Shea<sup>1</sup>, J.E. Mahoney<sup>2</sup>, V.L. Gobel<sup>2</sup>, J. Janczewski<sup>1,2</sup>, S.F. Cech<sup>3</sup>, 1. *University of Wisconsin Hospital and Clinics, Madison, Wisconsin*, 2. *School of Medicine and Public Health, Madison, Wisconsin*, 3. *Greater Wisconsin Agency on Aging, Madison, Wisconsin*

This presentation will demonstrate using root cause analysis (RCA) to recommend solutions to problems with maintaining fidelity when implementing the Stepping On program. After modifying the Stepping On manual for use in the United States, we conducted a pilot Stepping On program and monitored it for fidelity to the key elements. Fidelity was assessed at each session by both an expert physical therapist and an experienced peer leader using a checklist of key elements. Loss of fidelity was noted in areas of adult learning, exercise, leader's role, and delivery of program content. Root causes identified for these areas included: leaders without the appropriate background, insufficient training (related to exercise and group facilitation), high levels of frailty among participants, and communication gaps between class leaders and site administrators. Our findings led to changes in how the program was structured, leader recruitment and training, and participant recruitment.

#### **RESEARCH ON THE TRANSLATION AND IMPLEMENTATION OF STEPPING ON IN THREE COMMUNITY SETTINGS**

A.E. Schlotthauer<sup>1</sup>, P.M. Layde<sup>1</sup>, J.E. Mahoney<sup>2</sup>, K.A. Mack<sup>3</sup>, T. Shea<sup>4</sup>, A.L. Christiansen<sup>1</sup>, V.L. Gobel<sup>2</sup>, L.M. Clemson<sup>2</sup>, 1. *Medical College of Wisconsin Injury Research Center, Milwaukee, Wisconsin*, 2. *University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*, 3. *Centers for Disease Control and Prevention National Center for Injury Prevention and Control, Atlanta, Georgia*, 4. *University of Wisconsin Hospital and Clinics, Madison, Wisconsin*, 5. *University of Sydney Health Sciences, Sydney, New South Wales, Australia*

The goal of this study was to determine the importance of program feasibility, acceptability, reach, uptake, and fidelity to key program elements to inform widespread adoption of Stepping On. Implementation considerations included the type of host organization, rural versus urban location, the leader's professional background (health versus non-health professional), and whether a phone call could replace the home visit prescribed in the original program. These factors were studied using a mixed methodology of surveys, focus groups and content expert fidelity observations. The study identified organizational challenges to implementation that varied by setting. There were no implementation differences between rural and urban locations, and no differences in program fidelity between health and non-health professional leaders. Home visits identified more home hazards than did phone calls. However, in follow-up there was no significant difference in remediation of those home hazards. Lessons from this research will inform widespread dissemination of Stepping On.

#### **EVALUATION OF STEPPING ON IMPLEMENTATION ACROSS WISCONSIN**

J.E. Mahoney<sup>1</sup>, R. Gangnon<sup>2</sup>, L.M. Clemson<sup>3</sup>, V.L. Gobel<sup>1</sup>, V. Lecey<sup>4</sup>, 1. *Medicine, University of Wisconsin School of Medicine and Public Health, Madison, WI, Wisconsin*, 2. *University of Wisconsin Dept. of Biostatistics & Medical Informatics/Population Health, Madison, Wisconsin*, 3. *University of Sydney, Sydney, New South Wales, Australia*, 4. *Greater Wisconsin Agency on Aging Resources, Inc., Madison, Wisconsin*

Between January 2008 and June 2011, Stepping On classes conducted across Wisconsin were attended by 2310 adults (mean age 78, 73% women). Participants reported a mean of 1.2 falls in the 6 months prior to enrollment. The rate ratio for falls in the 6 months after the program compared to the 6 months before was 0.50 (95% CI 0.45 to 0.56), and the rate ratio for the second 6 month period after the program ended compared to baseline was 0.52 (95% CI 0.46 to 0.59). The pre-post reduction in falls did not differ significantly by type of workshop leader (health professional versus non-health professional), nor by location (rural versus urban). These results suggest that with sufficient training and by selecting for prior experience, professionals from a variety of backgrounds may effectively lead Stepping On. Further, rural older adults are as likely as urban to benefit from the program.

#### **SESSION 1770 (SYMPOSIUM)**

##### **HEALTH OUTCOMES AND HEALTH DISPARITIES IN OLDER ADULTS: SOCIETAL AND CULTURAL FACTORS**

Chair: *S.A. Greenberg, University of Pennsylvania, Philadelphia, Pennsylvania*

Discussant: *C. Brown, Virginia Commonwealth University, Richmond, Virginia*

Improving our understanding of health outcomes and health disparities remain public health priorities; particularly as they relate to aging. Emerging research will be presented on important health-related outcomes and associated health disparities that are rooted in medical, societal, and cultural factors found both in the United States and around the

world. New findings will be presented including the influence of hypertension on cognition and mortality in Japan, the association between preventive health care utilization and hypertension in older Chinese adults, qualitative factors influencing obesity and health disparities in Appalachian women, the consequences of initial hip fracture while receiving skilled nursing care, and the impact of home health skilled nursing visits on hospitalization. Pursuant to this year's theme, this symposium will explore emerging frontiers in aging. The objective of this symposium is to present multiple cross cultural perspectives from health outcomes and health disparity research. Current findings and implications for future research in aging emphasizing connections within and across individuals, systems, environments, cultures, and nations are incorporated.

#### **WHAT HAPPENS TO THE PATIENT WHEN THEY FRACTURE THEIR HIP DURING SNF CARE?**

N. Leland<sup>1,2</sup>, J.M. Teno<sup>2</sup>, P.L. Gozalo<sup>2</sup>, J. Bynum<sup>3</sup>, V. Mor<sup>2</sup>, 1. *University of Southern California, Los Angeles, California*, 2. *Brown University, Providence, Rhode Island*, 3. *Dartmouth Medical School & Dartmouth Institute for Health Policy and Clinical Practice, Hanover, New Hampshire*

Approximately 1.6 million patients receive rehabilitation in a skilled nursing facility (SNF) each year after an acute hospital stay with the goal of regaining health and function. This study examined patient outcomes among a Medicare population who experienced their first hip fracture while receiving SNF care. Between 1999 and 2007, 29,201 individuals experienced their first hip fracture while receiving SNF care. Within the first 60 days following the fracture, 26.5% died. Among the 6,128 (20.1%) patients discharged back to the community two-thirds (n=3,938) were able to remain in the community a consecutive 30 days. Experiencing a hip fracture while receiving SNF care is a sentinel event which limits the patient's ability to return home and stay home. Therefore, fall prevention should be an integral piece of the SNF plan of care.

#### **THE IMPACT OF NUMBER OF HOME HEALTH SKILLED NURSING VISITS ON HOSPITALIZATION AND DEATH**

M. O'Connor<sup>1,2</sup>, A.L. Hanlon<sup>1,2</sup>, M.D. Naylor<sup>1,2</sup>, K.H. Bowles<sup>1,2</sup>, 1. *University of Pennsylvania, Philadelphia, Pennsylvania*, 2. *NewCourtland Center for Transitions and Health, Philadelphia, Pennsylvania*

**Aims:** Examine the relationship between number of skilled nursing (SN) visits on the occurrence of and time to first hospitalization and death within 90 days after home health (HH) discharge. **Methods:** Retrospective analysis of five CMS-owned data sets from 2009 (Outcomes Assessment Information Set, Home Health Agency Standard Analytic File, Medicare Provider and Analysis Review File, Beneficiary Summary and Provider of Services file). Propensity score analysis was applied prior to logistic and Cox Proportional Hazards Regression Analyses (n=4,500). **Results:** 16.3% of HH recipients were hospitalized within 90 days of discharge from HH. Number of SN visits was not associated with the occurrence of (p = 0.5014) or time to first hospitalization (p = 0.3300), or the time to death (p=0.3337). **Conclusions:** This study begins to fill the gaps in knowledge regarding the outcomes of Medicare-reimbursed HH beneficiaries. Additional research is critical to generate evidence to improve beneficiary outcomes.

#### **OBESITY FACTORS AND FAMILY INFLUENCE AMONG OLDER APPALACHIAN WOMEN**

T. O'Brien<sup>2,1</sup>, L.S. Nemeth<sup>2</sup>, L. Talbot<sup>1</sup>, 1. *Nursing, UNCC, Charlotte, North Carolina*, 2. *Medical University of South Carolina, Charleston, South Carolina*

Appalachian women are often older and live with limited employment, income, education, and access to health care compare to other women living in the United States. The specific aims of this study are:

1) to examine social and contextual factors influencing obesity, or the adoption and maintenance of health behaviors to prevent obesity, and 2) ascertain social themes of insecurity, stress and a sense of powerlessness in an uncertain economy among Appalachian women. A qualitative design was used to explore obesity among Appalachian women using semi-structured interviews. Perspectives were gained (n=13) about family values relating to nutrition and weight management. Five themes emerged from both groups: struggles with weight control and family tradition, solutions, negative role models and lack of time messages in the media, and stressors of obesity. This study provides identification of possible strategies to decrease obesity and health disparities for women living in the Appalachian region.

#### **THE JAPANESE PARADOX: HYPERTENSION AND HEALTH IN THE ELDERLY POPULATION OF JAPAN**

S. Davarian<sup>1</sup>, E. Crimmins<sup>1</sup>, Y. Saito<sup>2</sup>, A. Takahashi<sup>2</sup>, 1. *Gerontology, University of Southern California, Los Angeles, California*, 2. *Nihon University, Tokyo, Japan*

The Japanese population is relatively healthy, with low rates of heart disease, obesity, diabetes, and the longest life expectancy in the world but high rates of hypertension. Japan provides a unique opportunity to examine how various aspects of health influence each other in a relatively healthy population. This study examined the influence of hypertension on mortality and cognitive performance in the elderly population of Japan utilizing the Nihon University Japanese Longitudinal Study of Aging (NUJLSOA) (n=2195). Contrary to literature on the US, in Japan hypertension was neither associated with mortality (OR: 0.91, 95% CI: 0.55-1.51) nor with cognitive performance using logistic and OLS-regression, respectively. These findings persisted even when education, gender, and common hypertension comorbidities were added. The findings suggest that aging may be conceptualized differently in various countries; it appears that in the US aging might be a constellation of diseases, whereas in Japan this is not the case.

#### **A CROSS-SECTIONAL STUDY ABOUT PREVENTIVE HEALTH CARE UTILIZATION AND HYPERTENSION IN CHINA**

X. Pan, *Miami University, Oxford, Ohio*

**Objective** The aim of the present study is to examine the association between the utilization of preventive health service and the diagnosis of hypertension among older Chinese (65+). **Design** A cross-sectional study by using 2006 survey data of China Health and Nutrition Survey (CHNS). **Sample** 1,643 participants in the sample, 89 (5.39%) used preventive health service. **Analysis** The association was analyzed with multiple logistic regression by adjusting for sociodemographic and lifestyle factors (including age, gender, SES, residence area, smoking and alcohol consumption) as well as the comorbidity of Type 2 diabetes (DM). **Results** The utilization of preventive health care is significantly related with the diagnosis of hypertension ( $\chi^2=9.33$ ,  $p<.01$ ). People with hypertension are 1.06 times more likely to use preventive health care than their counterparts without hypertension. **Conclusion** Hypertension is a significant predictor for the utilization of preventive health care among 65 and older Chinese in Mainland, China.

#### **SESSION 1775 (SYMPOSIUM)**

##### **METHODOLOGICAL CHALLENGES TO UNDERSTANDING AGING THROUGH DYSREGULATION OF COMPLEX HOMEOSTATIC NETWORKS**

Chair: *A.A. Cohen, University of Sherbrooke, Sherbrooke, Quebec, Canada, Groupe de Recherche PRIMUS, Centre Hospitalier Universitaire de Sherbrooke, Sherbrooke, Quebec, Canada*  
Co-Chair: *K. Bandeen-Roche, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland*

Many aging researchers are moving away from the idea that there is a single, simple biological cause of aging, and evidence is accumu-



lating for multiple processes and systems. Because many of these systems interact with and regulate each other in maintaining physiological homeostasis, there is a substantial likelihood of complex feedback loops contributing substantially to aging. Furthermore, these interactions may occur across different hierarchical levels, with lifestyle choices such as physical activity affecting biological processes, which in turn may affect cognitive processes, etc. While such a multi-systemic model of aging holds promise for explaining most of the observed data on aging, the posited complexity presents substantial methodological challenges. Controlled experiments are ill-suited to exploring the system-level properties of such complex networks, where the results on an experiment could change depending on the interactions of hundreds of other factors. At the same time, there are also no silver bullet statistical or epidemiological methodologies for exploring these questions, nor are there fully developed datasets containing all the key parameters involved over the full life course. Accordingly, we have invited four experts from different domains of aging research to share and discuss their thoughts on how we move forward in addressing these complexities. The format will be a panel discussion.

#### **DATA ANALYTIC CHALLENGES TO DEVELOPING MEASURES OF MULTI-SYSTEM DYSREGULATION IN AGING**

K. Bandeen-Roche, *Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland*

Challenges to developing measures of multi-system dysregulation in older adults and, perhaps, biological aging, include: (1) Assembling databases in which development can proceed. Existing cohort studies on aging are subject to different measurement methods, selection biases, etc. Additional experimental data may be necessary. (2) Selecting available biomarkers most relevant to the goal. Both biology and measurement (e.g. reliability, validity) are relevant. (3) Establishing viable conceptual frameworks for research. For example, two competing hypotheses are that (i) there exists a “biological clock” that can be inferred from multiple sentinel physiological changes, and (ii) “aging” results from loss of plasticity of a physiological systems network whose properties can be inferred from appropriate models and experimental designs. (4) Applying data analytic methods that can link physiological system measures to conceptual frameworks to yield valid measures of dysregulation. Candidate methods include intensively predictive procedures, structural equations, and latent variable models.

#### **ASSESSING AGING WITHIN THE CONTEXT OF COMPLEX, INTERACTING SYSTEMS: CHALLENGES FOR BIOGERONTOLOGY**

D. Ingram, *Pennington Biomedical Res Center, Baton Rouge, Louisiana*

By virtue of their training, biologists are prone to focus on singularity when searching for mechanisms of biological phenomena—single molecule, single receptor, single gene. Even when considering a single pathway as the next level of complexity, the desire remains to keep it simple. Biogerontologists are no exception to this approach; however, the complexities of aging have forced them increasingly to consider more complex systems and analysis. Nathan Shock, a founder of gerontology, emphasized systems in consideration that aging is manifested as a decline in homeostatic processes. The genomic revolution has forced biogerontologists to deal with this complexity and sparked greater use of bioinformatics. Such efforts have generated application of transcriptional profiling of aging and aging interventions using gene array. These efforts have been evolving for further application of proteomics and metabolomics, but these technologies remain ahead of the ability to use them efficiently and effectively.

#### **THE LIMITS OF LIMITLESS DATA**

T. Harris, *NIA IRP, Bethesda, Maryland*

I am both a geriatrician and an epidemiologist. As a geriatrician, I know that outcomes in old age are multi-system and as an epidemiologist, I know that means that I should include all the domains that contribute to these outcomes. But this means that the participants in my studies will need to move into the clinic for at least several days as I used expensive, state-of-the-art technologies to assess multi-level sub-clinical and clinical disease and computers and interviewers to ask hours of questions and cognitive tests. How can researchers in gerontology stay ahead of the information tsunami in designing reasonable studies that still allow exploration of cutting edge methods?

#### **SESSION 1780 (SYMPOSIUM)**

##### **NCCA GENE D. COHEN RESEARCH AWARD IN CREATIVITY AND AGING SYMPOSIUM**

Chair: *L.S. Noelker, Benjamin Rose Institute, Cleveland, Ohio*

Co-Chair: *G. Hanna, National Center for Creative Aging, Washington, DC, District of Columbia*

Discussant: *M.C. Patterson, MindRAMP, Silver Spring, Maryland*

The Gerontological Society of American in partnership with the National Center for Creative Aging, an affiliate of George Washington University, will present the 4th Annual Gene D. Cohen Research Award in Creativity and Aging to Bruce Miller MD, Professor, Director, The Memory and Aging Center at University California, San Francisco. Dr. Miller will report on his research that charts a new course for establishing links between brain function and creative expression through studies on frontal lobe dementia. The research shows that creative expression is related to promoting and maintaining brain function and general wellbeing as well as providing indicators for progression of brain disease. Creative expression was also shown to mitigate cognitive decline by providing auxiliary methods of communication and socialization. This presentation will be supported by two others, one that examines the state of the field of research related to the arts and human development with a focus on later life. Promising directions and priorities for future research studies are discussed. The third presentation reports on findings from recent studies investigating the quality of later life for older artists and the resulting innovative intergenerational program that was developed to preserve their artistic legacies. The symposium will showcase these pioneering studies that help to establish a new role for humanities and the arts across the spectrum of aging research, education and practice.

##### **ARTISTIC CREATIVITY IN THE SETTING OF DEMENTIA**

B. Miller, *University of California San Francisco, San Francisco, California*

Some individuals with the semantic variant of primary progressive aphasia (svPPA) develop new artistic skills in the setting of neurodegenerative disease. Visual activities such as drawing, painting or sculpting may arise as the patient loses verbal language aptitude. Creativity in visual art, music and mechanical design with svPPA has been reported. The artwork of people with svPPA tends to be literal versus abstract and the use of color is striking. As the illness encroaches upon the right anterior temporal lobe, faces often become distorted, reflecting specific deficits in recognizing faces, emotions and meaning. As patients lose the meaning of words, images become more vague and eccentric. The elements often show no contextual meaning or relationships to other elements. The composition may not represent a coherent expression of an idea, but the arrangement can be highly original. Generally, paintings are realistic or surrealistic without a significant abstract component.

## THE STATE OF THE RESEARCH FIELD ON CREATIVITY AND HUMAN DEVELOPMENT IN LATER LIFE

G. Hanna, *National Center for Creative Aging, Washington, District of Columbia*

The state of the current research field on creativity and aging as it relates to human development in later life is a focus of the recently released "The Arts in Human Development Framing a National Research Agenda for the Arts, Lifelong Learning, and Individual Well-Being." This section of the white paper was authored by the National Center for Creative Aging and produced by the National Endowment for the Arts. Its purpose is to feature the pioneering work of researchers such as Drs. Cohen and Miller in forming a new frontier for aging studies. Originating from a summit held by the US DHHS and the National Endowment for the Arts, this paper has led to an interagency governmental task force that is working across disciplines and professions to review and revise funding priorities for future research in the area of the humanities and the arts as related to aging initiatives.

## IMPACT OF CAREERS IN THE ARTS ON AGING AND THE QUALITY OF LATER LIFE

J. Jeffri, *National Center for Creative Aging, Washington, District of Columbia*

Complementing the research findings of Miller and Cohen, the ABOVE GROUND project studied 146 professional visual artists in the New York metro area. These artists, who have spent a lifetime making art, report higher self-esteem than the general population, good to excellent health, and positive emotions in relation to their work. With these characteristics and resilience, tenacity, and a life of meaningful work, older artists can serve as models for aging well. This prototypical research led to ART CART: SAVING THE LEGACY, a program matching interdisciplinary teams of graduate students in health, aging and arts disciplines with older artists. Together, they document the artists' work and this provides a model of positive aging and deep experiential learning for students. ART CART is being replicated in two cities in 2012 and 2013 with a parallel research component using some of Cohen's instruments to measure general health, loneliness, depression, and mastery.

## SESSION 1785 (PAPER)

### COGNITIVE FUNCTION: EFFECTS AND OUTCOMES

#### GAIT SPEED AND COGNITION IN A HIGH FUNCTIONING COHORT OF OLDER PERSONS

R. Marottoli<sup>1,2</sup>, K. Araujo<sup>1</sup>, P. Peduzzi<sup>1</sup>, *1. Internal Medicine, Yale University School of Medicine, New Haven, Connecticut, 2. VA Connecticut, West Haven, Connecticut*

**Background:** While an association between gait and cognition has been identified among impaired individuals, the relationship between these abilities in higher functioning individuals is less well known. **Methods:** Participants were community-living active drivers age 70 years and older recruited from medical clinics and community sources. A variety of cognitive and physical abilities were assessed at baseline, including timed walk over 10 feet up and back at usual pace (UP) and as quickly as possible (rapid pace, RP) **Results:** The 615 drivers had a mean age of 78.8 ( $\pm 4.9$ ) years, 12% were women, and mean MMSE score was 27.4 ( $\pm 2.1$ ) points. Cognitive measures strongly correlated with gait speed at the  $p < .001$  level included: MMSE (#correct, correlation coefficient  $-0.18$  UP,  $-0.22$  RP), Babcock Immediate ( $-0.12$  UP,  $-0.14$  RP) and Delayed ( $-0.19$  UP,  $-0.21$  RP) Recall, Trails A ( $0.21$  UP and RP), Trails B ( $0.26$  UP,  $0.30$  RP), Visual Scanning ( $-0.29$  UP,  $-0.31$  RP), and Symbol Digit Modalities ( $-0.28$  UP,  $-0.31$  RP) **Conclusion:** A variety of cognitive measures assessing global cognition and higher level abilities were strongly associated with gait speed in a cohort of high functioning individuals. Awareness of this

association could lead to early identification of individuals at risk for subsequent functional decline and the development of intervention strategies.

## THE EFFECTS OF COGNITIVE-BEHAVIORAL THERAPY ON INSOMNIA AMONG COMMUNITY-DWELLING OLDER PEOPLE: A RANDOMISED CONTROLLED TRIAL

Y.S. Doris, *The Chinese University of Hong Kong, Hong Kong, Hong Kong, Hong Kong*

Insomnia is a prevalent problem affecting older people worldwide. There is ample evidence to indicate that the devastating effects of late-life insomnia on health and functional status. This longitudinal randomized controlled trial with waiting list attention-controlled group aimed at examine the effects of cognitive-behavioral therapy (CBT) on sleep pattern, sleep quality and daytime impairment among older people with insomnia. A total of 197 subjects were recruited from 6 elderly community centers in Hong Kong. Cluster randomization allocated them to either intervention ( $n=108$ ) or waiting-list attention-placebo control groups ( $n=89$ ). The intervention group received an 8-week group training on a multi-modal CBT including cognitive therapy, sleep hygiene, stimulus control and relaxation therapy whereas the attention-controlled group received health talks. Outcome evaluation using actigraphy, Pittsburg Sleep Questionnaire Index (PSQI) and Sleep Impairment Index (ISI) were conducted for both groups at baseline, immediately after training, and 1month, 3months and 6 months thereafter. Then, the control group also received CBT training. Analysis with general lineal model indicated that the CBT has significantly improved the total sleep time ( $p < 0.001$ ), nocturnal awakening ( $p < 0.001$ ), sleep latency ( $p < 0.001$ ), sleep efficacy ( $p < 0.001$ ), PSQI ( $p < 0.001$ ), and SII ( $p < 0.001$ ). The improvement in sleep quality and sleep pattern remained at the 6-month evaluative endpoints. This study indicated that CBT is an effective and feasible non-pharmacological intervention to improve late-life insomnia. A knowledge transfer fund was obtained to empower social and health care professionals through train-the-trainer workshops and user-friendly toolkits to conduct CBT for late-life insomnia in various community care settings in Hong Kong.

## EXCESS MEDICAL COSTS ASSOCIATED WITH COGNITIVE DECLINE: WHERE DO COST DIFFERENCES OCCUR? A CNS STUDY

C. Leibson<sup>1</sup>, K.H. Long<sup>2</sup>, J.E. Ransom<sup>1</sup>, R.O. Roberts<sup>1</sup>, S.P. Hass<sup>3</sup>, A.M. Duhig<sup>3</sup>, V.S. Pankratz<sup>1</sup>, R.C. Petersen<sup>1</sup>, *1. Mayo Clinic, Rochester, Minnesota, 2. Economics Consulting, LLC, St. Paul, Minnesota, 3. Abbott Laboratories, Abbott Park, Illinois*

We observed higher medical costs with worsening cognitive status, from normal through mild cognitive impairment (MCI) to dementia. This work attempts to identify the source of excess costs. Subjects were a subset of the Mayo Clinic Study of Aging (MCSA). MCSA used population-based records-linkage Rochester Epidemiology Project (REP) resources to construct a stratified random sample ( $N=6,171$ ) from Olmsted County, MN residents, age 70-89 years. Following neurologist's review of medical records, subjects meeting criteria for dementia were defined as prevalent dementia as of review date (index) ( $N=484$ ). Remaining eligible subjects were invited to be prospectively evaluated using comprehensive clinical/neuropsychological assessments. At initial assessment (index), 2,452, 537, and 119 met criteria for normal, MCI, or newly-discovered dementia. Using REP provider-linked line-item billing data, we obtained all diagnosis codes and all medical services/procedures 1-year before index. We computed total costs and assigned 2010 nationally stan-

standardized wage- and inflation-adjusted dollar estimates. We combined newly-discovered with prevalent dementia. We assessed contributions of age, sex, and pre-index co-morbidity (excluding dementia diagnoses) to cost differences across categories. Compared to normal subjects, age- and sex-adjusted costs remained significantly higher for dementia (mean difference=+\$5,316) and MCI (+\$859). After including pre-index comorbidity, dementia vs. normal differences were attenuated (+\$2,210); MCI vs. normal differences disappeared (-\$35). Of 17 ICD-9-CM chapters, the proportions assigned  $\geq 1$  non-dementia diagnosis were significantly higher for both MCI and dementia vs. normal subjects for Infectious/parasitic Diseases, Respiratory Diseases, Signs/symptoms, Injury/poisoning, and Mental disorders. Comorbid conditions associated with declining cognition account for much of observed excess medical costs.

### **AEROBIC EXERCISE: EFFECTS ON ALZHEIMER'S SYMPTOMS**

F. Yu<sup>1</sup>, N.W. Nelson<sup>2</sup>, K. Savik<sup>1</sup>, M. Dysken<sup>3</sup>, J. Wyman<sup>1</sup>, 1. *University of Minnesota School of Nursing, Minneapolis, Minnesota*, 2. *Saint Thomas University, Minneapolis, Minnesota*, 3. *Minneapolis VAMC, Minneapolis, Minnesota*

**Background:** Increasing evidence suggests that aerobic exercise might be therapeutic for Alzheimer's disease (AD) because it is related to reduced AD incidence, alters brain structure in AD transgenic animals, and improves cognition in non-AD individuals. Nonetheless, exercise studies in AD are just emerging and show conflicting results, largely due to inconsistent outcomes and poor exercise prescription and delivery. Hence, the purpose of this study was to inform power analysis in future studies by generating effect size (ES) of a 6-month moderate intensity cycling intervention on AD symptoms. **Methods:** A pre-test post-test design was used to qualify 29 community-dwelling older adults with AD. A trained research assistant who was blinded to the study purpose assessed cognition using the AD Assessment Scale – cognition, activities of daily living (ADLs) using the Disability in AD scale, and the prevalence of and caregiver distress from behavior and psychological symptoms of dementia (BPSD) use the Neuropsychiatric Inventory at baseline and 6 months. **Results:** Participants maintained cognition, ADLs, and BPSD during the 6-month cycling, while caregiving distress was significantly reduced. The ES is .13 ( $p = .48$ ) for global cognition, .03 ( $p = .87$ ) for verbal memory, .31 ( $p = .87$ ) for executive function, .18 ( $p = .34$ ) for ADLs, and .28 ( $p = .16$ ) for BPSD, and .4 ( $p = .04$ ) for caregiver distress from baseline to 6 months. **Discussions:** Findings from this study indicate that aerobic exercise might be effective at reducing AD symptoms. This study provides ESs to guide the power calculation in future studies.

### **EVIDENCE ON CHANGES IN THE CENTRAL NERVOUS SYSTEM CONTROL OF MOVEMENT ACROSS THE LIFESPAN AND IN AGING**

C. Rosano, *University of Pittsburgh, Pittsburgh, Pennsylvania*

Gait and balance problems are common and severely disabling in older adults. The number of older adults at risk for physical disability is rapidly increasing, and onset of mobility impairment is associated with loss of independence, hospitalization, and premature death. However, mobility impairments in community-dwelling older adults are largely understudied, particularly regarding the role of the central nervous system. This has hampered the development of clearly defined pathophysiology, clinical terminology, and effective treatments. Understanding the mechanisms of mobility impairment has the potential to greatly improve clinical and preventive care for older adults.

## **SESSION 1790 (PAPER)**

### **ENDOCRINOLOGY AND METABOLISM IN THE OLDER ADULT**

#### **THE EFFECTS OF SELECTIVE ESTROGEN RECEPTOR MODULATOR TREATMENT FOLLOWING HORMONE REPLACEMENT THERAPY ON ELDERLY POSTMENOPAUSAL WOMEN WITH OSTEOPOROSIS**

T. Hayashi, K. Ina, H. Nomura, *Geriatrics, Nagoya University Graduate School of Medicine, Nagoya, Japan*

**Objectives:** A comparison between the atheroprotective and osteoprotective effects of the selective estrogen receptor modulator (SERM) raloxifene and those of hormone replacement therapy (HRT) has not been made in elderly. **Methods:** A randomized prospective controlled trial was performed in a cohort of 32 elderly Japanese women with osteoporosis receiving HRT (estriol plus medroxyprogesterone) for more than 1 year. In 16 randomly selected subjects, HRT was changed to raloxifene therapy (60mg/day, 71.4 $\pm$ 3.4 years, SERM group). The other 16 patients were continued on HRT (71.8 $\pm$ 2.9 years, HRT group). As a control group, 14 subjects were enrolled, did not take any medications and were age-matched to experimental patients (72.5 $\pm$ 3.3 years, control group). Plasma lipids, TNF $\alpha$ , adiponectin, NO metabolites (NO $_x$ : NO $_2$ - and NO $_3$ -), cyclic GMP and bone-mineral density (BMD) were evaluated at baseline and at 26 and 52 weeks after enrollment. **Results:** SERM (Raloxifene) increased high-density-lipoprotein-cholesterol levels and tended to decrease low-density-lipoprotein-cholesterol levels ( $P = 0.058$ ) compared with baseline. Adiponectin, NO $_x$  and cGMP levels were significantly increased after 6 months compared with baseline or the HRT group. TNF $\alpha$  was decreased by raloxifene. In control subjects, no significant changes were observed in any of these markers. Bone-mineral density was higher at baseline in the raloxifene and HRT groups than in the control group, and BMD increased 12 months after baseline in the HRT and control group. **Conclusion:** SERM improved BMD and endothelial function in elderly postmenopausal women with osteoporosis who had received HRT, and these effects were comparable to or slightly stronger than those of HRT. Changes in adiponectin and TNF $\alpha$  may underlie the improvements in endothelial function, such as NO signaling.

#### **ASSOCIATION OF ANDROGEN RECEPTOR GENE (CAG)N REPEAT POLYMORPHISM WITH OBESITY IN OLD MALES**

X. Li, X. Chu, *First Department of Geriatric Cardiology, Chinese PLA General Hospital, Beijing, China*

**Background:** The association between androgen status and obesity in males has not been fully understood. The aim of this study is to investigate androgen, androgen receptor level and AR gene CAG length polymorphism associated with waist circumference in older males. **Methods:** A study was performed randomly to select 323 males who aged from 60-92 years old in a community in Beijing. Luteotrophic hormone (LH), follicle-stimulating hormone (FSH), estradiol (E2) and total testosterone (TT) were measured by chemiluminescence technique. Free testosterone (FT), sex hormone binding globulin (SHBG) and dehydroepiandrosterone sulphate (DHEA-s) were measured by ELISA. Mean fluorescent channel (MFC) of androgen receptor in peripheral lymphocyte was analyzed by flow cytometry. DNA sequencing of the CAG repeat from which the N-terminal domain of the first exon of the AR gene, were analyzed by applied Biosystems 3730xl DNA Analyzer. **Results:** With increase of waist circumference, DBP and E2/T were elevated gradually. TT was decreased, and E2 was ascended in obesity,  $p < 0.05$ . MFC was no correlation with BMI, WHR and waist circumference. CAG repeat were positively associated with BMI ( $p = 0.044$ ), but its association was no longer significant after adjusting for age ( $p = 0.067$ ). Multiple linear

regression analysis showed that E2 was positively relation to waist circumference and TT was negatively relation to waist circumference. Conclusion TT was decreased, E2 and E2/T were increased in obesity males; E2 positively and TT negatively related to waist circumference. MFC and CAG length polymorphism were of no correlation with body fat distribution.

#### **PERSISTENCE OF THE EFFECT OF BODY SIZE AT BIRTH ON DYSGLYCAEMIA AND TYPE 2 DIABETES IN OLD AGE: AGES-REYKJAVIK STUDY**

M. von Bonsdorff<sup>2,1</sup>, M. Muller<sup>2,3</sup>, T. Rantanen<sup>1</sup>, M. Garcia<sup>2</sup>, I. Thorsdottir<sup>6</sup>, V. Gudnason<sup>4,5</sup>, L.J. Launer<sup>2</sup>, T.B. Harris<sup>2</sup>, 1. *Gerontology Research Center and Health Sciences, University of Jyväskylä, University of Jyväskylä, Finland*, 2. *Laboratory of Epidemiology, Demography and Biometry, Intramural Research Program, National Institute on Aging, Bethesda, Maryland*, 3. *VU University Medical Center Amsterdam, Department of Internal Medicine, Amsterdam, Netherlands*, 4. *Icelandic Heart Association, Kopavogur, Iceland*, 5. *University of Iceland, Faculty of Medicine, Reykjavik, Iceland*, 6. *Unit for Nutrition Research, University of Iceland and Landspítali, National University Hospital of Iceland, Reykjavik, Iceland*

**Objectives:** We studied the effect of birth size on glucose and insulin metabolism among older non-diabetic individuals. We also explored the combined effect of birth size and midlife body mass index (BMI) on type 2 diabetes in old age. **Methods:** Our study comprised 1682 Icelanders whose birth records included anthropometrical data. The same individuals had participated in the prospective population-based Reykjavik Study, where BMI was assessed at a mean age of 47 years, and in the AGES-Reykjavik Study during 2002 to 2006, where fasting glucose, insulin, and HbA1c were measured and HOMA-IR calculated at a mean age of 75.5 years. Type 2 diabetes was determined as having a history of diabetes, using glucose-modifying medication, or fasting glucose of >7.0 mmol/l. **Findings:** 249 had prevalent type 2 diabetes in old age. Lower birth weight and body length were associated with higher fasting glucose, insulin, HOMA-IR, and HbA1c among old non-diabetic individuals. Higher birth weight and ponderal index at birth decreased the risk for type 2 diabetes in old age, OR 0.61 (95% CI 0.48-0.79) and 0.96 (95% CI 0.92-1.00), respectively. Compared with those with high birth weight and low BMI in midlife, the odds of diabetes was almost five-fold for individuals with low birth weight and high BMI, (OR 4.93, 95% CI 2.14-11.37). **Interpretation:** Excessive weight gain in adulthood might be particularly detrimental to the health of old individuals with low birth weight. Clinicians should consider unfavourable exposures during early life along with the well-known risk factors for dysglycaemia.

#### **INTRAMUSCULAR INTERLEUKIN-6 IN OLDER ADULTS WITH TYPE 2 DIABETES: RELATIONSHIPS TO BODY COMPOSITION**

Y. Wang<sup>1,2</sup>, D. Simar<sup>3</sup>, K.A. Anderberg<sup>1</sup>, Y. Mavros<sup>1</sup>, M. Kay<sup>1</sup>, B. Baune<sup>4</sup>, N.A. Singh<sup>1,5,6</sup>, M.A. Fiatarone Singh<sup>1,7</sup>, 1. *The University of Sydney, Sydney, New South Wales, Australia*, 2. *University of California, San Francisco, San Francisco, California*, 3. *The University of New South Wales, Sydney, New South Wales, Australia*, 4. *The University of Adelaide, Adelaide, South Australia, Australia*, 5. *The Centre for STRONG Medicine, Balmain Hospital, Sydney, New South Wales, Australia*, 6. *Royal Prince Alfred Hospital, Sydney, New South Wales, Australia*, 7. *Tufts University, Boston, Massachusetts*

Skeletal muscle has been identified as an endocrine organ, and muscle-derived IL-6 has been shown to have insulin sensitizing and anti-inflammatory properties. Therefore, we hypothesized that higher

levels of intramuscular IL-6 and IGF-1 after acute resistive exercise would be associated with favorable body composition characteristics and better insulin resistance, and IL-6 and IGF-1 would be related to each other. **Method:** The cohort consisted of 50 adults over 60 years of age with type 2 diabetes. Fasting insulin resistance was determined via the homeostatic model of assessment 2. Whole body composition was derived from bioelectrical impedance analysis and regional body composition was measured by computed tomography. Intramuscular IL-6 and IGF-1 were analyzed via cytometric bead assay in vastus lateralis muscle biopsy samples after a bout of resistive exercise. **Results:** Intramuscular IL-6 was directly related to intramuscular IGF-1 (Rho=0.62, p=0.001), as well as a more favorable body composition profile, including lower body mass index (Rho=-0.40, p<0.03) and whole body fat mass (Rho=-0.35, p=0.05), and higher relative skeletal muscle mass (Rho=0.34, p<0.06), as hypothesized. Unexpectedly, IL-6 was directly related to age (Rho=0.38, p=0.04) and was not related to insulin resistance. By contrast, intramuscular IGF-1 was not related to body composition or insulin resistance. **Conclusions:** Intramuscular IL-6 after acute exercise appears to differ from pro-inflammatory IL-6 derived from visceral adipocytes, as it was related to favorable body composition profile. Additional investigations of intramuscular IL-6 adaptations to acute stimuli or chronic lifestyle interventions designed to improve insulin resistance are required.

#### **AMBULANT 24-HOUR GLUCOSE RHYTHMS IN CHRONOLOGICAL AGE AND FAMILIAL LONGEVITY IN INDIVIDUALS WITHOUT DIABETES**

C. Wijman<sup>1</sup>, D. van Heemst<sup>1</sup>, E. Slagboom<sup>1,2</sup>, H. Pijl<sup>1</sup>, F. Van der Ouderaa<sup>1,2</sup>, R. Westendorp<sup>1,2</sup>, S. Mooijaart<sup>1,2</sup>, 1. *Leiden University Medical Center, Leiden, Netherlands*, 2. *Netherlands Consortium for Healthy Ageing, Leiden, Netherlands*

**Background.** Glucose metabolism is involved in ageing and familial longevity. Ambulant continuous glucose monitoring provides 24-hour glucose rhythms under daily-life conditions, allowing detailed analysis of mean glucose levels and its variability. **Objective.** To determine the association of 24-hour glucose rhythms with chronological age and familial longevity in individuals without diabetes. **Design.** Cross-sectional. **Participants.** Twenty-one young (aged 22 to 37 years) and 37 middle-aged individuals (aged 44 to 72 years) from the general population, and 26 middle-aged individuals with propensity for longevity (aged 52 to 74 years). All individuals were free of diabetes. **Main outcome measures.** Parameters of mean glucose levels and its variability, derived from 24-hour glucose rhythms obtained by continuous glucose monitoring. **Results.** Compared to young individuals, middle-aged individuals from the general population had higher mean glucose levels (5.3 vs 4.7 mmol/L, p<0.001), both diurnally (p<0.001) and nocturnally (p=0.002). Furthermore, glucose variability was higher in the middle-aged compared to the young (standard deviation 0.57 vs 0.70 mmol/L, p=0.025). Compared to middle-aged individuals from the general population, middle-aged individuals with propensity for longevity had lower overall mean glucose levels (5.2 vs 5.4 mmol/L, p=0.047), which were more outspoken nocturnally (4.8 vs 5.2 mmol/L, p=0.003) than diurnally (5.3 vs 5.5 mmol/L, p=0.14). There were no differences in glucose variability between these groups. For all comparisons, results were independent of body mass index. **Conclusions.** We observed a significant difference in most parameters of 24-hour glucose rhythms with different chronological age. Second, we observed lower mean glucose levels driven by nocturnal glucose levels in individuals with propensity for longevity compared to middle-aged individuals from the general population, which may reflect a longevity-specific trait.

## SESSION 1795 (PAPER)

### LONG TERM CARE STAFF ISSUES AND PRACTICES: THE AFFECT ON QUALITY

#### EMOTIONAL INTELLIGENCE AND BURNOUT IN HEALTH PROFESSIONALS

N. Galdona, E. Urdaneta, E. Aldaz, I. Etxeberria, *Ingema, San Sebastian, Guipuzcoa, Spain*

Burnout has been conceptualized as a psychological syndrome that takes place in response to chronic interpersonal stressors on the job, however some people are affected more than others. An individual skill that would help to better understand why certain subjects are more susceptible to the negative consequences of stress than others is Emotional Intelligence. This study assesses the relationship between dimensions of burnout and emotional intelligence in a sample of health professionals. A cross sectional study was conducted with 46 health professionals working in a variety of nursing homes in Spain. Burnout was measured using the Maslach Burnout Inventory-HSS, which is based on the three-dimensional conceptualization of burnout (emotional exhaustion, depersonalization and (reduced) personal accomplishment), perceived emotional intelligence was measured by TMMS-24 (a self-reported emotional intelligence scale), and the ability to manage emotions was evaluated by the MSCEIT (ability to be open to feelings, and to modulate them in oneself and others so as to promote personal understanding and growth). It was studied whether there was an association between the dimensions of burnout and emotional intelligence using Pearson correlation analysis. It was found that Personal Achievement was significantly correlated with Emotional Clarity ( $r=0.51$ ;  $p=0.00$ ) and Managing Emotions ( $r=0.32$ ;  $p=0.03$ ). From these results it may be deduced that the ability to manage one's own emotions and recognize other people's, as well as perceived emotional clarity, are especially useful in the practice of health professionals and it is necessary the training of emotional intelligence in health professionals to prevent occupational stress.

#### TAKING A CLOSE LOOK AT PAY-FOR-PERFORMANCE PROGRAMS FOR NURSING HOMES

C. Mueller<sup>1</sup>, K. Abrahamson<sup>2</sup>, H. Davila<sup>1</sup>, L. Kouns<sup>3</sup>, T. Inui<sup>3</sup>, R.A. Anderson<sup>4</sup>, E. Miech<sup>3</sup>, G. Arling<sup>3</sup>, *1. Nursing, Univ of MN-School of Nursing, Minneapolis, Minnesota, 2. Western Kentucky University, Bowling Green, Kentucky, 3. Indiana University, Indianapolis, Indiana, 4. Duke University, Durham, North Carolina*

Minnesota has implemented a unique, grass roots pay-for-performance program enabling 199 nursing home providers to develop and implement 89 quality improvement (QI) projects for which they receive a rate increase linked to negotiated performance indicators. We employed case study methods, including in-depth telephone interviews and facility site visits, to comprehensively evaluate the experiences of administrators, project leaders, and direct care staff within eight projects, involving 98 facilities, participating in this pay-for-performance program. The eight projects focused on various clinical and quality of life domains. Common challenges to project implementation were obtaining buy-in and overcoming resistance to change among staff, residents, and families; resource limitations including personnel and space; and selecting performance measures that captured the overall positive changes occurring within the facility. Specifically, staff buy-in was a challenge in project areas that involved changes in long-standing work routines and integration of additional work processes such as increased documentation requirements. Challenges were overcome by getting input from and providing education to direct care staff early in the process, engaging supportive leadership and enthusiastic staff to promote change, and developing frequent opportunities for interdisciplinary communication. As the projects progressed and successes were realized, resistance to change was mitigated. Case study results highlighted the importance of involv-

ing staff from a variety of disciplines and roles, building capacity to enact organizational change and improve quality beyond the domain of the project, and the benefits of QI efforts in terms of public perception of the facility, staff satisfaction, and resident quality of life.

#### NURSING HOME CULTURE CHANGE: IMPACT ON CARE PRACTICES AND QUALITY

J.A. Lucas<sup>1,4</sup>, J.R. Bowblis<sup>2,3</sup>, J. Straker<sup>2,3</sup>, *1. Institute For Health, Health Care Policy, and Aging Research, Rutgers Univ, New Brunswick, New Jersey, 2. Miami University, Oxford, Ohio, 3. Scripps Gerontology Center, Oxford, Ohio, 4. Seton Hall University, So. Orange, New Jersey*

Culture change (CC) is an increasingly popular person-centered care approach that may substantively improve the culture and environment of nursing homes (NH). Except for improved satisfaction, this movement has gained momentum through face validity, and is largely unproven with respect to CC's impact on resident quality of care. This study examines the association of extent of CC involvement and NH care practices and outcomes. Using 2005-06 Ohio Culture Change Index data from 829 of Ohio's 950 facilities (87% response rate) merged with OSCAR data, NH quality indicators were regressed on overall CC involvement. Quality indicators included: the use of antipsychotics, catheters, and feeding tubes; pressure sores; total deficiencies; and total nurse staffing. Nearly half (46%) of facilities reported working on CC. Involvement varied by activity type: 54% reported involving residents in 3/more care decisions; 36% involved staff/families in 2/more staffing/activity decisions; while 16% made 2/more physical environment changes. Cronbach's alpha for overall CC was .76. Regressions showed that higher overall CC was associated with significantly less antipsychotic use, less feeding tube use, lower total deficiencies, and more total staffing. While not reaching significance, catheter use showed a negative association. Findings demonstrate that overall CC involvement is associated with higher quality in NHs. This would suggest that CC is a potential means to improve quality, but further research is needed to determine if CC induces higher quality or if high quality facilities are more likely to engage in CC.

#### THE INFLUENCE OF ORGANIZATIONAL CONTEXT ON USE OF RESEARCH AND STAFF OUTCOMES IN HEALTHCARE AIDES

C.A. Estabrooks<sup>1</sup>, J. Squires<sup>2</sup>, G.G. Cummings<sup>1</sup>, D.G. Morgan<sup>3</sup>, N.J. Stewart<sup>3</sup>, P. Norton<sup>4</sup>, L.R. Ginsberg<sup>5</sup>, K.S. McGilton<sup>6</sup>, *1. University of Alberta, Edmonton, Alberta, Canada, 2. Ottawa Hospital Research Institute, Ottawa, Ontario, Canada, 3. University of Saskatchewan, Saskatoon, Saskatchewan, Canada, 4. University of Calgary, Calgary, Alberta, Canada, 5. York University, Toronto, Ontario, Canada, 6. Toronto Rehab, Toronto, Ontario, Canada*

Policy changes in Canada have enabled many older persons to live in the community for longer periods of time than in the past. Consequently older adults now entering nursing homes have high dependencies on formal care providers – they are more frail, with more complex medical conditions and at more advanced stages of dementia than previously. The majority of their direct care is provided by unregulated care aides who are poorly remunerated, have little status in the health system, and who experience significant levels of work related stress. The objective of this study (part of the larger Translating Research in Elder Care or TREC Program) was to examine the influence of modifiable elements of organizational context on staff outcomes and staff's use of best practices. Study participants were 1506 care aides from 36 nursing homes in the Canadian prairie provinces stratified by public/private ownership and size. Structured interviews were completed using the general TREC survey that includes the Alberta Context Tool (ACT), the Maslach Burnout Inventory, the SF-8TM, and several measures of best practice use. Context assessments (from the ACT) of the nursing homes were grouped using cluster analysis into nursing homes with a

more or a less favorable context. Scatter plots and other graphical displays demonstrate consistent patterns; care aides in nursing homes with a more favourable context report better outcomes. Specifically, nursing homes with a more favorable organizational context were associated with higher use of best practices, better staff health, lower burnout, and greater job satisfaction.

### **A PILOT STUDY DESIGNED TO IMPROVE RESIDENT CARE AND FRONTLINE STAFF ENGAGEMENT IN NURSING HOMES**

C.A. Estabrooks<sup>1</sup>, L.A. Cranley<sup>1</sup>, G.G. Cummings<sup>1</sup>, C. Regier<sup>2</sup>, D. McLeod<sup>3</sup>, D. Barnard<sup>4</sup>, M. Van Dijk<sup>5</sup>, P. Norton<sup>6</sup>, 1. *University of Alberta, Edmonton, Alberta, Canada*, 2. *BC Interior Health Authority, Penticton, British Columbia, Canada*, 3. *Bethany Care Society, Calgary, Alberta, Canada*, 4. *Health Sciences North, Sudbury, Ontario, Canada*, 5. *BC Patient Safety & Quality Council, Vancouver, British Columbia, Canada*, 6. *University of Calgary, Calgary, Alberta, Canada*

Safer Care for Older Persons (in Residential) Environments (SCOPE) was a two-year pilot (2010-2012) funded by Health Canada in seven nursing homes in western Canada. Our purpose was to evaluate feasibility of engaging frontline staff (primarily healthcare aides) to use quality improvement (QI) methods to incorporate best practices into resident care. The 12-month QI initiative was modeled on the Institute for Healthcare Improvement Breakthrough Series Collaborative and the Canadian Safer Healthcare Now! campaign. QI teams in each nursing home, led by healthcare aides, focused on pain management, difficult behaviors or pressure ulcer prevention. The intervention included local measurement, virtual and face-to-face learning congresses, QI methods, ongoing support, and networking. Teams reported barriers to and facilitators of change, team communication, relationships, group cohesion, and progress towards resident care goals. Organizational context and staff outcome data were obtained by survey. MDS-RAI 2.0 data were used to assess changes in resident outcomes. We ranked QI team success based on their process work during the intervention. Despite the short intervention, we saw early improvement trends in resident outcomes and staff engagement. Facilitators of QI team success were: strong teamwork, good communication, team motivation, manager support, and team engagement. Barriers included QI team turnover, lack of leadership engagement at some sites, and high learning curves among staff around QI techniques. We concluded that investing at the microsystem level, i.e., in frontline staff knowledge and skills of QI activities and effective teamwork, is central to advancing quality care and improving quality of worklife in nursing homes.

## **SESSION 1800 (PAPER)**

### **PROMOTING OLDER ADULT HEALTH AND QUALITY OF LIFE**

#### **DETECTION AND INTERVENTION OF HEALTH PROBLEMS AFTER STROKE- A NURSE-LED FOLLOW-UP PROGRAM**

A. Jönsson<sup>1,3</sup>, H. Pessah-Rasmussen<sup>3,2</sup>, 1. *Dept of Health Sciences, Lund University, Lund, Sweden*, 2. *Lund University, Lund, Sweden*, 3. *Skane University Hospital, Malmö, Sweden*

Secondary prevention among stroke survivors has been reported to be neglected. This randomized controlled trial examines whether a structured nurse-led follow-up program three months after stroke improves health status one year after stroke. During one year, all survivors one month after stroke from a university hospital in Malmö, Sweden, were approached for participation. Those consenting were randomized to intervention group with structured follow-up at three months or to standard care (control group) (mean age 73.8/73.7 years). Three months after stroke, a nurse specialist (NS) followed up the intervention group

regarding risk factors and health problems after stroke. The NS sent urgent health problems immediately to a stroke clinician; otherwise patients were referred to a GP for non-urgent or rehabilitative interventions. Patients were informed about stroke and life style factors. Depression/anxiety was assessed by patient self-report with the EQ-5D scale. After three months, 80% of the intervention group (n=194) needed 1-4 interventions compared with 63% (p<0.001) in the same group after one year, and 74% in the control group (n=197) (p=0.022) after one year, and only 40% in the intervention group experienced depression/anxiety compared with 52% in the control group (p=0.042). A nurse-led follow-up three months after stroke resulted in reduced need for interventions and lower prevalence of self-reported depression/anxiety one year after stroke compared to standard care. The follow-up program may be further enhanced by collaboration between a NS and a stroke clinician at the outpatient clinic regarding all medical interventions before referring patients to the GP for continued follow-up.

### **NEIGHBOURHOOD ENVIRONMENT, MOBILITY AND SOCIAL PARTICIPATION IN OLDER ADULTS: RESULTS FROM A SCOPING STUDY**

M. Levasseur<sup>1,2</sup>, J. Desroches<sup>1</sup>, M. Gé né reux<sup>2</sup>, A. Vanasse<sup>2</sup>, C. Beaulac<sup>3</sup>, ÉLISE Paquette<sup>4</sup>, ÉRIC Chabot<sup>5</sup>, L. Gosselin<sup>6</sup>, 1. *Research Centre on Aging, Health and Social Services Centre – University Institute of Geriatrics of Sherbrooke (CSSS-IUGS), Sherbrooke, Québec, Canada, Sherbrooke, Quebec, Canada*, 2. *Faculty of Medicine and Health Sciences, Université de Sherbrooke, Sherbrooke, Quebec, Canada*, 3. *Ordre des urbanistes du Québec, Montréal, Quebec, Canada*, 4. *Ministère de la Famille et des Aînés, Québec, Quebec, Canada*, 5. *Société de transport de Sherbrooke, Sherbrooke, Quebec, Canada*, 6. *Sherbrooke Ville en santé inc., Sherbrooke, Quebec, Canada*

As mobility and social participation are both key determinants amenable to change of many favourable health and quality of life outcomes, it is important to identify factors that influence them. Although several investigations have been carried out on mobility, social participation and neighbourhood environment, there is no clear integration of these results available yet. The main objective of this scoping study is to provide a comprehensive understanding on how neighbourhood environment influences mobility and social participation in older adults. A rigorous methodological scoping studies framework was used. Twenty databases from different fields (public health, urban planning, rehabilitation and gerontology) were searched with forty predetermined keywords. Data were exhaustively analyzed, organized and synthesized by the two research assistants following PRISMA-guidelines and knowledge users were consulted. Majority of the 32 selected articles reports results of cross-sectional studies, mainly conducted in US, and a few in Europe. Studies mostly focused on neighborhood environment associations with mobility, and sparsely with social participation. Neighborhood environment is often considered a mediator of the influence of mobility on social participation. The magnitude of the influence of neighborhood environment is modified by age of individuals, disability levels, perception of risks, streets designs, proximity of resources and availability of public transit. Selected articles raised methodological issues concerning lack of consensus on 1) spatial scale and 2) definition of neighborhood environment. This comprehensive synthesis of empirical studies will ultimately support decisions, and the development of innovative interventions and clear guidelines for the creation of age-supportive environments.

### **BUILDING BLOCKS OF PREVENTIVE HEALTH BEHAVIORS: RECOMMENDATIONS AND READINESS TO CHANGE**

H. Aronow<sup>1</sup>, J.E. Hahn<sup>2</sup>, 1. *Nursing Research & Development, Cedars-Sinai Medical Center, Los Angeles, California*, 2. *University of New Hampshire, Durham, New Hampshire*

The growing number of older adults aging with and into disability has highlighted the need to advance self-management of chronic dis-

ease as part of national policy to improve health and lower the costs of health services. Multidimensional health risk appraisal (M-HRA) has been promoted as a method to target recommendations to maintain and improve health. In this study we sought to link recommendations with readiness to change, adherence, and, ultimately, to changes in health status. Method. Ninety-one adults aging with intellectual and/or developmental disabilities (I/DD) were visited at home by a nurse practitioner (NP) for three visits over 1-3 years. The NP completed M-HRA, made recommendations and recorded adherence and changes in health. Results. Preliminary results on 78 individuals at the second visit are reported; 58% female; 63.5% white; median age = 54.5. Forty percent remembered receiving the recommendations from their first visit; although when prompted with the three top priority recommendations, over 80% reported having “started working on it” or “done a lot” to follow the recommendations. Approximately two-thirds were accomplishing their goals with help of people in their support systems. A total of 345 specific recommendations were given: 70% for specific self-care activities; 19% to see a physician or other community provider; and 6% involved specific social/environmental actions. Conclusions. While persons living in the community with life-long disability are particularly challenged with chronic disease, their experience and responses to a preventive intervention provides an important opportunity to explore models of behavior change, generalizing to all older adults.

#### **ASSESSING PSYCHO-EMOTIONAL CHALLENGES IN PERSON-CENTERED THERAPY WITH OLDER ADULTS**

S. von Humboldt, I. Leal, *Research Unit in Psychology and Health, I&D, ISPA – Instituto Universitário, Lisbon, Portugal*

**Aims:** This research aims to evaluate psycho-emotional challenges for older adults and the relevance of person-centered therapy (PCT) for older adults. **Methods:** Forty senior adults, aged above 65 years ( $M = 71.7$ ;  $SD = 4.6$ ) were assessed with the the Self-Esteem Scale (‘SES’) and the Mini-Mental State Examination (MMSE). Socio-demographic data, including gender (57.5% women), marital status (37.5% married) and education (39.2% mandatory school) were also assessed. Bivariate associations were performed. **Results:** Results yielded a set of five descriptive categories that captured the distinct ways older adults perceived psycho-emotional challenges and that reflected the individual’s perceived importance of PCT: ‘time perspective’, ‘the aging body’, ‘autonomy and control’, ‘cognitive endurance’ and ‘loss and reminiscing’. Regarding bivariate associations, results indicated that ‘autonomy and control’ was associated with the ‘aging body’ and with ‘time perspective’. This latter was also associated with ‘loss and reminiscing’. **Conclusions:** This study highlights the importance of PCT for older adults facing psycho-emotional challenges in old age. Interventions with older adults may benefit from clearly understanding older adults’ specific issues as an important component for promoting successful aging and reducing health disparities. **Key words:** Aging, care, congruence, older adults, person-centered therapy, psycho-emotional challenges, successful aging.

#### **NEW FRONTIER IN VOICE TREATMENT FOR PARKINSON’S DISEASE: SINGING IMPROVES VOCAL QUALITY OF LIFE**

M. Tanner<sup>1,2</sup>, L. Liu<sup>1</sup>, L. Rammage<sup>3</sup>, S. Warren<sup>1</sup>, *1. University of Alberta, Edmonton, Alberta, Canada, 2. Glenrose Rehabilitation Hospital, Edmonton, Alberta, Canada, 3. University of British Columbia, Vancouver, British Columbia, Canada*

A study was conducted to examine a group vocalization program designed to improve the voices of people with idiopathic Parkinson’s disease (IPD). A single group pretest-posttest research design was used. A total of 28 people with IPD participated in the study. The intervention program took place twice a week for six weeks. Each session included vocal warm-up, vocal exercises, singing exercises, choral speech, and choral singing with piano accompaniment. Video and audio

files of songs and exercises to facilitate daily vocal practice were provided. Participants were tested for pre- and post-treatment changes in “vocal quality of life”. Two participant-rated measures, the Voice-Related Quality of Life (V-RQOL) and the Speech Intelligibility Inventory: Self Assessment Form (SII), were used to assess “vocal quality of life”. A statistically significant improvement ( $p < .001$  and effect size of .93) was found on the SII. The results from both questionnaires were found to be clinically relevant. Voice group interventions similar to this study are now offered in the Edmonton community and at the Glenrose Rehabilitation Hospital. Participants include people with voice problems due to multiple causes such as Parkinson’s disease, stroke, brain injury, deconditioning and normal aging.

## **SESSION 1805 (SYMPOSIUM)**

#### **COMMUNITY COLLABORATION AS THE NEW-OLD FRONTIER FOR ENGAGING STUDENTS IN AGING**

Chair: *E. Welleford, Gerontology, VCU, Richmond, Virginia*  
Discussant: *D.C. Burdick, The Richard Stockton College of New Jersey, Galloway, New Jersey*

Gerontology programs are well-positioned to respond to the call for increased levels of Community Engagement currently being encouraged by higher education. Gerontology programs have a long history of community engagement on which to draw. In this symposium, presenters will describe replicable lessons learned from their own program successes as they revisit the call to make connections, make friends, and make some noise in this new frontier of Community Engagement. Evidence based strategies for program success will be described across the continuum from classroom to campus to community. Presenters will share findings from specific program successes including 1) increases in enrollment and scholarship dollars as a result of community engagement initiatives in the classroom, 2) Program sustainability through successful stakeholder relationships across campus and community, and 3) a community identified needs approach to generating core competencies. Finally, the discussant will review themes and key strategies for participants seeking success through community engagement efforts.

#### **CHARTING A COURSE FOR CREATING & SUSTAINING SUCCESSFUL COMMUNITY-UNIVERSITY COLLABORATIONS IN AGING**

R.J. Karasik, *Gerontology, St. Cloud State University, St. Cloud, Minnesota*

Considerable attention has been given to the benefits of experiential education (e.g., community-based research; intergenerational service-learning; internships) for students in gerontology and geriatrics (Blair & Minkler, 2009; Blieszner & Artale, 2001; Karasik, 2007; 2009; Silverstein, Moorhead & Murtha, 2001). Community-University collaborations can also help sustain academic programs in difficult times. Benefits to programs include alignment with University mission and goals for civic engagement, increased program visibility, student recruitment, and employment opportunities for graduates. Developing successful Community-University collaborations, however, can pose a variety of challenges (Karasik & Wallingford, 2007). Drawing on survey data and focus group responses from community and university partners, the current study examines some of the challenges of developing and maintaining strong community-university partnerships and lays out a framework used for building successful collaborations. Key elements of this framework include: identifying compatible partners; agreeing upon mutually beneficial tasks and goals; creating a communication plan; and addressing the logistics

## COMMUNITY OUTREACH AS A GROWTH STRATEGY

D.J. Van Dussen, *Sociology, Anthropology, and Gerontology*,  
*Youngstown State University, Youngstown, Ohio*

Youngstown State University's gerontology program has made community outreach and collaboration a key component of its programs. We have a community advisory committee made of 9 key employers and government agencies. Through this program we have been able to identify over 40 internship locations through networking and place over 90% of our students in aging related positions or graduate school. The committee is designed to improve understanding of gerontology as a field of study and to help our programs create curricula that will help local employers with their needs. Additionally we have been able to have a high community profile which has led to donations for the creation of scholarship funds. Our strategy has shown success through enrollment growth over the past 5 years (4 students enrolled in 2006; 85 students in 2012). Our program would not be successful without our partnerships and the high level of community engagement.

## USING COMMUNITY ENGAGEMENT TO STRENGTHEN ACADEMIC PROGRAMS IN GERONTOLOGY

M. Erickson, E.J. Bergman, C.H. Pogorzala, *Gerontology Institute, Ithaca College, Ithaca, New York*

Infusing opportunities for community engagement into the gerontology curriculum has important benefits for students, community partners and academic programs. The current study draws on experiences teaching gerontology to undergraduates and suggests that contact with older adults within an introductory aging class can encourage students to continue with gerontology courses and envision a future working with older adults. These outcomes lead to increased enrollments which are vital to gerontology program sustainability. Results of the Student Attitudes on Aging Studies survey (N=300) suggest that aging-related service learning participation has a positive effect on students' interest in aging courses and aging-related careers. Further, we trace the impact of participation in an optional service learning experience in introductory courses. Quantitative findings related to increased course and degree program enrollment are supported by qualitative evidence drawn from student papers, which cite the importance of community engagement in shaping their educational and professional goals.

## ENGAGING THE COMMUNITY IN THE EDUCATION OF OUR FUTURE PROFESSIONALS THROUGH CIVIC ENGAGEMENT PROJECTS

K. Kopera-Frye, *Gerontology, University of Louisiana at Monroe/Institute of Gerontology, West Monroe, Louisiana*

Involving the community in the education of our future gerontologists is a win-win situation for all: the university, student, and instructor. In terms of the university benefits, many colleges and universities have civic engagement as part of their mission and vision. Students can potentially secure a job upon graduation through their experiential learning connection with community partners. The instructor benefits from employing a pedagogical approach which Shulman (2002) and others note involves deeper, meaningful learning, well beyond the classroom walls. However, the learning experiences need to be carefully planned and well-organized. Some of the challenges, e.g., changing students' preconceptions about the experience, and potential solutions, e.g., involving the community agency in the evaluation of the student experience, will be shared. Evaluation of the civic engagement experiences is critical, and tools used to evaluate the student learning experiences and sample portfolios will be shared. Benefits of this approach will be highlighted.

## CHARTING A COURSE FOR A NEW GERONTOLOGY CERTIFICATE PROGRAM: COLLABORATING WITH CAMPUS AND COMMUNITY STAKEHOLDERS

T. Kruger, *Indiana State University, Terre Haute, Indiana*

While creating a gerontology certificate at a regional comprehensive university without existing aging studies, a collaborative approach

was taken. Working with community and campus stakeholders allowed the identification of needs of those who might direct students to the certificate program and of potential internship hosts/future employers while forging bonds across the community. Based on suggestions from various faculty and aging services providers, objectives for a nascent gerontology certificate were developed. Stakeholders desired that students be able to distinguish normal aging changes from pathological conditions/behaviors, contribute to older adults' well-being, and be aware of policies affecting older adults. This collaborative approach facilitated progression through the academic hierarchy as the program was reviewed and fostered interest and investment in the program from academic and community representatives. This session will describe the development of the objectives for a new gerontology certificate program and compare the community-identified core competencies with AGHE standards and guidelines.

## SESSION 1810 (SYMPOSIUM)

### LGBT AGING CULTURAL COMPETENCY TRAINING: UNDERSTANDING AUDIENCE, MODALITIES AND EFFECTIVENESS

Chair: R. Moone, *Greater Twin Cities United Way, Minneapolis, Minnesota*

Discussant: S. Butler, *University of Maine, Orono, Maine*

Lesbian, gay, bisexual and transgender (LGBT) people represent a significant minority within the older adult population. However, very little cultural competency training addresses the unique needs and challenges of LGBT older adults. Further, research on cultural competency training and LGBT older adults is virtually non-existent. The four studies within this symposium represent a comprehensive examination of cultural competency training from an LGBT aging perspective. Croghan and colleagues investigated the mainstream aging service provider perceptions of service delivery to LGBT clients and implications for LGBT aging cultural competency training. Understanding resource constraints facing providers, and the burgeoning modalities of provider training that have emerged of late, Moone and colleagues surveyed service providers on preferences for and utilization of cultural competency training modalities. Giunta and colleagues present findings on the evaluation of LGBT aging cultural competence curricula created by the National Resource Center on LGBT Aging. Finally, Rowan and colleagues provide a case study of introducing LGBT aging sensitivity training. Together the panelists describe the need, methods, implementation, and effectiveness of LGBT aging cultural competency training. The session's discussant, Sandra Butler, will offer implications of the rapidly growing developments in LGBT aging services and facilitate discussion of future directions for research, practice, and policy.

### AGING SERVICES PROVIDER PERCEPTIONS OF LGBT CULTURAL COMPETENCY TRAINING: UNDERSTANDING PARAMETERS FOR PROGRAM DEVELOPMENT

R. Moone<sup>2,1</sup>, C. Croghan<sup>2</sup>, J. Smith<sup>2</sup>, 1. *Greater Twin Cities United Way, Minneapolis, Minnesota*, 2. *Training to Serve, St. Paul, Minnesota*

A number of studies on lesbian, gay, bisexual and transgender (LGBT) older adults depict significant health disparities in comparison to heterosexual peers. This burgeoning research, coupled with federal initiatives, inspired the creation of cultural competency training curricula on LGBT aging. This is the first study to investigate aging services provider participation and preferences in LGBT cultural competency training. Of the participants (n=202), the vast majority (66.7%) did not include LGBT in staff training and only 5% of organizations believed staff could participate in a training over two hours. The implications from the study are quite profound for current providers of LGBT aging cultural competency training. Most curricula are based on four hour sessions and are delivered in person. This study investigated the perception of aging service providers; however, additional research is



needed on the effectiveness of training delivered in short periods of time in an online format.

### **INTRODUCING A SERIES OF LGBT OLDER ADULT CULTURAL SENSITIVITY TRAININGS IN RURAL AND URBAN KENTUCKY**

N. Rowan<sup>1</sup>, L. Paris<sup>2</sup>, S. Bowland<sup>1</sup>, B. Gordon<sup>3</sup>, S.A. Lawrence<sup>1</sup>, *1. Kent School of Social Work, University of Louisville, Louisville, Kentucky, 2. Park View Psychiatric Services, Jeffersonville, Indiana, 3. Kentuckiana Regional Planning and Development Agency, Louisville, Kentucky*

Multiple challenges face the LGBT aging population including the need for culturally sensitive community resources and health and mental health care provisions. With scarce resources for an increasing aging population, programs specifically for LGBT older adults are virtually non-existent. Instead, LGBT older adults access services through mainstream aging service providers that serve all populations. To better equip providers with tools to serve this diverse community, a number of LGBT aging curricula have developed across the US. Through the seven-county KIPDA region Mental Health and Aging Coalition, funding was secured to introduce a series of LGBT older adult cultural sensitivity trainings in rural and urban Kentucky. This presentation will provide a case study on the implementation and effectiveness of cultural competency training with aging service providers.

### **IMPROVING CULTURAL COMPETENCE IN AGING AND LGBT SERVICES NATIONALLY: TESTING THE EFFICACY OF THE NATIONAL RESOURCE CENTER ON LGBT AGING TRAINING CURRICULA**

N. Giunta<sup>1</sup>, L.G. Van Sluytman<sup>2</sup>, H. Meyer<sup>3</sup>, *1. Hunter College, City University of New York, New York, New York, 2. Morgan State University, Baltimore, Maryland, 3. Services and Advocacy for GLBT Elders (SAGE), New York, New York*

The National Resource Center on LGBT Aging (NRC) is a partnership of organizations nationwide led by Services & Advocacy for GLBT Elders (SAGE), and supported by the U.S. Administration on Aging. The NRC provides, among other resources, cultural competence training using curricula designed for both aging and LGBT service organizations. This paper presents analyses of pre-and post-test measures of knowledge and attitudes around LGBT aging among aging service providers (N = 441) and LGBT service providers (N = 85) who attended trainings. Results include increased knowledge around creating safe environments ( $t = 1.03, p < .001$ ), and increased comfort with using culturally competent language. These findings are promising in that trainings were delivered in various geographic locations nationally, suggesting replication potential of the NRC curricula in diverse settings. Future directions for research to be discussed include experimental and longitudinal designs to further examine both efficacy and effectiveness.

### **AGING SERVICE PROVIDER PERCEPTIONS OF READINESS TO WORK WITH LGBT CLIENTS**

C. Croghan<sup>1</sup>, K. Knochel<sup>3</sup>, R. Moone<sup>2</sup>, J.K. Quam<sup>2</sup>, *1. Croghan Consulting, Roseville, Minnesota, 2. University of Minnesota, Minneapolis, Minnesota, 3. Augsburg College, Minneapolis, Minnesota*

Over the last decade there have been considerable local and federal resources invested in development and delivery of lesbian, gay, bisexual and transgender (LGBT) cultural competency training curricula. However, most of this work has been done with little or no formal assessment of mainstream aging service provider perceptions about working with LGBT clients. This study examines the Aging Network perceptions of readiness to serve; half of existing agencies (n=320) participated in the study. Three out of five did not support development of separate LGBT specific services; one in four did not believe LGBT clients

would be welcomed by local service providers; and four out of five were willing to offer training. These results point to a significant service gap for LGBT clients and support resource investment in delivery of LGBT aging cultural competency training to ensure availability of quality services.

## **SESSION 1815 (SYMPOSIUM)**

### **POLICY SERIES: TRANSFORMING ADVANCED CARE FOR OLDER ADULTS**

Chair: *B.W. Lindberg, Consumer Coalition, Washington, District of Columbia*

Discussant: *B.W. Lindberg, National Academy on an Aging Society, Washington, District of Columbia*  
Discussant: *T. Koutsoumpas, Coalition to Transform Advanced Care, Washington, District of Columbia*

Leaders in the area of advanced care, staff of the Coalition to Transform Advanced Care, and policy experts will discuss the evolving field post-health care reform. Topics will include the work of leading health care providers, consumer advocates, and other stakeholders. The session will address best practices, obstacles to success in the field, and regulatory and legislative updates.

## **SESSION 1820 (PAPER)**

### **DETERMINANTS AND CONTEXTS OF NURSING HOME QUALITY OF CARE AND LIFE**

#### **THE INFLUENCE OF CONSISTENT ASSIGNMENT OF NURSE AIDES IN NURSING HOMES**

N. Castle<sup>1</sup>, J. Engberg<sup>2</sup>, J.C. Ferguson-Rome<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. RAND, Pittsburgh, Pennsylvania*

Consistent assignment has developed as a preferred practice in nursing homes based on little empirical evidence in the peer reviewed literature. In this research, the association of consistent assignment of Nurse Aides (NAs) with quality of care of nursing home residents is examined (using 14 indicators of care quality). Data used came from a survey of nursing home administrators (response rate = 65%), the Online Survey Certification and Reporting data, and the Area Resource File. The quality indicators came from Nursing Home Compare. The information including consistent assignment and staffing variables of Registered Nurses, Licensed Practical Nurses, and NAs were measured in 2007, and came from 3,941 facilities. Multivariate regression models using a spline functional form (also known as a piecewise linear functional form) were used. An average of 68% of nursing homes reported using consistent assignment. However, the actual levels used varied. In the multivariate analyses, consistent assignment was associated with 10 of the 14 quality indicators. The functional forms did vary for the quality indicators; but on average, a level of 78% consistent assignment appeared to be most beneficial. Less than 35% of facilities used consistent assignment at this level (or greater). The findings presented here provide some justification for the use of this staffing practice for NAs.

#### **SATISFACTION OF DISCHARGED NURSING HOME RESIDENTS**

N. Castle<sup>1</sup>, J. Sangl<sup>2</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. Agency for Healthcare Research and Quality, Rockville, Maryland*

The CAHPS Nursing Home Survey of discharged nursing home residents' experiences (NHCAHPS-D), originally tested in 2005, is being updated (to include transition items) and finalized (with larger sample size). In this research, we present the psychometric properties of the NHCAHPS-D. Short-term residents discharged over a three month period from nursing homes were used as the sample frame. A random sample of 370 nursing homes (response rate = 67%) from across the

U.S. with 4,926 returned surveys (response rate = 70%) were used in the analyses. Analyses consisted of: simple descriptive statistics consisting of the percent or mean for each item; summary score for each satisfaction category (i.e., domain); applied psychometric properties of the instrument, such as the completeness of data, score distributions, item-scale consistency, and reliability of domain scores; and, confirmatory factor analysis findings examining the extent to which the items in each domain appear to represent the same underlying constructs as the long stay resident instrument. The findings show that the domains of meals, comfort and cleanliness, safety and security, medications and pain management, nursing home staff, services, nursing home environment, visitors, medical care, autonomy, transition out of the nursing home, and overall ratings perform very well. NHAHPS-D should have considerable relevance because more than half of all elders cared for in nursing homes are now discharged home. Moreover, when satisfaction information from current (long stay) residents is compared with those of elders discharged home substantial differences exist. This would indicate that these are different populations with different needs.

#### **DEVELOPMENT OF THE NURSING HOME SOCIAL WORKERS' LEADERSHIP COMPETENCE SCALE IN END OF LIFE CARE**

E.J. Cherlin<sup>1</sup>, W. Klein<sup>2</sup>, 1. Yale University School of Public Health, New Haven, Connecticut, 2. University of Connecticut School of Social Work, West Hartford, Connecticut

The standards for delivering palliative and end of life care established by the National Association of Social Work require that social workers have expertise in order to lead efforts around palliative and end of life care issues with individuals, groups and organizations. We know that hospice care in the nursing home has been associated with improved quality of care of seriously ill nursing home residents. Social workers have the potential to improve access and early initiation of hospice and palliative care to seriously-ill residents residing in nursing homes; yet, many factors hinder nursing home social workers' recognition as leaders in meeting the needs of seriously-ill nursing home residents and their families. We conducted a mixed methods study in Connecticut of 231 nursing home social workers in order to develop and validate a scale to assess the areas in which social workers need greater competence to be leaders in the delivery of end of life care in the nursing home setting. Factor analysis resulted in a preferred five-factor solution including competence in 1) communication and practice, 2) clinical knowledge, 3) social work policy issues, 4) hospice and palliative care legal issues, and 5) hospice benefits and financing. Having a brief, easy-to-administer Leadership Competence Scale can be incorporated into state-by-state or national studies in order to better understand the variation in nursing home social workers' level of leadership competencies in end of life care

#### **EVALUATION OF AHRQ'S ON-TIME PRESSURE ULCER PREVENTION PROGRAM**

L.E. Olsho<sup>1</sup>, W.D. Spector<sup>2</sup>, C. Williams<sup>1</sup>, W. Rhodes<sup>1</sup>, R.V. Fink<sup>1</sup>, R. Limcangco<sup>2</sup>, D.T. Hurd<sup>1</sup>, 1. U.S. Health Division, Abt Associates Inc., Cambridge, Massachusetts, 2. Agency for Healthcare Research and Quality, Rockville, Maryland

Pressure ulcers present serious health and economic consequences for frail elders in nursing homes. The Agency for Healthcare Research and Quality, in partnership with the New York State Department of Health, has sponsored and implemented the On-Time Quality Improvement for Long Term Care, a program intended to reduce pressure ulcer rates and improve workflow processes in participating nursing homes. The On-Time Program is designed to improve long-term care by turning daily documentation into useful information that enhances clinical care planning. We employed a quasi-experimental design to assess the program's effectiveness in reducing the rate of in-house acquired pressure ulcers among nursing home residents. We collected monthly resi-

dent-level data on pressure ulcer incidence between 2008 and 2010 for 3,124 residents of 12 nursing homes employing the intervention, and for 2,604 residents of 13 purposively-selected comparison facilities not employing the intervention. Intervention rollout occurred on a varying timeline across participating units, with individual process improvements and associated reports adopted in different combinations and sequences. We account for this heterogeneity in implementation by separately estimating effects for each On-Time report component. Impacts are estimated via a random effects model including resident- and facility-level covariates. We find a statistically significant reduction in pressure ulcer incidence associated with the joint implementation of four core On-Time reports. Impacts vary with implementation of specific report combinations. Analyses of heterogeneity in impacts by individual-level pressure ulcer risk indicate larger effects among high-risk residents.

#### **VALIDATING A MODEL OF FINANCIAL DISTRESS IN NURSING HOMES: IMPLICATIONS FOR QUALITY**

A.Y. Landry<sup>1</sup>, R. Pradhan<sup>1</sup>, R. Weech-Maldonado<sup>1</sup>, J. Epane<sup>1</sup>, N. Castle<sup>2</sup>, 1. Health Services Administration, University of Alabama at Birmingham, Birmingham, Alabama, 2. University of Pittsburgh, Pittsburgh, Pennsylvania

Evidence from other industries suggests that financial distress may have negative effects on nursing home quality and access to care. This study will validate the Altman Z-score model, a predictive financial distress model frequently used in other industries, for use with nursing homes. This model sums 4 weighted financial ratios into a score that is the basis for identifying organizations at risk for financial distress. Four data sources are used: Medicare Cost Reports, the Online Survey Certification and Reporting (OSCAR) file, the Area Resource File, and nursing home closure data for the period of 1999 - 2005. Our independent variables consist of financial ratios representing liquidity, long-term profitability, operational efficiency, and productivity. Our dependent variable consists of closure vs. non-closure. Approximately 1800 closures occurred between the years 1999 and 2005. Using Multiple Discriminant Analysis, we will determine if the four ratios included in Altman's Z-score accurately predict nursing home closure, and we will create optimal weights to maximize our predictive capabilities. Based upon the score generated using the validated Altman Z-score model, we will categorize nursing homes into one of three groups: (1) high risk of closure, (2) moderate risk of closure, and (3) good financial health. Chi-square analysis will be used to examine between group differences with regard to for-profit status, chain affiliation, and metropolitan location. Models such as the Altman's Z-score can be used to identify nursing homes at financial risk, and can aid policymakers and managers in crafting interventions that might stem potential access and quality problems.

### **SESSION 1825 (PAPER)**

#### **ECONOMICS OF AGING AND PUBLIC POLICY**

##### **MITIGATING ILLNESS-RELATED HOUSEHOLD DEVASTATION THROUGH INBUILT ECONOMIC RESILIENCE OPTIONS**

M.A. Simon<sup>1</sup>, B. Gunia<sup>2</sup>, E.J. Martin<sup>1</sup>, C. Foucar<sup>1</sup>, T. Kundu<sup>3</sup>, D. Ragas<sup>1</sup>, L. Emanuel<sup>1</sup>, 1. Obstetrics and Gynecology and Preventive Medicine, Northwestern University, Feinberg School of Medicine, Chicago, Illinois, 2. Johns Hopkins University, Baltimore, Maryland, 3. Peace Research Institute, Oslo, Norway

Illness can frequently cause multigenerational economic devastation. Costs of direct care account for some of this economic impact, but much is attributable to lost patient and family caregiver work income. Inbuilt Economic Resilience (IER) options aim to mitigate economic impact on the household. One IER option is to build on the skills that family caregivers acquire during patient care, facilitating a post-bereave-

ment transition into the health care industry and providing economic relief to low-income families. After identifying support among patients, families, and health care providers for establishing a health care employment option to train and certify informal caregivers in palliative care, we sought to investigate the feasibility of designing such an educational system. We compiled a core set of applicable skills acquired during informal caregiving through interviews with experts in geriatrics and palliative care as well as information provided by the National Family Caregivers Association. We investigated current medical certification programs and provided rankings by cost and expected salary upon completion. Further, we designed a sample questionnaire to enable program coordinators to identify caregivers best suited for economic resilience program participation. Given the rapidly evolving US health care system and the current economic recession, IERs merit closer attention. Our paper offers an overview and practical plan for implementation of our proposed IER. Our goal is to provide concrete steps and actionable guidance to interested practitioners and executives. We detail how interested parties would identify candidates, provide certifiable knowledge, skills, and abilities, and connect candidates to the health care industry.

### **WORK, RETIREMENT AND POLICY IMPLICATIONS FOR OLDER ADULTS WITH INTELLECTUAL DEVELOPMENTAL DISABILITIES**

B.B. Pieper, J. Dacher, *Nursing, The Sage Colleges, Troy, New York*

Discussion of retirement options for individuals with intellectual and developmental disabilities (I/DD) is relatively new. As individuals with I/DD are living longer, this vulnerable population is more likely to enter into a retirement phase of life, much like the general population of older adults. Few if any data are available to inform the planning, policy agenda and resource allocation for this new phenomenon. During the first phase of pilot work, experience was gained in interviewing this unique population group, exploring data collection methods (video) and identifying ways to elicit rich data. Additionally, a focus group was conducted with the supportive employment site management team to make explicit these individuals' assumptions about work and retirement. The purpose of this paper is to describe the lived experience and meaning of work for a group of 20 individuals, as the first step in partnering with them and the agencies that support them, to create meaningful retirement options that are supported by public policy. The meaning of work (as opposed to retirement, a much more abstract concept) was a way of gaining access to the thoughts and feelings about an activity participants engage in daily. In light of recently mandated changes in Medicaid Managed Care there is a risk that unique retirement needs of these individuals will go unmet because of the need for cost efficiencies and loss of funding for community based programs. A discussion of the findings relative to changes in policy and funding for support of individuals with I/DD is included.

### **ECONOMICS OF PREVENTIVE GERONTOLOGY: HEALTH IMPACT ASSESSMENT OF DIABETES SELF-MANAGEMENT PROGRAMS IN SENIOR CENTERS**

M.C. Fahs<sup>1</sup>, G. Bayaz-Ozturk<sup>1</sup>, X. Wang<sup>2</sup>, W. Gallo<sup>1</sup>, *1. Health Policy and Management, CUNY School of Public Health at Hunter College, New York, New York, 2. PhD Program in Economics, CUNY Graduate Center, New York, New York*

The integration of evidence-based public health strategies with principles of gerontology in community-based senior services settings has made important progress in recent years. Yet scant attention has been devoted to understanding their economic value. Consequently, policy support for public health infrastructure, guidelines, and benefits, critical to dissemination and sustainability, remains marginal. In this study, we use health impact assessment and cost effectiveness analysis to predict the potential for senior centers to be cost effective partners in population-based diabetes control strategies. Data are from the 2008 NYC Health Indicators Project, the first representative sample of senior cen-

ter attendee health status. Over 6,400 NYC senior center participants have been diagnosed with Type2 diabetes. Using advanced computer-based disease simulation modeling techniques, we project 10-year cost savings of \$3,000 per person associated with implementing a diabetes self-management program among all NYC senior centers. Applying conservative population projections for the current NYC senior center diabetic population cohort, total 10-year cost savings are estimated to be \$19 million, or \$1.3 million annually. The most significant health impact is a 40% reduction in insulin use; the risk of amputation is reduced by 20%, and the risk of stroke is reduced by 10%. Public health intervention through preventive gerontology, by improving the delivery of existing therapies through implementation in community-based aging services organizations, may be as valuable as the development of new therapies, and remains a fundamental challenge for translation research and policy linking public health and gerontology.

### **GLOBAL AGING AND PUBLIC POLICY**

L. Polivka<sup>1</sup>, B. Luo<sup>2</sup>, *1. Claude Pepper Center, Florida State University, Tallahassee, Florida, 2. Western Washington University, Bellingham, Washington*

The first part of this paper will focus on an analysis of changes in the global political economy and in many domestic economies over the last 40 years and the impact of these changes on the ability of developed and, especially developing nations to respond to the economic and health care needs of their rapidly growing populations of older persons. Neoliberal (conservative) economic policies have been implemented in many countries over the last several decades resulting in reduced expenditures for public programs, including health care, privatization of many previously public programs, reductions in revenues (taxes), deregulation of finance and the growing influence of corporate elites in the political system. These neoliberal policies have been strongly supported by international financial organizations (IMF, World Bank) and the U.S. (Washington consensus). This presentation will assess the effects of these policies on income support and health care for the elderly and emerging resistance to them in many countries since 2000. The second part of the paper will focus on emerging health and long-term care trends and policies in China, where the already very large older population is projected to double over the next 40 years. China has a rapidly developing capitalist economy characterized by neo-keynesian rather than neoliberal policies and featuring a more state centered economic model designed to ensure the centrality of the Communist Party. The paper will discuss the implications of this economic model and political system for the future of aging related policy, especially health and long-term care, in China.

### **HETEROGENEOUS IMPACT OF THE NON-CONTRIBUTORY PENSION PROGRAM 70 Y MÁS ON NUTRITION AND DIET AMONG A MEXICAN SAMPLE OF RURAL ELDERLY**

A. Salinas-Rodríguez, K. Moreno-Tamayo, B. Manrique-Espinoza, M. Tellez-Rojo Solis, *Instituto Nacional de Salud Pública, Cuernavaca, Morelos, Mexico*

A rising body of evidence documents the impact of some non-contributory social pensions targeted toward elderly, on poverty, labour force participation, migration patterns, food household consumption and children's nutrition. But currently, there is a gap in the evaluation literature regarding the impact of economic transfer programs on individual outcomes such as elderly's diet and nutritional status. Using data from the Mexican non-contributory program 70 y más, a differences-in-differences model with fixed effects was used to estimate the impact of the program on elderly's total energy and macronutrient intakes, percentage of adequacy intake (PAI) and nutritional status; also it was explored any possible heterogeneous effects by sex, ethnicity, and household socioeconomic status (SES). A sample of 1138 individuals aged 70-74 years who received (approximately US\$40) every month were

compared with 884 individuals aged 70–74 years in the control group. After 11 months of exposure, the results indicate a positive impact on protein (3.1g/d,  $p < 0.05$ ) and carbohydrates intake (15.1g/d,  $p < 0.1$ ). An increase attributed to the program was also observed in the PAI of proteins (5.9%,  $p < 0.05$ ) and carbohydrates (8.3%,  $p < 0.1$ ). We also found heterogeneous effects. The impact of the pension on energy, macronutrient intake and PAI were significantly higher among women, indigenous groups, and among the elderly belonging to the lowest SES. Overall, there was no program effect on nutritional status. The program 70 y más exhibits evidence that cash transference targeted toward old people is positively associated with dietary outcomes.

## SESSION 1830 (SYMPOSIUM)

### INFLAMMATION, OXIDATIVE STRESS, ADIPOSE TISSUE AND AGING: INFLAMMATION NATION - ARE INFLAMMATORY RESPONSES WITH AGE MEDIATED BY INCREASED FAT?

Chair: *H.M. Brown-Borg, University of North Dakota, Fargo, North Dakota*

Co-Chair: *H.M. Brown-Borg, University of North Dakota, Fargo,*

*North Dakota* Co-Chair: *M.E. Starr, University of Kentucky, Lexington, Kentucky*

Inflammation and oxidative stress are hallmarks of aging and age-related disease. Nevertheless, the specific mechanisms that contribute to increased inflammation and oxidative stress remain unclear. This symposium will focus on the interrelationship between adipose tissue, inflammatory responses and age-related disease.

### THE NLRP3 INFLAMMASOME REGULATES ADIPOSE TISSUE INFLAMMATION AND IMMUNE-SENESCENCE

V.D. Dixit, *Immunobiology, Pennington Biomedical Research Center, Baton Rouge, Louisiana*

Emergence of chronic ‘sterile’ inflammation during obesity in absence of overt infection or autoimmune process is a puzzling phenomenon. The Nod Like Receptor (NLR) family of innate immune cell sensors like the Nlrp3 inflammasome are implicated in recognizing certain non-microbial origin ‘danger–signals’ leading to caspase-1 activation and subsequent IL-1 $\beta$  and IL-18 secretion. We show that reduction in adipose tissue expression of Nlrp3 is coupled with decreased inflammation and improved insulin–sensitivity in obese type-2 diabetic patients. The Nlrp3 inflammasome senses the lipotoxicity–associated ceramide to induce caspase-1 cleavage in macrophages and adipose tissue. Ablation of Nlrp3 prevented the obesity–induced inflammasome activation in fat depots and liver together with enhanced insulin–signalling. Furthermore, elimination of Nlrp3 in obesity reduced IL-18 and adipose tissue IFN $\gamma$  along with an increase in naïve and reduction in effector adipose tissue T cells. Collectively, these data establish that Nlrp3 inflammasome senses obesity–associated ‘danger–signals’ and contributes to obesity–induced inflammation and insulin–resistance.

### AGE-DEPENDENT INDUCTION OF PRO-INFLAMMATORY AND PRO-THROMBOTIC GENES IN ADIPOSE TISSUE BY INFLAMMATORY STRESS

H. Saito, M. Starr, *Surgery, University of Kentucky, Lexington, Kentucky*

Aging is characterized by reduced tolerance to physiological stressors including infection and inflammation. Compared to young mice, aged mice under inflammatory stress exhibit increased mortality accompanied with dysregulated inflammation and enhanced thrombosis; however, the mechanisms for age-associated loss of stress tolerance are poorly understood. Our microarray analysis revealed that visceral white adipose tissue expresses a large number of genes for inflammatory cytokines and pro-thrombotic factors upon inflammatory stress, and that expression of many of these genes is augmented by aging. Our *in vitro*

organ culture experiments revealed that such age-associated increase in inflammatory gene expression is due, not only to increased fat mass, but to changes in the nature of the fat. Further, cell separation showed that age-dependent induction of these factors occurs more strongly in stromal cells compared to adipocytes. Altered gene expression in adipose tissue appears to be partly responsible for loss of stress tolerance in old age.

## AGING, FAT TISSUE, INFLAMMATION, AND CELLULAR SENESCENCE

J. Kirkland<sup>1</sup>, T. Tchkonja<sup>1</sup>, T. Pirtskhalava<sup>1</sup>, Y. Zhu<sup>1</sup>, N. LeBrasseur<sup>1</sup>, R. Miller<sup>2</sup>, J. van Deursen<sup>1</sup>, *1. Robert and Arlene Kogod Center on Aging, Mayo Clinic, Rochester, Minnesota, 2. Department of Pathology, University of Michigan, Ann Arbor, Michigan*

Fat tissue is frequently the largest organ in humans, undergoes pronounced age-related changes in function and distribution, and is a major source of inflammatory cytokines and chemokines, especially in advanced age. Fat tissue lipid storage capacity declines with aging. This contributes to fat redistribution from subcutaneous to visceral fat depots, muscle, liver, bone marrow, and other ectopic tissues, and underlies systemic lipotoxicity due to cytotoxic effects of lipids. Senescent preadipocytes accumulate in fat with aging and obesity. They secrete inflammatory cytokines, chemokines, and matrix proteases, collectively referred to as the senescence-associated secretory phenotype or SASP. Fat tissue senescent cell accumulation, fat redistribution, and dysfunction are delayed in long-lived mutant mice. Although the percent of senescent cells in fat is low in advanced age (around 10%), eliminating senescent cells using genetic strategies (“INK-ATTAC”) or interfering with the SASP pharmacologically delays or partially reverses age-related fat tissue and systemic dysfunction in mice. Support: NIH grants AG41122, AG13925, and AG31736, and the Ellison, Ted Nash, Glenn, and Noaber Foundations.

## SESSION 1835 (SYMPOSIUM)

### THE AGING RENIN-ANGIOTENSIN SYSTEM AND THE POTENTIAL FOR INTERVENTION

Chair: *J.D. Walston, Medicine/Geriatrics, Johns Hopkins University, Baltimore, Maryland*

Co-Chair: *P.M. Abadir, Medicine/Geriatrics, Johns Hopkins University, Baltimore, Maryland*

Discussant: *K. High, Wake Forest, Winston-Salem, North Carolina*

Declines and dysregulation in multiple physiological systems contribute to chronic disease, frailty, and late life decline in function and independence. The understanding of the role of the renin-angiotensin system (RAS) on these age-related processes has increased rapidly in the recent past with the discovery that Angiotensin II (Ang II) promotes inflammation and the generation of reactive oxygen species and the discovery of a functional mitochondrial RAS that includes a functional angiotensin type 2 receptor (AT2R). Importantly, the number of mitochondrial AT2R decrease with age and increase with AT1R blocker losartan. Further, blocking the RAS in older mice with losartan facilitates skeletal muscle healing and slows muscle deterioration in disuse atrophy. Given the potential importance of this pathway in aging, and a readily available pharmaceutical intervention, further studies to identify the crucial biological components and interactions between systems on a variety of biological pathways and tissues are underway and will be presented in this symposium. First, ongoing efforts to unravel the impact of losartan on the mitochondrial RAS and on mitochondrial function in aging will be presented. Data regarding the age-specific effects of losartan on skeletal muscle atrophy in aging mice will be presented. Data presenting the role of aging related changes in RAS on cardiac muscle and the ability of losartan to help restore the cardiac phenotype towards that of younger animals will be presented. Finally, data that

presents the relationship between serum mediators of the RAS and cognitive parameters in older adults will be presented.

#### **AGE-DEPENDENT EFFECTS OF ANGIOTENSIN II TYPE I RECEPTOR BLOCKADE ON DISUSE ATROPHY**

T.N. Burks<sup>1</sup>, O. Lucas<sup>2</sup>, E. Andres-Mateos<sup>1</sup>, R. Marx<sup>1</sup>, J. Simmers<sup>1</sup>, J.D. Walston<sup>1</sup>, R.D. Cohn<sup>1</sup>, *1. Johns Hopkins University School of Medicine, Baltimore, Maryland, 2. Johns Hopkins University, Baltimore, Maryland*

The aging of skeletal muscle is a dynamic process that occurs as a result of multiple biological and environmental factors including changes in the renin-angiotensin system (RAS) and decreased physical activity. Angiotensin II type I receptor blocker (ARB) losartan has produced beneficial results in ameliorating the muscle phenotype of several conditions. Here we show that the benefits of losartan on disuse atrophy are age-dependent. Losartan confers no protection against disuse atrophy in young mice and partial protection in adult mice. However, it completely protects against the loss of muscle mass in aged mice. This is particularly important because aged muscle lacks the ability to recover from disuse atrophy. The discrepancies in results are due to the modulation of pathways downstream of RAS, particularly the TGF- $\beta$  pathway. These data show that the age-related changes in the RAS affect the impact of ARBs on the maintenance of skeletal muscle.

#### **REGULATION OF MITOCHONDRIAL BIOGENESIS WITH LOSARTAN IN THE HEART OF 150 WEEKS OLD AGED MICE**

P.M. Abadir, B.R. Manwani, H. Yang, C. Lin, J.D. Walston, *Johns Hopkins University, Baltimore, Maryland*

A functional mitochondrial angiotensin system was recently identified. Given the known relationship between aging and mitochondrial biogenesis, and the emerging understanding of local mitochondrial RAS system, we hypothesized that blocking AT1R with losartan in vivo would increase mitochondrial biogenesis and survival gene production. To test this hypothesis, quantitative PCR was used to calculate CytB /GAPDH ratio and to measure mitochondrial survival genes Sirt1, Sirt3, Nampt, and PGC-1 $\alpha$ . AT1R blockade increased mitochondrial biogenesis in the heart of treated young (age 20wks, N=5) and old mice (age 150wks, N=5) (3.84 fold and 4.37 fold increase respectively). Mitochondrial survival gene expression in the heart was not increased and PGC-1 $\alpha$ , one of the main regulators that drive biogenesis, was in fact down-regulated by 50% and 55% in young and old treated mice respectively. The role of the RAS system in maintaining mitochondrial levels might therefore be a key mechanism in promoting healthy aging.

#### **LOSARTAN IMPROVES AGING-ASSOCIATED DECLINE IN MYOCARDIAL ENERGY METABOLISM**

A. Akki, P.M. Abadir, A. Gupta, V.P. Chacko, H. Yang, J.D. Walston, R.G. Weiss, *Medicine, Cardiology, Johns Hopkins Medical Institution, Baltimore, Maryland*

Aging is associated with increased mitochondrial angiotensin-II type-1 (AT1R) receptor density that is reversed by chronic treatment with Losartan, an AT1R blocker. To determine whether long-term AT1R blockade effects myocardial function or energy metabolism in older mice, we employed non-invasive 1H magnetic resonance imaging and 31P spectroscopy at baseline and after 4 weeks of Losartan treatment (40-60 mg/kg/day). Compared to young controls (20 week-old, n=5), old mice (150 week-old, n=5) exhibited a significantly higher left ventricular (LV) mass (103 $\pm$ 4.8 vs. 121 $\pm$ 3.9 mg, young vs. old, P<0.05) and a markedly lower Phosphocreatine (PCr)/ATP (1.84 $\pm$ 0.10 vs. 1.51 $\pm$ 0.05, P<0.05) with no difference in ejection fraction. Four weeks of Losartan normalized LV mass (100 $\pm$ 1.7 vs. 107 $\pm$ 6.6, mg, P=0.33) and PCr/ATP (1.75 $\pm$ 0.02 vs. 1.74 $\pm$ 0.12, P=0.95) in old mice. These findings suggest that AT1R blockade not only normalizes LV mass but also improves myocardial energetics in aging.

#### **THE RENIN ANGIOTENSIN SYSTEM (RAS) AND PHYSICAL FUNCTION**

S. Yasar, H. Polinder - Bos, G. Harris, V.R. Varma, N.S. Fedarko, P. Rabins, M. Carlson, *JHU/APL, Baltimore, Maryland*

The RAS plays a role in physical function by regulating blood flow and energy supply of skeletal muscle. However, it is not clear through which component of the RAS differences in physical function and fatigue in older individuals being affected. We hypothesized that higher levels of blood markers of RAS would influence activity and fatigue in older adults. A secondary cross-sectional data analysis of the Brain Health Study, a nested trial within the Baltimore Experience Corps Trial, of 123 community-dwelling adults aged at least 60 years was performed. Associations between blood angiotensin II (AngII) and angiotensin converting enzyme (ACE) levels and physical function related measures, weight loss and fatigue were evaluated using multiple linear regression analysis. Of the 123 participants, 35 had blood levels of AngII and ACE available. Significant positive associations were found between AngII and fatigue ( $\beta$ =0.39; p=0.04) but no other parameters.

#### **SESSION 1840 (SYMPOSIUM)**

##### **CTI IN THE COMMUNITY: PARTNERSHIPS, PATIENTS AND OUTCOMES**

Chair: *A.B. Stevens, Scott & White Healthcare, Temple, Texas, Texas A&M Health Science Center, Temple, Texas*

Discussant: *A. Berman, John A. Hartford Foundation, New York, New York*

Care transition programs have been a major focus to address costs associated with hospital readmissions and improve patient outcomes and quality of care. This is especially true as the Centers for Medicare and Medicaid Services (CMS) will implement a hospital readmission reduction program in FY2013 and started funding Community Based Care Transitions Program projects in 2012 to test care transition models for high risk Medicare beneficiaries to reduce readmissions and improve patient outcomes. The Administration on Aging's Aging and Disability Resource Center (ADRC) Evidence Based Care Transitions program provides grant funds to ADRCs to implement evidence-based care transition models in partnership with healthcare systems to engage older adults and individuals with disabilities. ADRCs play a critical role during care transitions to support and empower individuals to take control of their healthcare. This session will present an overview of the ADRC Evidence Based Care Transitions program, the partnerships between ADRCs and healthcare systems, and highlight two care transition projects implementing the Care Transitions Intervention® model (the Central Texas ADRC program and the California ADRC program). Additionally, Amy Berman from the John A. Hartford Foundation will serve as the discussant for this symposium. Ms. Berman heads the Foundation's Integrating and Improving Services grants which focus on development and dissemination of innovative, cost-effective models of care including care transitions that improve health outcomes of older adults.

##### **USING EVIDENCE-BASED CARE TRANSITIONS PROGRAMS TO SUPPORT A COMPREHENSIVE PERSON-CENTERED SYSTEM**

C. Ryan, *US Administration on Aging, Washington, District of Columbia*

AoA, CMS and the Veteran's Administration (VA) share a vision of a No Wrong Door/Single Point of Entry (NWD/SPE) as serving as an integral component of health and long-term care reform and essential in the development of effectively managed person-centered service systems at national and state levels. These person-centered systems are envisioned to: optimize choice and independence; be served by an adequate workforce; be transparent, encourage personal responsibility; provide coordinated, high quality care; be financially sustainable; and utilize health information technology. NWD/SEP systems have a history

of collaborating with healthcare partners across the country to develop and implement care transition programs. Participants will learn about NWD/SEP functions and their work with care transitions; identify opportunities for collaboration; and describe outcomes of successful care transition partnerships between NWD/SEP and health care providers.

#### **REACH AND IMPLEMENTATION OF CTI® IN AN ADRC-HEALTHCARE PARTNERSHIP IN TEXAS**

J.L. Thorud<sup>1</sup>, A. Hochhalter<sup>1,2</sup>, R. McGhee<sup>3</sup>, A.B. Stevens<sup>1,2</sup>, *1. Scott & White Healthcare, Temple, Texas, 2. Texas A&M Health Science Center, Temple, Texas, 3. Central Texas Aging and Disability Resource Center, Belton, Texas*

In the first six months of the AoA/CMS-funded Texas program, 795 hospitalized older adults were eligible and 272 (34%) chose to enroll to receive Care Transitions Intervention® (CTI) services. Enrollees were diverse in terms of ethnicity, age, gender, rurality of residence, self-rated health, and health literacy. Sixty-eight (N=184) percent of enrollees completed at least the home visit intervention contacts. CTI coaching techniques lead to the majority of participants defining a personal health goal. Likewise, one or more medication discrepancy was identified for 24% of those who completed at least one visit, with a mean of 2.7 discrepancies per person. While preliminary findings suggest multiple benefits of CTI, challenges to reaching older adults with support during transitions home after hospitalization are common. Strategies that facilitate reach into the target patient population and methods to ensure fidelity to the CTI model will be presented.

#### **CALIFORNIA AGING DISABILITY RESOURCE CENTER CTI IMPLEMENTATION: LESSONS LEARNED AND NEXT STEPS**

M.M. Parrish, *LifeCourse Strategies, Orinda, California*

With several federal grants providing support for an evidence-based care transitions program, California developed and administered an initiative (2006-2012) to implement the Care Transitions Intervention (CTI) through an Aging Disability Resource Center (ADRC) – local hospital(s) partnership. This presentation will review the structure of the initiative, which includes establishment of a state project team to provide technical assistance and support, a Learning Community, and a standardized data set, and the initiative's focus under the most recent Administration on Aging ADRC Care Transitions Grant – to identify and engage diverse and underserved communities in the CTI. The presentation will also discuss lessons learned from the initiative, specifically addressing implementation, partnerships, and sustainability, and will share key data findings and next steps for the ADRCs and their respective CTI programs.

#### **SESSION 1845 (SYMPOSIUM)**

##### **GRANDPARENTS RAISING GRANDCHILDREN: RESILIENCE AND OTHER POSITIVE ASPECTS OF RELATIVE CAREGIVING**

Chair: *K. Bundy-Fazioli, Colorado State University, Fort Collins, Colorado*

Discussant: *L. Yancura, University at Hawaii at Manoa, Honolulu, Hawaii*

In spite of adversity, grandparents raising grandchildren have demonstrated resilience and determination in their ability to persevere. Resilience research focuses on protective factors using a psychosocial framework that promote positive outcomes. Research focused on protective factors that help to foster positive wellbeing in grandfamily households is crucial for supporting the direction of strength-based practice and interventions. There is a wealth of information pertaining to risk factors for this population, for instance problems related to health, poverty, and lack of social supports. This symposium seeks to balance what we know regarding health and wellbeing

risks for grandparent caregivers by shedding light on the positive aspects of caregiving. In particular, the first paper by Hayslip and Neuman focuses on resiliency factors in custodial grandparents using longitudinal findings. The next paper by Gladstone focuses on resiliency from the perspective of internal and external discontinuity. The third paper by Ficker, Lichtenber, Lysack and Hannigan addresses African American grandparenting norms within an urban context examining the benefits of family involvement. The fourth paper by Conway uses intervention research to explore the benefit findings for physical and emotional adaptations of African-American and Latino grandparents. And lastly, Whitley, Kelley and Campos provide a descriptive report of the positive coping behaviors for African American grandparents raising grandchildren with special needs. The discussant, Dr. Yancura, will integrate the findings from these papers addressing future research needs and providing a discussion on implications for practice

##### **RESILIENCE AND ADJUSTMENT- WHAT CAUSES WHAT? ONE-YEAR LONGITUDINAL FINDINGS FOR CUSTODIAL GRANDFAMILIES**

B. Hayslip, C. Neumann, *Psychology, University of North Texas, Denton, Texas*

Resilience can be conceived as trait-like, as a dynamic process, or as an outcome derived from one's experience. How custodial grandparents deal with caregiving-related lifestyle changes and with grandchild-specific demands may reflect resilience or may bring about resilience. We explored relationships over time between measures of resilience and parental efficacy and measures of adjustment and parental stress among 87 custodial grandparents who were reassessed over a year. Inspection of the cross lagged relationships over time suggested that while resilience at Time 1 predicted ( $p < .01$ ) adjustment at Time 2, Time 1 adjustment did not predict Time 2 resilience. In contrast, cross lagged correlations between parental efficacy and parental stress suggested relationships over time between the two to be bidirectional in nature. While these findings suggest that resilience may be a trait-like attribute, parental efficacy's relationships with parental stress over time are likely to be dynamic and mutual in nature.

##### **BENEFIT FINDING: A COGNITIVE INTERVENTION FOR THE PSYCHOLOGICAL HEALTH OF AFRICAN AMERICAN AND LATINO GRANDMOTHERS RAISING THEIR GRANDCHILDREN**

F. Conway, *Psychology, Adelphi University, Garden City, New York*

The grandparent caregiving phenomenon stems from a myriad of circumstances adversely affecting the parents of children. This study explored the physical and emotional adaptation of African-American and Latino grandparents to potentially adverse situations which result in their assuming parental responsibilities for their grandchildren. Sixty-seven African-American and Latino grandparents, who are primary caregivers of at least one grandchild, participated in the study and completed protocol measures: demographic questionnaire, benefit finding (the post traumatic growth inventory) and psychological wellbeing (Brief Symptom Inventory). Zero order correlations and multiple regressions confirmed the findings that the benefit-finding process is highly correlated with the grandparent's reduced experience of psychological distress, with significantly less positive symptom distress ( $t = -2.08, p < .05$ ) and a trend towards lower levels of interpersonal sensitivity ( $t = -1.90, p = .06$ ) among grandparents who are high benefit finders. These results have importance for cognitive interventions with grandparent caregivers which are discussed.

## GRANDPARENTS RAISING GRANDCHILDREN: A DISCONTINUOUS LIFE EVENT AND ITS RELATIONSHIP TO RESILIENCY

J. Gladstone, *McMaster University, Hamilton, Ontario, Canada*

This paper examines ways that grandparents who are raising their grandchildren respond to adversity. We conceptualize adverse conditions that caregiving grandparents experience in terms of internal and external discontinuity (Atchley, 1989). Data were gathered from 33 caregiving grandparents who were involved with the child welfare system. Findings show that discontinuity is related to: having to take on a parental role regarding grandchildren; interacting differently with the middle generation; and being involved with child protection services. Grandparents manage this discontinuity by identifying positive aspects of the caregiving experience and by looking for markers that reinforce their status as grandparents and suggest that parenting responsibilities towards their grandchildren will eventually diminish. Our conclusion is that the concept of "resiliency" may be linked to internal and external discontinuity and is consistent with a strength based approach when working with caregiving grandparents.

## GRANDMOTHERS RAISING GRANDCHILDREN WITH DISABILITIES: THE POSITIVE SIDE OF THE STORY

D. Whitley<sup>4,1</sup>, S.J. Kelley<sup>2,1</sup>, P.E. Campos<sup>3,1</sup>, *1. Georgia State University, Atlanta, Georgia, 2. Byrdine F. Lewis School of Nursing and Health Professions, Atlanta, Georgia, 3. Project Healthy Grandparents, Atlanta, Georgia, 4. School of Social Work, Atlanta, Georgia*

Research has demonstrated that children under the custodial care of their grandparents experience various developmental disabilities due to prenatal exposure to substances, coupled with poor parental functioning following birth. However, researchers are also beginning to recognize that many families have positive experiences related to raising their grandchildren with special needs. This presentation is a description of the positive coping behaviors of a small sample of African American custodial grandmothers and their young grandchildren who are participating in a program designed to enhance caregivers' well-being. The grandchildren in these families, ages 1- 5 years, received a full developmental diagnostic evaluation and treatment protocol. The presentation includes quantitative results, highlighting caregivers' coping strategies as measured by the FACES and FCOPEs scales; qualitative statements from custodial grandparents emphasize specific positive perceptions about raising their grandchildren around themes of actual caregiving responsibilities, family relationships, and community supports. Discussion includes implications for programmatic service designs.

## OLDER AFRICAN AMERICANS CARING FOR GRANDCHILDREN: A NORMATIVE STUDY IN AN URBAN CONTEXT

L.J. Ficker<sup>1,2</sup>, P.A. Lichtenberg<sup>1,2</sup>, C. Lysack<sup>1,2</sup>, *1. Wayne State University, Detroit, Michigan, 2. Institute of Gerontology, Detroit, Michigan*

The goal of this study was to document the extent of caregiving of African American grandparents for grandchildren in an urban context, both current and over the lifespan. We interviewed 501 community-dwelling African American elders over age 55. Over half of the sample had a grandchild live in their household during their lifetime. Despite studies that highlight African American grandparents caregiving due to a crisis (e.g., parental death, teen pregnancy, AIDS, substance abuse), supportive reasons for living with a grandchild (e.g., helping an adult child go to college, buy a home, travel for work or military service, or provide support during divorce) were endorsed by almost half the sample (46.1%). Grandparents who had ever lived with their grandchildren (past or present) had significantly more current social interaction with their grandchildren and received significantly more tangible support from them at the present time, regardless of the reason for grandparent involvement.

## SESSION 1850 (SYMPOSIUM)

### HEALTH, HEALTH CARE SERVICE NEEDS, PERCEIVED SERVICE AVAILABILITY, AND PATTERNS OF SOCIAL CONNECTIONS AMONG OLDER ADULTS LIVING IN URBAN AND RURAL ENVIRONMENTS

Chair: *J. Yorgason, Brigham Young University, School of Family Life, Provo, Utah*

Residents in rural communities tend to be older than their urban counterparts (Gallardo 2010), and may face different challenges from those in urban areas such as limited access to healthcare (Iezzoni, Killeen, & O'Day, 2006). Social connections may be especially important for those living in rural areas (Kaufman, Kosberg, Leeper, & Tang, 2010). In this symposium, papers address health care service needs, perceived service availability, and patterns of social connections among older adults living in urban and rural environments. The first paper uses data from 3,513 adults living in Montana to assess health care use across highly rural, rural, and urban settings. Findings indicated fewer primary care physician visits by respondents living in rural and highly rural compared to urban areas. The second paper uses data from 1,662 older adults living in Montana to explore health status and resources as predictors of anticipated mobility. Findings indicated that those living in highly rural and rural areas that enjoy better health are less likely to move than their urban counterparts. The third paper addresses the health care needs of rural versus urban, and male versus female veterans through community focus groups carried out Montana and Utah. Findings highlight a need in rural areas for better access to specialized health care. The last paper used daily diaries from 161 later life couples to explore links between daily received support and daily outcomes. Findings indicated that support was significantly related to daily levels of depression, anxiety, and life satisfaction. Results different by rural status.

### WHO GOES TO THE DOCTOR? ENABLING AND INHIBITING FACTORS AFFECTING HEALTH CARE ACCESS BY OLDER RURAL RESIDENTS

V. Call, C.E. Yost, *BYU, Provo, Utah*

It is well known that rural elderly face access barriers to medical services (Bull et. al., 2001; Goins et. al., 2005). Little research focuses on the determinants of health service use in rural areas. We use the Behavioral Model (Andersen & Davidson, 2007; Andersen, 1995) and the 2011 Montana Health Matters data (n=3,513) to examine the predisposing, enabling, and need characteristics that predict an older person's access to their primary care physician. Rural and highly rural elderly were significantly less likely than urban elderly to visit their primary care physician in the last 60 days. Patterns of predisposing, enabling, and need variables that increased or decreased the odds of going to their physician were also significantly different. For example, PTSD symptoms increased the odds of going to their doctor in urban but not rural areas. Alternatively, having insurance increased physician visits in rural but not urban or highly rural areas.

### HEALTH STATUS, RESOURCES AND RESIDENTIAL MOBILITY AMONG THE ELDERLY IN URBAN, RURAL, AND HIGHLY RURAL MONTANA COMMUNITIES

L. Erickson, *Brigham Young University, Provo, Utah*

The increasing health risks elderly face as they age ultimately create discontinuities in their lifestyle. These life disruptions may be particularly prominent among rural residents because without the overall population base to support substantial elder care services, rural communities may be unable to support their disproportionate numbers of older residents compared, forcing some to move. Using data representative of Montana I examine whether the health status and resources available to elderly residents (age 60+, N = 1662) in urban, rural, and highly rural communities influences whether they anticipate having to move. Preliminary results indicate that although access to quality health

and elder care uniformly reduce mobility expectations across urban, rural, and highly rural communities, healthier rural and highly rural residents are less likely while healthier urban elderly are more likely to expect to move. Subsequent analyses will explore how formal and informal sources of care can account for these differences.

### **EXPERIENCES OF ELDERLY VETERANS WITH ACCESSING HEALTH CARE IN UTAH AND MONTANA: A GENDER COMPARISON**

C. Ward, *Sociology, Brigham Young University, Provo, Utah*

Disparities in the care provided to male and female veterans have been persistent. Compared to their male counterparts, female veterans are more likely to have poor health status, low income, lack adequate insurance, higher instances of stress and trauma, and lower levels of VA use. This paper presents results of a focus group study concerning the health care needs of older men and women veterans in Utah and Montana, including non-natives and Native Americans in rural and urban areas. Findings include the needs for better access to specialized care and the important roles women veterans play in addressing their own needs and the needs of other generations of veterans. Additionally, findings suggest that women veterans often experience isolation both in the military as well as after they return, a situation that affects their access to health care resources.

### **DAILY ASSOCIATIONS BETWEEN FAMILY AND COMMUNITY SUPPORT WITH DAILY LEVELS OF DEPRESSION, ANXIETY, AND LIFE SATISFACTION**

J. Yorgason<sup>1</sup>, H. Choi<sup>2</sup>, K. Gustafson<sup>1</sup>, W. Godfrey<sup>1</sup>, A. Bond<sup>1</sup>, *1. School of Family Life, Brigham Young University, Provo, Utah, 2. Penn State University, Altoona, Pennsylvania*

Formal resources are often limited in rural areas (Iezzoni, Killeen, & O'Day, 2006). As such, social connections may associate with indicators of well-being differently for urban versus rural older adults (Kaufman, Kosberg, Leeper, & Tang, 2010). Using daily diaries from 161 later life couples across 14 days, this study examined links between daily received support and daily anxiety, depression, and life satisfaction. Moderating factors of rural/urban environment, veteran status, and gender were also examined. Findings from multilevel "actor" models indicated that daily family and community support were individually linked with daily levels of life satisfaction for males and females, and to depression for males. Rural and veteran status moderated links between community support and daily depression and anxiety for both males and females. Results from models exploring "partner" effects will also be discussed.

## **SESSION 1855 (SYMPOSIUM)**

### **INEQUALITY AND AGE: THE INTERGENERATIONAL EQUITY DEBATE IN THE UK**

Chair: *J.S. Macnicol, Social Policy, London School of Economics, London, United Kingdom*

Discussant: *S.E. Rix, AARP, Washington, District of Columbia*

In recent welfare state analyses, there has been much discussion of inequalities of socio-economic status, race/ethnicity, gender, disability status, and so on, yet inequalities of age remain relatively neglected. Despite a few notable exceptions, issues of distributional justice across the lifecourse have also not been adequately considered by liberal democratic political theorists. Yet age-based inequalities are of vital importance to all modern welfare states, which effect a pronounced redistribution of resources across the lifecourse. Cross-sectional analysis appears to reveal sharp distinctions between 'winners' and 'losers' in the distribution of public resources; yet when one compares completed lives the distributional effects are much more complex. The whole issue of inequalities of age has attained heightened salience by the recent debate on intergenerational equity in the UK, against a background of

economic recession, inflated property prices and high levels of youth unemployment, leading to accusations that a selfish 'welfare generation' of baby boomers has monopolised resources at the expense of those generations below it. At the same time, older people are having to work later in life, state pension ages are set to rise and further public expenditure cuts may hit services for older people. There will undoubtedly be discussion of generational distribution for many years to come. This symposium will therefore explore a debate that is topical, urgent and relatively neglected.

### **THE REAPPEARANCE OF AN INTERGENERATIONAL EQUITY DEBATE IN BRITAIN**

J.S. Macnicol<sup>1</sup>, J.S. Macnicol<sup>2</sup>, *1. London School of Economics, London, United Kingdom, 2. Social Policy, London School of Economics, London, United Kingdom*

Intergenerational equity has been the subject of controversy in Britain recently, at a populist and academic level. Against a background of public expenditure cuts, the issue of what should be a 'just' allocation of public resources between generations has become very relevant. The debate today in many ways replicates an equivalent one twenty years ago in both the USA and the UK. A key question is therefore why a debate has reappeared in Britain now. The concept of intergenerational equity is highly problematic and contested, raising such issues as the definition of a generation, generational location, intra-versus inter-generational inequalities, collective agency, and so on. One central issue is whether narratives of intergenerational injustice conceal widening class inequalities. This paper will review the interpretative issues, and conclude with a brief analysis of whether the history of policies for older people in Britain reveals intergenerational equity to have been an important issue.

### **STAYING PUT OR MOVING ON? THE POLITICS OF HOUSING IN AN AGEING POPULATION**

L. Livsey, D. Price, *Institute of Gerontology, King's College London, London, United Kingdom*

In the UK, the media and political classes increasingly represent housing occupancy and wealth as sites of intergenerational schism, while the housing of the over 65's is viewed by Government as a legitimate target for funding retirement and care. In this paper, we analyse historic policy texts to demonstrate that political concerns and moral panics about housing and welfare consumption by the old at the expense of the young have been repeatedly deployed over time for political purposes. These representations neglect social inequalities in housing wealth, resurrect discourses of 'deserving' and 'undeserving poor', hide the inadequate housing of many older people and the residualisation of state provision in late life care, disguise the regressive effect of using housing equity to fund late-life care, and mask multiple policy and market failures. By so casting these problems, attention is deflected away from the erosion of social citizenship in contemporary welfare policy.

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housing equity to fund late-life care, and mask multiple policy and market failures. By so casting these problems, attention is deflected away from the erosion of social citizenship in contemporary welfare policy.

### **GENERATIONAL JUSTICE, GENERATIONAL HABITUS AND THE 'PROBLEM' OF THE BABY BOOMERS**

P. Higgs, C.J. Gilleard, *University College London, London, United Kingdom*

The financial crisis has seen the re-emergence of a debate about the lack of generational justice in the UK. Despite the definitional debates of what constitutes a generation a general agreement has been reached that those cohorts associated with the 'baby booms' of the mid-twentieth century constitute the problem. These post-war cohorts have not only benefited from educational opportunities and relatively stable employment opportunities but have also experienced higher levels of income and material comfort than previous cohorts. For the cohorts following behind the world looks less friendly and that the advantages of present day retirees can only be sustained at the expense of younger cohorts. This paper takes a critical approach to this view and suggests that the issue of intergenerational justice masks other social and political processes. Generation therefore acts as a prism through which multiple social concerns can be refracted rather than being the origin of them

## **SESSION 1860 (SYMPOSIUM)**

### **MULTIPLE PERSPECTIVES ON THE MEANING OF ENGAGEMENT IN LATER LIFE**

Chair: *J. James, Boston College, Chestnut Hill, Massachusetts*  
Discussant: *M.K. Diehl, Colorado State University, Fort Collins, Colorado*

Most theories of pathways to healthy and positive aging suggest the importance of staying engaged with life for enhanced well-being and cognitive functioning (Morrow-Howell, 2010; Reitzes, Mutran, & Verrill, 1995; Rowe & Kahn, 1998). Largely, these injunctions have been interpreted as staying active or one form or another of the "busy ethic" (Ekherdt, 1986). Yet, findings from the Life & Times in an Aging Society Study (James, Besen, Matz-Costa, & Pitt-Catsoupes, 2012), based on a convenience sample of over 800 adults, ages 21-83, suggest that being involved in any one of four roles (work, volunteering, caregiving, or education) but not particularly challenged by it, excited about it, or dedicated to it is worse for well-being than not being involved at all. These findings are especially important for adults age 65+. Panelists for this symposium will examine various meanings of engagement, its assessment, and the challenges therein. Both quantitative and qualitative data will be used to discuss engagement in everyday activities (life tasks), and in civic and volunteer activities. Panelists will discuss engagement as participation in an activity (e.g. activity theory), which will be differentiated from engagement as deep investment of the self (e.g., work engagement theory). Longitudinal data spanning 50 years will examine both barriers to and facilitators of engagement. A second study will provide evidence of the role that engagement plays in inhibiting cognitive decline. Personality development will be emphasized as an important factor in later life engagement strategies.

### **THE MEANING OF SUCCESSFUL AGING IN RELATION TO ENGAGEMENT IN ACTIVITY**

J. James, C. Matz-Costa, E. Besen, M. Brown, *Boston College, Chestnut Hill, Massachusetts*

Successful aging takes on different meanings for adults. Some adults focus on the importance of health while others focus on finding meaning in life. Although there are many different views in the academic literature about the meaning of successful aging, it is not clear that older adults themselves have similar views. Still less is known about how definitions of successful aging relate to actual engagement, or deep psy-

chological investment in activities. The current study examines differences in the meaning of successful aging between a subsample of adults over the age of 65 who are both involved in activities (n=183) and those who are uninvolved (n=60) and how they relate to engagement. The most common theme in the definitions was the importance of social relationships followed by the importance of activity. The relationships among the themes and engagement in four activities (paid employment, volunteering, caregiving, and education) will be discussed.

### **WHAT DO I HAVE TO "USE" TO NOT "LOSE IT"? A NEW PERSPECTIVE ON MEASURING ACTIVITY ENGAGEMENT IN RELATION TO COGNITION**

A.A. Bielak, *Colorado State University, Fort Collins, Colorado*

One facet of cognitive aging research focuses on identifying factors that may prevent or delay cognitive decline. Engagement in social, cognitive, and physical activities has been shown to be positively associated with cognition in older age. The measurement of self-reported activity participation varies from study to study, but one theme is constant: Activity participation is measured according to time spent doing specific activities, from completing crossword puzzles, to skiing on the slopes. However, is this only way we can measure activity engagement? This talk explores the likelihood of a specific activity being the "holy grail" of cognitive protection, and suggests a new perspective on assessing activity engagement in relation to cognitive ability. This approach differs from the current method of measuring specific activity participation in various ways, including focusing on the characteristics of activities, and accounting for individual differences in effort.

### **ENGAGEMENT AND PERSONALITY DEVELOPMENT**

U.M. Staudinger, *Jacobs Center on Lifelong Learning, Jacobs University Bremen, Bremen, Germany*

In a 15-months longitudinal study, it was investigated whether participation in a nation-wide program financed by the German Government and aiming at the promotion of civic engagement in older age shows effects on personality development. The intervention program consisted of a 3 x 3 days seminar where participants were taught important skills to support their success in conducting projects in their community. It was hypothesized that volunteering in combination with an empowering training program represents a contextual resource that facilitates increases in openness to new experience which usually shows decline after midlife. To unfold its facilitative power, however, the contextual resource needs to be combined with personal resources, in particular internal control beliefs. The control group was composed of volunteers of the waiting list for participating in the program. Results confirm this hypothesis and are discussed in the light of societal consequences.

### **ADOLESCENT PERSONALITY AS PREDICTOR OF ENGAGEMENT IN EVERYDAY ACTIVITIES IN OLDER ADULTHOOD**

P.M. Wink, *Psychology, Wellesley College, Wellesley, Massachusetts*

Findings from the Institute of Human Development Longitudinal study were used to investigate adolescent predictors of engagement in everyday life tasks or activities in older adulthood, a span of over 50 years. The findings confirmed the usefulness of distinguishing between maturity based on growth and adjustment. Adolescent personalities characterized by growth, as operationalized by observer ratings of openness to experience, and adjustment, as operationalized by observer ratings of conscientiousness, both predicted self-reported overall engagement in everyday activities at age 70s as measured by Cantor's Scale of Life Tasks. However, only adolescent openness predicted involvement in creative activities (e.g., singing in a choir, painting, sculpting) and those designed to expand one's knowledge and only adolescent conscientiousness predicted engagement in social activities involving family,

neighbors, and friends. These relationships remained significant after controlling for gender and social class of family of origin.

## SESSION 1865 (SYMPOSIUM)

### NEW FRONTIERS IN SOCIAL GERONTOLOGY: EXPLORING GERONTOLOGICAL THEORY WITHIN AND ACROSS DISCIPLINES

Chair: *J. Allen, University of South Florida, Tampa, Florida*

Co-Chair: *B.D. Capistrant, Harvard University, Cambridge, Massachusetts*

Discussant: *K.F. Ferraro, Purdue University, West Lafayette, Indiana*

While the field of gerontology is sometimes characterized as “data-rich but theory-poor,” there is growing recognition of the importance of theory in advancing gerontological knowledge. Because aging is a universal human experience that affects and is affected by all facets of life, gerontological theories draw from multiple disciplines to build a more comprehensive explanation of patterns and processes of aging. Social gerontology, in particular, draws on traditions of the social sciences and humanities to situate the experience of aging in broader interpersonal, familial, and societal perspectives. The aim of this session is to highlight the importance of theory development alongside empirical investigation and to encourage new work on social theory both within and across the gerontological disciplines. The first presentation considers theoretical approaches such as power relations to address the need for research and interventions that first consider inequalities that underlie individual differences among aging populations. The second presentation introduces a typology of the “Third Age” and examines a framework with which to guide a deeper understanding of the implications, opportunities, and expectations associated with this new life phase. The third presentation introduces five scenarios (i.e. aging as a lifelong process, cumulative advantage/disadvantage, interrelationships between aging persons and environment, variability vs. universality, and agency/structural constraints) to examine parameters for future theory development in aging that expand across disciplinary boundaries. Finally, a fourth presentation by the winner of the Theoretical Developments in Social Gerontology Paper Award, which will provide an interdisciplinary perspective on social gerontology theory, will conclude the session.

### A TYPOLOGY OF THE THIRD AGE: INSPIRING THEORETICAL DEVELOPMENT FOR EXAMINING A NEW PHASE OF LIFE

*D.C. Carr, V.W. Marshall, Institute on Aging, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*

The Third Age is the period in the life course after departure from one’s career but prior to the onset of disability. A variety of initiatives seeking to increase the activity and engagement of older adults target “third-agers”. However, little effort has been made to develop frameworks with which to guide a deeper understanding of the implications, opportunities, and expectations associated with this new life phase. In this presentation, I introduce a typology of the Third Age, which can provide foundation for future research examining this new period of life.

### FIVE SCENARIOS FOR FUTURE THEORIES OF AGING

*V.L. Bengtson, D.A. Lloyd, Roybal Institute on Aging, University of Southern California, Los Angeles, California*

Research in the social and behavioral science of aging has been criticized for not developing theory consistently. Yet in recent years there has been a resurgence of interest in theory, and theoretical advances have helped bring together previously unconnected bodies of empirical findings. In particular the concept of intersectionalities and the cumulative disadvantage/advantage hypothesis has been useful in developing explanations across and within disciplines. In this paper I wish to

call attention to five developments or scenarios that might provide parameters for future theory development in aging that expand across disciplinary boundaries: (1) Aging as a lifelong process rather than a state; (2) Cumulative advantage/disadvantage at both the individual and population levels; (3) Interrelationships between environment and aging individuals; (4) Focusing on variability rather than universality; (5) Individual agency or structural constraints. The paper will use examples from research described in the new “Handbook of Theories of Aging.

### UNDERSTANDING ‘DIFFERENCE’: THE IMPORTANCE OF THEORY

*T. Calasanti, Virginia Tech, Blacksburg, Virginia*

Although gerontologists have become increasingly aware of and attentive to diversity among the older population, research and interventions can remain at the level of describing differences and intervening at an individual level, rather than trying to understand the sources of such variations. Taking a theoretical approach that focuses on power relations, and exploring varying experiences based on gender and age relations, I give examples of what can occur when we construct interventions without first attempting to understand and dismantle the inequalities that underlie differences.

## SESSION 1870 (SYMPOSIUM)

### RISK FACTORS FOR SUICIDAL BEHAVIOR IN OLDER ADULTS: CHARTING GLOBAL CONNECTIONS

Chair: *K.A. Van Orden, Psychiatry, University of Rochester Medical Center, Rochester, New York*

Discussant: *Y. Conwell, Psychiatry, University of Rochester Medical Center, Rochester, New York*

Suicide is a global public health problem that accounts for more than 1 million deaths worldwide. Suicide prevention is highly relevant to work with older adults: in most countries, suicide rates rise with age for both men and women and peak among the oldest old. However, there is global variability in rates and risk factors for suicidal behaviors in later life, which is the focus of this symposium. Considering late-life suicide from a global perspective is highly relevant to the conference theme of “charting connections” because the reasons for both global differences and commonalities are largely unexplored. Dr. Van Orden will begin with an overview of late-life suicide from a global perspective. Next, Dr. Wiktorsson will present results from a case-controlled study of older Swedish men and women who attempted suicide, emphasizing depression, personality traits, and physical health. Dr. Draper will then present results from a controlled psychological autopsy study of middle-aged and older Australian adults who died by suicide, emphasizing the role of personality traits. Next, Dr. Miller will present on the association between household firearm ownership and late-life suicide in the US, including a discussion of means restriction. Finally, considering within-country variability is also important. Dr. Van Orden will present on differences in endorsement rates for death and suicide ideation among older adults in the US as a function of race and social support. The symposium will conclude with a discussion, led by Dr. Conwell, on suicide prevention in older adults from a global perspective.

### RACIAL DIFFERENCES IN SUICIDE IDEATION AMONG OLDER ADULTS IN THE U.S

*K.A. Van Orden, A. O’Riley, T. Richardson, C. Podgorski, Y. Conwell, Psychiatry, University of Rochester Medical Center, Rochester, New York*

Suicide rates in the United States vary as a function of age, gender, and race. Very little research, however, has examined the prevalence of suicide ideation in later life as a function of gender and race; this research is important given that suicide ideation is a contributor to risk for suicide deaths and is a sign of distress. The current project examines racial differences in the prevalence of death and suicide ideation over the

past year (i.e., using the Paykel Scale) and also considers possible social factors that may, in part, account for these differences. The sample consists of 377 older adults (16% African American) who accessed an aging service organization in Monroe County, NY. Results indicate that white subjects were significantly more likely to endorse any form of death or suicide ideation over the past year (30%) compared to African Americans (17%; chi square = 4.14,  $p < .05$ ). The effect of race was partially accounted for by religious strength and perceived social support from family. These results suggest that social factors may function as protective factors for suicide ideation among older African Americans, and therefore may contribute to lower suicide ideation rates in that population.

### **PERSONALITY TRAITS, SUICIDE AND PSYCHIATRIC DISORDER: A CONTROLLED PSYCHOLOGICAL AUTOPSY STUDY**

B. Draper<sup>1</sup>, A. Altendorf<sup>1</sup>, D. De Leo<sup>2</sup>, J. Snowdon<sup>3</sup>, K. Kolves<sup>2</sup>, 1. UNSW, Randwick, New South Wales, Australia, 2. Griffith University, Brisbane, Queensland, Australia, 3. University of Sydney, Sydney, New South Wales, Australia

A controlled psychological autopsy study of suicide in middle-aged and older persons was undertaken in two Australian cities. Our aim is to describe the personality traits of 65 suicide victims (28 aged 60+) who died without an active psychiatric disorder as compared with 194 suicide victims who had an active psychiatric disorder at death and 116 sudden death controls (SDC) who did not have a psychiatric disorder. Next-of kin were interviewed and completed the NEO-FFI to measure personality traits and the SCID for psychiatric disorder. Suicide victims without an active psychiatric disorder had higher Neuroticism and lower Extraversion scores than SDCs without a psychiatric disorder; and higher Agreeableness and Conscientiousness scores than suicide victims with an active psychiatric disorder. Older suicide victims had higher Conscientiousness scores than younger victims. There were no differences on the Openness to Experience domain. Personality factors contribute to suicide and interact with psychiatric disorders.

### **FACTORS ASSOCIATED WITH SUICIDE ATTEMPT IN PERSONS AGED 80 AND ABOVE: A COMPARISON STUDY**

S. Wiktorsson, O. Åkerblom, T. Marlow, I. Skoog, M. Waern, *Psychiatry, Neuroscience and Physiology, Mölndal, Sweden*

Background: Elderly have high suicide rates. This study aimed to identify factors associated with attempted suicide in late life. Methods: Fifty-five suicide attempters participated in the study. Comparison subjects ( $n = 220$ ) were selected from our population studies on health and ageing. Depressive symptoms were rated with the Montgomery-Åsberg Depression Rating Scale (MADRS). Results: Cases scored higher on the MADRS than comparisons (mean = 25.1 vs. 5.8,  $p < 0.001$ ). Previous episode(s) of depression was reported by 56% of the cases compared to 19% among comparisons ( $p < 0.001$ ). Depression was reported in a first-degree relative in 31% among cases compared to 16% among comparison subjects ( $p = 0.010$ ). Proportions with diabetes, asthma and heart attack did not differ between groups. However, stroke was more common among cases compared to comparisons (38% vs. 20%,  $p = 0.005$ ). Conclusions: Early detection of depression is of importance.

## **SESSION 1875 (SYMPOSIUM)**

### **THE DOWNSIDE OF POSITIVE AND SUPPORTIVE SOCIAL TIES (REVISITED)**

Chair: K. Fingerman, *University of Texas, Austin, Texas*

Co-Chair: K.S. Birditt, *University of Michigan, Ann Arbor, Michigan*

Although research clearly documents benefits from warm and intimate relationships across adulthood, studies also have found that some relationships generate detriments. This symposium revisits this topic by looking with greater complexity at potential problems in relationships

that are typically positive. Luong and Rook discuss roles of age and interpersonal motivations in shaping different facets of older adults' social tie. They found older participants did not report stronger relational-harmony motivations or positive social ties, but they did report fewer negative social ties. Birditt found age differences in daily positive interpersonal interactions and their links with well-being over a 14 day period. The study revealed that middle aged individuals reported greater negative affect and oldest old individuals reported more cognitive interference when they had more positive interactions. Fuller-Iglesias explores negativity within positive family relationships and identifies the association with well-being among Mexican adults. Findings demonstrate differences across relationship type and suggest a significant negative impact of controlling and irritating behavior even in positive relationships. Fingerman et al. describe the downside of parental support. Grown children's perceptions that parents' gave conflicted support were associated with: a) features of support (i.e., less frequent support), b) parents' feelings about providing support (e.g., greater stress providing help), and c) poorer quality parent-child relationships. Overall, this symposium demonstrates the diversity of relationship experiences and that relationship characteristics typically thought of as beneficial may actually be harmful.

### **WHEN FAMILY SUPPORT ISN'T SUPPORTIVE: PERCEPTIONS THAT PARENTAL SUPPORT IS CONFLICTED**

K. Fingerman<sup>1</sup>, Y. Cheng<sup>1</sup>, K.E. Cichy<sup>2</sup>, 1. *University of Texas, Austin, Texas*, 2. *Kent State University, Kent, Ohio*

Family support is often beneficial, but family members may provide help in ways that make the recipient feel beholden or intruded upon. Grown children (aged 18 to 41,  $N = 592$  reporting on 1,158 parents) rated their perceptions of whether parents provided conflicted support. Parents rated their perceptions of providing support. Multilevel models revealed that offspring's perceptions of conflicted support were associated with: a) features of the support (i.e., less frequent support, greater likelihood offspring experienced life problems necessitating support), b) parents' feelings about providing support (e.g., greater stress providing help, beliefs that grown children should be autonomous), and c) poorer quality relationships between parents and grown children, (e.g., less positive quality, more negative quality, children rating parents as self-absorbed). Negative experiences of family support appear to involve dynamics reflecting parental negative feelings about providing help as well as poor relationship qualities associated with diminished support.

### **AGE DIFFERENCES, INTERPERSONAL MOTIVATIONS, AND POSITIVE VS. NEGATIVE ASPECTS OF SOCIAL TIES IN LATER LIFE**

G. Luong, K.S. Rook, *University of California, Irvine, California*

Social motivations are believed to change with age, leading older adults to pursue emotionally rewarding social relationships and to avoid unrewarding relationships. Little research, however, has explicitly examined age and relational-harmony motivations in relation to positive and negative aspects of older adults' social ties. The current study examined these associations in a representative sample ( $N = 916$ ) of older adults. Analyses that controlled for sex, health conditions, and functional health revealed that older participants did not report stronger relational-harmony motivations, more positive social ties, or more frequent positive social exchanges, but they did report fewer negative social ties ( $p < .001$ ) and less frequent negative exchanges ( $p < .001$ ). Older participants also felt more satisfied with their positive exchanges ( $p < .001$ ) and less bothered by negative exchanges ( $p < .01$ ). The roles of age and interpersonal motivations in shaping different facets of older adults' social ties will be discussed.

## **NEGATIVE SIDE OF POSITIVE INTERACTIONS: AGE DIFFERENCES IN EXPOSURE AND REACTIVITY TO POSITIVE DAILY INTERACTIONS**

K.S. Birditt, *Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Older people report fewer tensions in their relationships than younger people but less work has been done examining daily positive interactions. This study examines age differences in daily positive interpersonal interactions and their links with well-being. Participants included 110 adults ages 40 to 95 who completed daily phone interviews every day for 14 days. Each day participants reported whether they experienced interactions that made them feel good or happy and completed assessments of their well-being. Participants described an average of 1.38 positive interactions each day. There were no age differences in the frequency of positive interactions. The influence of positive interactions on well-being varied by age. Middle aged individuals reported greater negative affect when they reported more positive interactions. Oldest old individuals reported more cognitive interference when they had more positive interactions and lower associations between positive interactions and positive affect. The findings suggest that positive interactions are not universally beneficial.

## **NEGATIVITY WITHIN MEXICAN ADULTS' POSITIVE FAMILY RELATIONSHIPS**

H. Fuller-Iglesias, *Human Development and Family Science, North Dakota State University, Fargo, North Dakota*

Recent studies have highlighted the often ambivalent nature of family social support. Though the importance of family relationships within Mexican culture has been increasingly studied in recent years, little is known about the prevalence and implications of ambivalence within these relationships. Using data from the Survey of Social Relations and Well-being in Mexico (Fuller-Iglesias & Antonucci, 2009), this study explores negativity within positive family relationships and identifies the association with well-being. Selected participants (aged 30-90) reported highly positive relationships with their spouses ( $N = 571$ ), siblings ( $N = 471$ ), or children ( $N = 382$ ). Despite this high positivity, some participants reported negativity in the form of irritating, demanding, controlling, and arguing behaviors, with prevalence varying by relationship. Regression analyses indicated that negativity was more prevalent among men and individuals of lower socioeconomic status. For spousal and sibling relationships, irritating behavior was associated with stress, and controlling behavior was associated with depressive symptoms; whereas, negativity in the child relationship did not predict well-being. Implications will be considered in light of the unique cultural context.

## **SESSION 1880 (SYMPOSIUM)**

### **THE MEANING OF MEMORY: CONVERGING OPERATIONS FROM REMINISCENCE, NARRATIVE, AND AUTOBIOGRAPHICAL MEMORY**

Chair: *T.W. Pierce, Department of Psychology, Radford University, Radford, Virginia*

Discussant: *L. Yancura, University of Hawaii at Manoa, Honolulu, Hawaii*

Life stories, or memories of one's personal history, are increasingly recognized as an important source of benefits for both storytellers and listeners. The Life Story is of central importance to a number of disciplines within gerontology, including reminiscence and life review, narrative studies, and autobiographical memory. However, these disciplines have developed as independent traditions of research and practice, with their members pursuing different goals derived from different theoretical perspectives and using different methods. The goal of this session, sponsored by the Reminiscence and Aging Interest Group, is to examine the degree to which the fields of reminiscence, narrative, and auto-

biographical memory overlap with and complement each other in their use of life stories to explore the personal past. Speakers representing each area will (a) explore the interface of these three areas, with examples drawn from empirical research, (b) examine the effects of autobiographical writing and oral reminiscence on self-concept and the formation of new friendships, (c) describe the functions of reminiscence in older Black adults, and (d) present a mathematical model of the reminiscence bump in autobiographical memory and its relationship with subjective well-being. The four presentations illustrate the degree to which theoretical and practice-based links among the conceptually distinct fields of narrative, reminiscence, and autobiographical memory can be forged through a mutual recognition of the life story as a fundamental unit of analysis.

### **THE LIFE ALREADY LIVED: LOOKING BACK THROUGH DIFFERENT CONCEPTUAL LENSES**

S. Bluck, *University of Florida, Gainesville, Florida*

This talk provides an introduction to the symposium through analysis of the interface of adult developmental literatures on the life story, reminiscence, narrative, and autobiographical memory. These areas share a common focus on psychosocial representations of 'the life already lived,' and all suggest that the personal past can be used adaptively as a resource in aging. They also vary substantially, however, through differential emphasis on several components. These include the relative focus on 'big vs. little' stories, significant versus everyday past events, language as integral to recall, past events that are shared with others versus recalled privately, and views of the reconstructive nature of recalling the personal past. Illustrative empirical examples will be used to highlight the strengths of methods from the life story, narrative, and autobiographical memory traditions. The extent to which synthesis across areas might be practical and fruitful will be discussed.

### **USING WRITING AND REMINISCENCE GROUPS TO IMPROVE SELF-CONCEPT IN OLDER ADULTS: FINDINGS FROM A RANDOMIZED CONTROL TRIAL**

K. de Medeiros<sup>1</sup>, A. Mosby<sup>2</sup>, *1. Miami University, Oxford, Ohio, 2. University of Maryland Baltimore County, Baltimore, Maryland*

Although the idea that writing or talking about the past will ultimately have a positive effect on self concept and overall wellbeing is at the center of many writing and reminiscence interventions, there have been few randomized controlled trials to test these constructs. In the current study, we conducted baseline testing on self-concept (TSCS), depression (GDS), and subjective wellbeing (SF36) on 51 older adults living in retirement communities before randomizing them to one of three groups: a structured autobiographical writing group, an oral reminiscence group or a wait list control. We conducted follow-up testing at eight weeks and 3 months and found significant improvement in several domains of self concept (TSCS and SF36) over time with greater improvement in the writing group, but not in depressive symptoms. Overall our findings support the potential effectiveness of such interventions in a variety of settings for older adults.

### **SOCIOCULTURAL INFLUENCES ON REMINISCENCE FUNCTIONS IN OLDER BLACK ADULTS**

J. Shellman, *University of Massachusetts Lowell, Lowell, Massachusetts*

This paper will present the results of a descriptive survey study that examined the influence of sociocultural variables on the patterns and functions of reminiscence in a sample of community-dwelling older Black adults ( $N=238$ ). Data were collected using the 39 item Modified Reminiscence Functions Scale (MRFS) in two urban areas in the northeast. Age and gender were positively associated with the reminiscence functions to teach/inform and pass on family history while church attendance was found to be negatively associated with bitterness revival. Regression analysis revealed age, gender and church attendance as

predictors of reminiscence functions in older Black adults. These results have implications for how reminiscence is facilitated with older Black adults to improve their mental health and well-being. Recommendations for future reminiscence research with older Black adults will be discussed.

### **THE DYNAMICS OF THE REMINISCENCE BUMP IN OLDER ADULTS**

J.J. Schroots<sup>1</sup>, T.W. Pierce<sup>2</sup>, 1. ERGO/University of Groningen, Amsterdam, Netherlands, 2. Redford University, Virginia, Virginia

Older adults recall a disproportionately high number of life events that occurred in late adolescence and/or early adulthood. The pattern is referred to as the “reminiscence bump” and has been empirically demonstrated with widely divergent techniques, including the Life-line Interview Method (LIM). To study the dynamics of the reminiscence bump, the Janus model of two coupled systems (Schroots, 2008) has been developed for the simulation of various event patterns – e.g. life-lines - as they emerge over the life-span. In this presentation we report data from the Amsterdam Longitudinal Study of Autobiographical Memory showing that older adults experiencing higher levels of loneliness are most likely to devote larger portions of life-lines to the bump period. Fits of these results to the Janus model support the hypothesis that higher levels of loneliness reflect a need to draw on memories from a period of life more filled with meaningful personal relationships.

## **SESSION 1885 (SYMPOSIUM)**

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### **THE ROLE OF PERCEPTIONS OF AGING IN BEHAVIOR AND ADJUSTMENT: EFFECTS OF CONTEXTS AND DOMAINS**

Chair: A.E. Kornadt, Department of Psychology, Friedrich-Schiller-Universität, Jena, Germany

Co-Chair: M. Wiest, German Centre of Gerontology, Berlin, Germany

Discussant: B.R. Levy, Yale School of Public Health, New Haven, Connecticut

A vast amount of research attests to the influence that perceptions of old age, aging, and the old have on developmental regulation and adjustment across the life span. However, only recent studies have acknowledged the differentiated nature of those perceptions and the moderating role of context factors in their influence on individual aging processes. The present symposium picks up on these recent advances and gaps in research, and demonstrates the influence of domain-specific perceptions of aging on subjective and objective indicators of adjustment. Using data from the German Ageing Survey, a large representative longitudinal study, Wurm, Schütz, and Wolff demonstrate that societal and environmental context factors such as the density of medical care influence whether a positive view on aging is related to the occurrence of chronic diseases. Also analyzing data from the German Ageing Survey, Wiest and Wurm provide evidence for differential effects of domain-specific aging self-perceptions on mortality. Kornadt and Rothermund show that general age stereotypes and personal future self-views are differentially related to the subjective importance people assign to specific life domains in the face of expected gains and losses. Finally, by an intervention study, Klusmann, Evers, Schwarzer, and Heuser explain how physical exercise in old age buffers against a negative view on one's aging. Together, these presentations demonstrate the importance of a differentiated and multidimensional view on perceptions of aging for an understanding of their effects on the aging process.

### **ON THE MEANING OF HEALTH AND CONTEXT FACTORS FOR A POSITIVE VIEW ON AGING**

S. Wurm<sup>1</sup>, B. Schütz<sup>2</sup>, J.K. Wolff<sup>1</sup>, 1. German Centre of Gerontology, Berlin, Germany, 2. University of Tasmania, Hobart, Tasmania, Australia

Whether or not people have positive views on aging (PVA) depends considerably on individual health status and on health supply in the environment. We examined whether the structural density of health supply (DHS) plays a role in the extent to which chronic disease (CD) influences PVA. Using data from the German Ageing Survey (age range: 40-85, N=6.151), hierarchical multi level models were estimated to investigate whether DHS at the county level had an impact on the relationship between CD and PVA. The DHS by general practitioners (GPs) was considered as indicator for opportunity structures of medical care on the county level. The findings support the hypothesis of a cross-level interaction between CD and DHS. Findings suggest that the negative relationship between CD and PVA can be buffered: In counties with a higher DHS, CD are of lower importance for PVA than in counties with fewer GPs per inhabitant.

### **SELF-PERCEPTIONS OF AGING AND LONGEVITY: BENEFITS IN OLD AGE**

M. Wiest, S. Wurm, German Centre of Gerontology, Berlin, Germany

Previous studies have shown that longevity is increased by positive self-perceptions of aging (SPA). Based on domain-specific SPA, the present study examines whether the perception of aging as associated with both physical losses and developmental gains has an impact on longevity depending on age. Data comes from the German Ageing Survey (N=3.191, 40-85 years). 14-year survival was predicted by domain-specific SPA, and the effect of age was explored. Perceiving aging as associated with gains predicted higher longevity (HR = .80, 95% CI = .70-.92, p = .001; controlling for socio-demographics and health indicators); however, expecting physical losses was not associated with longevity. Positive SPA were more important among older adults (65+ years) as compared to middle-aged adults (40-64 years). Findings support that positive SPA are beneficial for longevity. Once age-related changes become more salient, the view that aging is still associated with gains becomes more important.

### **WHO CARES FOR WHAT? EFFECTS OF PERCEPTIONS OF AGING ON THE IMPORTANCE OF LIFE DOMAINS**

A.E. Kornadt, K. Rothermund, Department of Psychology, Friedrich-Schiller-Universität Jena, Jena, Germany

What we think about being and getting old has been shown to influence action selection, well-being, and health, especially in old age. In our study, we investigated how perceptions of aging are related to the subjective importance people assign to different life domains and thus regulate adjustment in the face of expected gains and losses. We assessed views of the self as an old person, current self-views, and importance ratings in eight different life domains (N=769, aged 30 to 80). Future self-views were related to domain-specific importance ratings, but only for persons with a more positive current self-view. If current or future self-ratings were negative, domains were rated as less important indicating disengagement. In life domains that are related to social goals (family, friends, leisure), this relationship was especially pronounced for older participants. The results attest to the pivotal role of age-related expectations for developmental regulation throughout the life span.

### **BECOMING PHYSICALLY ACTIVE MEANS TO BUFFER NEGATIVE VIEWS ON AGING**

V. Klusmann<sup>2,1</sup>, A. Evers<sup>2,3</sup>, R. Schwarzer<sup>4</sup>, I. Heuser<sup>2</sup>, 1. Psychology, University of Konstanz, Konstanz, Germany, 2. Charité Universitätsmedizin Berlin Campus Benjamin Franklin, Berlin, Germany, 3. University of Heidelberg, Heidelberg, Germany, 4. Freie Universität Berlin, Berlin, Germany

With increasing age, people appear to develop a more negative view on aging which is accompanied with less health behavior and

a worse health status. We examined whether newly engaging in physical exercise can counteract negative views on aging and studied the underlying motivational mechanism. Healthy women (N=247) aged 70-93 years were randomized either to a 6-month 3-day/wk exercise course, an active, i.e., a computer course with equal duration and frequency, or a passive control group. The exercise group showed less negative views on aging as opposed to both the active and the passive control group,  $F(2,225)=5.39$ ,  $p=.005$ . Moreover, the buffering effect of exercise was mediated through a high direct approach orientation which implies a focus on immediate positive emotions derived from being active,  $B=-0.31$ , 95% CI=-0.68 to -0.05. Exercise participation in old age holds the potential to overcome subjective ageist bias through an enhanced orientation on proximal emotional gains.

## SESSION 1890 (SYMPOSIUM)

### WHAT MAKES A RELATIONSHIP? EXAMINATION OF APPROACHES AND METHODS TO THE STUDY OF SOCIAL INTERACTION IN LONG TERM CARE

Chair: P. Saunders, *Neurology, GUMC, Washington, DC, District of Columbia*

Co-Chair: K. de Medeiros, *Miami University, Oxford, Ohio*

Discussant: F. Oswald, *Goethe University, Frankfurt, Germany*

People residing in long-term care (LTC) facilities are faced with many personal challenges, including forming friendships, feeling “at home,” and finding enjoyable, social activities. The ability to develop and maintain relationships is linked with positive psychological and health outcomes in the aging population. These issues affect individuals who are cognitively normal as well as those who suffer from dementia. While research on institutional settings has offered solutions through therapeutic design and caregiving strategies, there is a need to better understand the personal, environmental, and social factors influencing the experience of individuals in LTC. This symposium brings together researchers from a variety of fields to examine the construct of social interaction. Each participant will present original research and/or a survey of methodological issues in this area. From the field of gerontological linguistics, Saunders and de Medeiros examine the issues inherent in defining the unit of social interaction among residents with dementia. From the field of social psychology, Sheehan examines the media’s portrayal of older people living in institutional settings and the choices people make regarding their social interactions. Roberts brings an international perspective to issues of how housing policy affects social interaction. She approaches the study social interaction from an architectural and aging vantage point. Gerontological researcher, Savundranayagam, observes not only how social interaction occur but what is missing from an interaction between staff and residents. This symposium concludes with remarks from Dr. Frank Oswald who brings an interdisciplinary, aging approach.

### HOW MANY SOCIAL INTERACTIONS MAKE A FRIENDSHIP? EXAMINATION OF THE ANALYTICAL PROCESS IN STUDYING SOCIAL INTERACTION AMONG PEOPLE WITH DEMENTIA LIVING IN LONG-TERM CARE SETTINGS

P. Saunders<sup>1</sup>, K. de Medeiros<sup>2</sup>, *1. Neurology, GUMC, Washington, DC, District of Columbia, 2. Miami University, Oxford, Ohio*

People with dementia residing in long-term care (LTC) facilities are faced with many personal challenges, including forming friendships, feeling “at home,” and finding enjoyable, social activities. The ability to develop and maintain relationships is linked with positive psychological and health outcomes in the aging population. These issues affect individuals who are cognitively normal as well as those who suffer from dementia. While research based on institutional settings has offered solutions through therapeutic design and caregiving strategies, there is

a need to better understand the personal, environment, and social factors influencing the experience of individuals in LTC. This paper examines the issues inherent in defining a unit of social interaction. These include who are the participants, how long is an interaction, what needs to occur during an interaction to be considered a social interaction? The challenges include what constitutes language and/or communication within a social interaction. Data are drawn from a mixed methods study on friendship in LTC.

### LEGISLATING HOME: THE IMPACT OF THE REGULATION OF SMALL HOUSE SETTINGS ON SOCIAL INTERACTION FOR LONG TERM CARE RESIDENTS IN NOVA SCOTIA, CANADA

E. Roberts, *Human Environmental Sciences, University of Missouri-Columbia, Columbia, Missouri*

The province of Nova Scotia, Canada recently funded 11 new LTC facilities under government guidelines requiring that all of these facilities be built in the model of the small house community, with multiple cottages of 12-15 residents each, and person centered care as an operational requirement. This qualitative study was conducted comparing two LTC facilities in Nova Scotia to determine the impact of the new guidelines on resident social interaction. The first facility (n=51) was built prior to the funding, and the second (n=49) was one of the first in the province to be designed and built to the new guidelines. Observations and interviews took place for 8 weeks in both facilities. The study findings revealed that while both settings included multiple opportunities for social interaction, it is the complex relational ties between staff, residents, management, and the environmental features of each facility which impact resident patterns of social interaction.

### STRATEGIES FOR NAVIGATING THE SOCIAL WORLD OF ASSISTED LIVING: SOCIAL PSYCHOLOGICAL PERSPECTIVES

N.W. Sheehan, *Human Development & Family Studies, University of Connecticut, Storrs, Connecticut*

Elders living in assisted living and other LTC settings must navigate social relationships with fellow residents, direct care staff and program administrators. However, the social dynamics and social interactions in these settings are not well understood. Some recent media portrayals raise significant concerns regarding how impaired residents are stigmatized or shunned. Current research in residential LTC settings, such as assisted living (AL), highlights the complex social dynamics among residents, staff, and family members and the diverse strategies that residents use in their social interactions. As residents’ personal and interpersonal circumstances change, they may either proactively alter their behavior to limit their social involvement or find that other residents treat them differently because of their increased dependence. From a social psychological perspective, current research about factors influencing the nature of social interactions in AL settings, transitions in social relationships, and strategies for negotiating social involvement in such settings will be discussed.

### WHAT DO MISSED OPPORTUNITIES FOR PERSON-CENTERED COMMUNICATION TELL US ABOUT STAFF-RESIDENT SOCIAL INTERACTION IN LONG TERM CARE?

M.Y. Savundranayagam, *School of Health Studies, Western University, London, Ontario, Canada*

Social interaction with long-term care residents with dementia has been characterized as task-oriented, patronizing, and/or overly directive. Long-term care settings are typically social contexts that emphasize dependency and threaten the personal identity of older residents. Conversations (N=46) between staff-resident dyads were audio-recorded during routine care tasks over twelve weeks. Conversations were coded for (a) person-centered communication, (b) specific instructions, and

(c) missed opportunities where person-centered communication could have been facilitated. Exemplars of missed opportunities and alternative person-centered responses will be illustrated. The findings revealed that missed opportunities highlight the need for staff training. Moreover, the data revealed a common communication sequence where utterances coded as person-centered were followed by utterances coded as missed opportunities. This sequence suggests that the positive impact of person-centered communication may be undermined when such communication is followed by missed opportunities. The findings underscore the importance of sustaining person-centered communication while completing routine care tasks.

## **SESSION 1895 (PAPER)**

### **FINANCES AND HEALTH**

#### **FINANCIAL STRAIN AND HEALTH IN OLDER COUPLES: A FIXED EFFECTS MODEL**

J.R. Kahn<sup>1</sup>, J. Kling<sup>1</sup>, S.L. Szanton<sup>3</sup>, M. Shardell<sup>2</sup>, D. Alley<sup>2</sup>, *1. Sociology, University of Maryland, College Park, Maryland, 2. University of Maryland School of Medicine, Baltimore, Maryland, 3. The Johns Hopkins University School of Nursing, Baltimore, Maryland*

Perceived financial strain is strongly associated with poor health, even after controlling for objective economic status (typically income). This association is often interpreted as the stressful effect of financial hardship on health. Alternately, perceived financial strain may provide better measurement of socioeconomic resources, suggesting that the observed independent association between financial strain and health may reflect variation in financial resources not captured by income. This analysis uses unique longitudinal data on spousal dyads from the 2006 and 2008 waves of the Health and Retirement Study to estimate the association between perceived financial strain (measured by four items in 2006) and three health outcomes measured in 2008 (self-rated health, depressive symptoms and mobility limitations). To overcome the limitation of unmeasured financial resources, we used fixed effects models to assess the relationship between spousal differences in perceived financial strain (correlation within spouses=0.63) and health within a household, thereby accounting for household financial resources (N=1533 spouse pairs). In sex-stratified longitudinal analysis, financial strain was associated with change in each health outcome, but after adjustment for covariates, the only significant association was between financial strain and increases in depressive symptoms. Similarly, fixed effects models found no evidence of an effect of financial strain on self-rated health or mobility limitations, but found a moderately significant association between financial strain and depressive symptoms ( $p=0.065$ ). These findings suggest that the impact of financial strain on health may be due to unmeasured household resources more than a direct effect of the stress associated with financial hardship.

#### **LINKED LIVES IN THE "GREAT RECESSION": PERSONAL AND FAMILY ECONOMIC STRESS AND OLDER ADULT HEALTH**

J.A. Ailshire, *Andrus Gerontology Center, Univ Southern California, Los Angeles, California*

The economic crisis that began in 2008 is expected to have significant immediate and long-term consequences for the health and well-being of the older adult population. However, there is currently limited research on how the recession was experienced by older adults. Furthermore, the experiences of older adults may have been linked to the recession experiences of their family. Therefore, the health and well-being of older adults may have been shaped not only by their own personal experiences in the recession, but also the experiences of their families. Using the linked lives perspective in life course theory as an orienting theoretical framework and data from the nationally representative Health and Retirement Study 2009 internet survey, this study

examined associations between recession-related experiences of financial strain and housing instability and the health and well-being of older Americans. Results show that disadvantaged groups, including non-whites and less educated older adults, were at greater risk of experiencing housing instability or financial strain themselves and were more likely to have family with similar experiences. In addition, net of personal demographic and socioeconomic characteristics, older adults who were themselves or had family affected by the recession were more likely to report having poor health, experiencing difficulty sleeping, and being depressed. In addition to providing new empirical data on how the recession had affected older adults, this study contributes to our understanding of the interdependency of human lives and the significant role of families in shaping individual experiences of social and economic changes.

#### **THE IMPACT OF HEALTH AND FINANCIAL LITERACY ON DECISION MAKING IN COMMUNITY-BASED OLDER ADULTS**

B.D. James, P.A. Boyle, J.S. Bennett, D.A. Bennett, *Medicine, Rush Alzheimer's Disease Center, Chicago, Illinois*

We examined the association of health and financial literacy with decision making in 525 community-dwelling older persons without dementia from the Rush Memory and Aging Project. Health and financial literacy were assessed via a series of questions designed to measure comprehension of health and financial information and concepts. The two scores were averaged to yield a total literacy score. A modified, 12-item version of the Decision Making Competence Assessment Tool was used to measure financial and healthcare decision making (6 items each), using materials designed to approximate those used in real world settings. All 12 items were summed to yield a total decision making score. On average, participants correctly answered 67% of the literacy questions (health=61.6%, SD=18.8%, financial=72.5%, SD=16.0%). In linear regression models adjusted for age, sex, education, cognitive function, income, depression, and chronic medical conditions, total literacy score was positively associated with decision making total score (estimate=0.64, SE=0.09,  $p<0.001$ ), as well as healthcare (estimate=0.37, SE=0.05,  $p<0.001$ ) and financial decision making (estimate=0.27, SE=0.05,  $p<0.001$ ). There was evidence of effect modification such that the beneficial association between literacy and healthcare decision making was stronger among older persons, poorer persons, and persons at the lower ranges of cognitive ability. This study is among the first to show that in older persons without dementia, higher levels of health and financial literacy were associated with better decision making, suggesting that improvements in literacy could facilitate better decision making and lead to better health and quality of life in later years.

#### **THE RELATIONSHIP BETWEEN FAMILY NETWORK, INTERGENERATIONAL TRANSFERS OF FINANCIAL SUPPORT, AND SELF-RATED HEALTH AMONG AGING PARENTS IN URBAN CHINA: PERCEIVED FILIAL PIETY AS THE MEDIATOR**

W. Mao, I. Chi, *School of social work, Univ Southern California, Los Angeles, California*

Objectives. Family network and intergenerational support were shown to be central to the well-being of older adults in Chinese societies characterized by filial piety. China provides a unique context for studying their effects on self-rated health among aging parents. This study explores direct and indirect effects of family network and intergenerational transfers of financial support on self-rated health and examines the role of perceived filial piety as the mediator in the aforementioned relationship among aging parents in urban China. Methods. Data came from the nationally representative study "Sample Survey on Aged Population in Urban and Rural China in 2006," collected by the China Research Center on Aging. A subsample of parents aged 60 and older in urban China (N=7,898) was included in path analysis using Mplus

5.1. Results. The model fit was good ( $\chi^2/df=11.797/1$ ,  $p=0.0006$ ; CFI=0.997; RMSEA=0.038). After adjusting for socio-demographic variables, co-residence with children, robust family network, and perception of children as pious were positively related with self-rated health while providing financial support to children was negatively related with self-rated health. Perceived filial piety of children was shown to mediate the relationship between family network and self-rated health. Conclusion. Besides encouraging and maintaining family network, interventions need to consider the effects of perceived filial piety of children in order to promote self-rated health among aging parents in urban China.

## SESSION 1900 (PAPER)

### MARRIAGE, HEALTH, AND COPING

#### YOURS, MINE, AND OURS: HOW OLDER NEWLYWEDS COPE WITH MCI

N. Brossoie, K.A. Roberto, R. Blieszner, *Center for Gerontology, Virginia Tech, Blacksburg, Virginia*

A marriage in late life can bring unforeseen challenges to newlyweds, such as when one spouse becomes a caregiver for the other before their relationship has time to mature and grow. Using an ethnographic approach, we examined how three couples, married less than three years, coped with the husbands' diagnosis of mild cognitive impairment (MCI). In-depth qualitative interviews were conducted with wives and husbands independently, soon after they had received the diagnosis and 12- and 24-months thereafter. Each couple married believing that incidents of short-term memory loss were signs of normal aging. Analysis revealed three key findings: (1) Couples did not regret marrying and accepted MCI as another health problem to manage together; (2) The lack of relationship history prevented the development of clearly defined household and relationship responsibilities. Husbands assumed they successfully managed their responsibilities, but their wives disagreed. Wives reluctantly took on responsibilities they did not perceive to be their own, including monitoring and managing their husbands' personal health, finances and investments, and long-term care plans, as well as communicating with his family and friends; and (3) Husbands and wives drew emotional support from their own children and friends they knew before the marriage. They did not turn to nor expect support from their spouses' family and friends. Findings suggest that community professionals need to recognize the distinct challenges of newlywed caregivers and offer services that include giving emotional support, identifying coping strategies that include their spouse's family and friends, and providing information about managing symptoms of MCI.

#### POSITIVE AND NEGATIVE MARITAL RELATIONSHIPS AND DEPRESSIVE SYMPTOMS: A GROWTH CURVE ANALYSIS

H. Ahn, *SOCIAL WORK, UNIVERSITY OF WISCONSIN MADISON, Madison, Wisconsin*

Research demonstrates that involvement in marital relationships benefits psychological and/or physical well-being. Marital quality is also known to have significant impact on health. There still remain many ambiguities, however, about the developmental dynamics in which marital exchanges (i.e., marital quality) are associated with changes in depressive symptoms over time. What are the effects of positive and negative marital exchanges on changes in depressive symptoms over time and across the adult life span? Socioemotional selectivity theory, a life course perspective to social goals, suggests that marital exchanges become more important to well-being as people age. I conduct a series of latent growth curve analyses using Mplus version 6.1. Data are from the Americans' Changing Lives study, for the subgroup of respondents ( $n=1,129$ ) who were continuously married across the first three waves (1986, 1989, & 1994). Findings show that negative marital exchanges are significantly associated with the initial levels and rates of change

of depressive symptoms. Especially, negative marital exchanges have more potent effects on the trajectories of depressive symptoms among older adults than younger adults. Positive marital exchanges are not substantially associated with changes in depressive symptoms over time. Education and female are associated with a slower rate of decline in depressive symptoms over time. Overall findings demonstrate that negative marital exchanges have significant effects on the trajectories of depressive symptoms over time especially among older adults. The present study demonstrates the importance of considering marital quality in the understanding of the life course trajectories of psychological well-being

#### DYADIC ASSOCIATIONS BETWEEN MARITAL QUALITY AND PHYSICAL HEALTH IN OLDER COUPLES: EDUCATION AS A MODERATING FACTOR

H. Choi, *Penn State University Altoona, Altoona, Pennsylvania*

Recent research suggests that high-quality marriage is more accessible to people with higher education, whereas the less educated are more likely to experience low-quality marriage. The present study extended the marital inequality literature by examining whether education might moderate the effects of positive and negative marital quality, reported by a spouse (i.e., actor) and his partner (i.e., partner), on changes in functional impairment. Data came from the last 4 waves of the Health and Retirement Survey (2004 - 2010), a biennial study of a U.S. representative sample of men and women aged 50+ and their spouses. The analytic sample consisted of heterosexual couples married to each other over the 6-year period and selected to report their positive and negative marital quality in 2004. For statistical analyses, I estimated a series of lagged Actor-Partner Interdependence Models using SAS PROC MIXED. Results indicated that education moderated actor and partner effects of marital quality on changes in functional impairment. With regard to the actor effect, higher education exacerbated the effect of negative marital quality on increases in the number of functional limitations. By contrast, the partner effect of negative marital quality on increases in functional impairment emerged only among spouses with lower education. Further, the partner effect of positive marital quality on declines in functional impairment was found only among spouses with higher education. The findings on the partner effects suggest that the more educated reap greater health benefits from good-quality marriage, whereas poor-quality marriage put the less educated at greater health risks.

#### LIFE COURSE INFLUENCES OF PSYCHIATRIC DIAGNOSIS ON MIDLIFE INTIMATE ATTACHMENT: DOES MARRIAGE MATTER?

C.E. Franz<sup>1</sup>, A. Ramundo<sup>1</sup>, W.S. Kremen<sup>1,3</sup>, M.J. Lyons<sup>2</sup>, *1. Psychiatry, University of California San Diego, La Jolla, California, 2. Boston University, Boston, Massachusetts, 3. San Diego VA HealthCare System, San Diego, California*

Psychiatric diagnoses are often associated with lower marriage rates and less marital stability. Adults with personality disorders tend to be higher in insecure attachment (high levels of attachment related anxiety and/or avoidance) which may interfere with successful affect regulation and stress reduction. The majority of adults with psychiatric disorders do marry and it may be that marriage functions as a protective factor. We examined whether marital status modulated longitudinal associations between psychiatric diagnoses and attachment. We predicted that married adults with previous psychiatric diagnoses would be more securely attached at age 55 than unmarried adults with prior diagnoses. Participants were 1235 men from the Vietnam Era Twin Study of Aging (average age 55) who were interviewed with the DSM III-R Diagnostic Interview Schedule in 1992 (average age 42). We analyzed outcomes of a diagnosis if it occurred in more than 5% of the sample [major depression (8.3%), PTSD (7%), conduct disorder (7.9%), drug (9.8%) and alcohol dependence (35%)]. Attachment style was assessed with the



Experiences in Close Relationships Scale. Men with previous DSM-III-R diagnoses were significantly less likely to be married and had higher levels of attachment insecurity at midlife. Marriage appeared to mitigate the effects of diagnosis on attachment security in men with externalizing diagnoses, but attachment insecurity was elevated among married men with histories of major depression. Understanding potential risk and preventive factors for interpersonal outcomes across the life course is critical because good interpersonal functioning and social support are important for quality of life in aging adults.

### THE EFFECT OF WIDOWHOOD ON HUSBANDS' AND WIVES' PHYSICAL ACTIVITY

S. Stahl, R. Schulz, *University of Pittsburgh, Pittsburgh, Pennsylvania*

Although the psychosocial correlates of widowhood have been studied extensively, little is known about the effects of widowhood on health behaviors such as physical activity. This prospective study examined the effect of widowhood on physical activity by comparing widowed elders to health status-, age-, and sex-matched married controls. Participants included 396 widows/widowers age 64 to 91 (M age = 72.7 years) who experienced the death of their spouse while participating in a longitudinal, epidemiologic study. Physical activity was characterized in terms of kilocalories (kcal) expended per week using the Minnesota Leisure-Time Physical Activity Questionnaire. Our outcome measure, change in physical activity was defined as the difference in kcal expended before and after the death of one's spouse. We tested a multivariate model using widowhood status (vs. non-widowed control), years of widowhood, age, sex, body mass index, physical functioning, general health status, depressive symptomology, and baseline physical activity as predictors of kcal change. There was no significant effect for widowhood status; however, the widowhood status X sex interaction was significantly related to kcal change [ $F(11, 408) = 33.32, p < .01, R^2 = .47$ ]. Compared to married controls, widowed men, but not women, were more likely to increase their physical activity after the death of their spouse. This unexpected finding raises questions about the types of physical activity widowed men engage in post-death, whether or not these increases in physical activity are sustained over time, and whether they confer health benefits to widowed men.

## SESSION 1905 (PAPER)

### OBESITY & AGING

#### PAYING THE PRICE? THE IMPACT OF SMOKING AND OBESITY ON HEALTH INEQUALITIES IN LATER LIFE

S. Fors<sup>1</sup>, N. Agahi<sup>1</sup>, B.A. Shaw<sup>2</sup>, *1. Aging Research Center, Stockholm, Sweden, 2. University of Albany, Albany, New York*

Aims: The aims of the study are twofold: i) to explore the impact of socioeconomic position, as measured 13 years earlier, on cognitive functioning and mobility impairment in later life, and ii) to explore the extent to which obesity and smoking status can explain socioeconomic inequalities in cognitive and mobility impairments in later life. Methods: Data from a nationally representative sample of Swedish adults aged 56-76 in 1991 who were re-interviewed 13 years later in 2004, was analysed to explore the impact of socioeconomic position, smoking and obesity on cognitive and physical functioning in late life. Results: The results showed that both smoking and obesity in late mid-life were stratified by socioeconomic position. Moreover, the results showed significant associations between socioeconomic position and both cognitive and physical functioning in later life. However, these inequalities in late life function could only partially be explained by the socioeconomic differences in smoking and obesity. Conclusions: The findings of this study suggest that socioeconomic differences in the rates of smoking and obesity may explain some, but not all, of the socioeconomic inequalities in physical and cognitive functioning during old age.

### OBESITY, PHYSICAL ACTIVITY AND MORTALITY AMONG OLDER ADULTS

M. Stommel, *Michigan State University, East Lansing, Michigan*

This study focuses on the interplay of physical activity, BMI levels and mortality risks among persons who already survived at least to age 65. Using linked data files from the National Health Interview Survey (NHIS) from 1997-2004 and the National Death Index (NDI) from 1997-2006, the mortality risks of more than 46,000 U.S. residents older than 64 years of age will be examined. Based on available survey information, respondents were divided into five standard BMI categories and four physical activity levels (using the USDHHD 2008 Physical Activity guidelines). Mainly relying on Cox-proportional hazard models, the analysis of mortality risks focuses specifically on three age cohorts of older adults: U.S. residents aged 65-74, 75-84, and 85 and older (the "oldest old") to investigate trade-offs between physical activity and BMI levels. The models employ days to mortality as the main outcome (from 2 years after the interview—to avoid reverse causation problems—up to 10 years of follow-up) and numerous control variables, including sex, age (within the age categories), race/ethnicity, poverty status, smoking status, alcohol consumption, diagnosis of chronic conditions, etc. The results show that older Americans who are overweight or obese, but continue to exercise, have lower mortality risks than inactive older adults of normal weight. In fact, in each age cohort of older adults both greater physical activity and higher BMI tend to confer additional survival benefits. Reasons include the differential survival of relatively healthy obese persons at older ages.

### FOOD, EXERCISE, AND WEIGHT: THE LIFELONG INFLUENCE OF PARENTHOOD

C. Reczek<sup>1</sup>, M. Thomeer<sup>2</sup>, D. Umberson<sup>2</sup>, M. Underhill<sup>1</sup>, *1. Sociology, University of Cincinnati, Cincinnati, Ohio, 2. University of Texas at Austin, Austin, Ohio*

The transition to parenthood is associated with decreased levels of exercise, increased fatty food consumption, and weight gain, and recent evidence from national longitudinal data shows that these early parenthood experiences have important consequences for weight in later life. Moreover, the consequences of parenthood for weight, food consumption, and exercise vary by gender. However, few studies go beyond population trends to uncover the gendered processes that underlie these patterns. We analyze data from 45 retrospective in-depth interviews with mid to late life parents to examine how parenthood—from pregnancy, to a child's infancy, to adult childhood—shapes parental weight, food consumption patterns, and exercise behavior across the life course. Three primary themes emerge from this analysis. First, we uncover the ways in which transitioning into parenthood promotes and deters healthy eating, regular exercise, and weight gain. Second, we show how the early years of parenthood set a trajectory of weight gain into motion, and articulate how this trajectory is altered over time, as children become adolescents and then adults. Third, we identify how these patterns are gendered. Overall, we find that that early childhood and adolescent parent-child ties are strongly linked to weight gain, lack of exercise, and increased fatty foods as a result of the stress of parenthood, especially among women, and for some, ongoing relationships with adult children promote healthy eating, weight loss, and exercise habits. These findings have important implications for public health initiatives attempting to promote the health of aging parents.

### WEIGHT GAIN IN ADULTHOOD VERSUS LONG-TERM EXPOSURE TO EXCESS WEIGHT: WHAT'S MORE DETRIMENTAL TO HEALTH?

A. Zajacova<sup>1</sup>, J. Dowd<sup>2</sup>, *1. University of Wyoming, Laramie, Wyoming, 2. Hunter College, CUNY, New York, New York*

Research on health consequences of obesity has increasingly focused on long-term patterns of body weight. Two sets of findings have emerged: 1) exposure to excess body weight over a long period of time

is linked to worse health outcomes and 2) weight gain in adulthood was also linked to worse health outcomes. These two perspectives provide conflicting predictions on how excess weight at age 25 would be related to middle-aged health, net of current BMI. We test these two conflicting perspectives: how does early-adulthood body mass impact middle-age health profile, net of current body mass index? We use National Health and Nutrition Examination Survey (NHANES) 1999 to 2010 for data on 25,615 adults age 35-64. We estimate logistic and linear models of biomarkers (systolic and diastolic blood pressure, triglycerides, cholesterol, LDL, CRP, and functional limitations) on current body mass index and body mass index at age 25 (reported retroactively). Preliminary analyses show that independently, higher BMI at 25 and higher current BMI are both related to worse biomarker risk profile. Jointly, however, net of current BMI, BMI at age 25 is negatively associated with middle-aged health. Weight gain appears to be more detrimental to health than long-term exposure to excess body weight. This finding has strong implications for clinical recommendations across the entire adult life span.

### SENIORS' BODY IMAGE: IS THERE A LINK WITH EATING AND WEIGHT-RELATED DISORDERS?

M. Roy<sup>1</sup>, H. Payette<sup>1,2</sup>, 1. *Research Center on Aging, Health & Social Services Center-University Institute of Geriatrics of Sherbrooke, Sherbrooke, Quebec, Canada*, 2. *Department of Community Health Sciences, Faculty of Medicine and Health Sciences, Université de Sherbrooke, Sherbrooke, Quebec, Canada*

Objective: Negative body image is linked with eating and weight-related disorders. There is however a dearth regarding seniors' body image and these disorders. Our objectives were to (1) estimate the prevalence of seniors' body dissatisfaction and eating and weight-related disorders, and (2) examine associations between these variables. Methods: Data were from the first annual follow-up of the Longitudinal Study on Nutrition and Successful Aging (NuAge; Québec (Canada), n=1416, 52.4% female, age=69-83). Gender-specific logistic regressions were conducted to examine associations between seniors' body dissatisfaction ("no" to "Currently, are you happy with your weight?") and prevalence of obesity (BMI (weight/height(m)<sup>2</sup>≥30) and anorexia (self-reported loss of appetite in the last 6 months). Results: Prevalence of seniors' body dissatisfaction was 46.2% (36.6% males, 54.9% females) whereas prevalences of obesity and anorexia were respectively 25.3% (24.6% males, 25.9% female) and 9.0% (7.0% males, 10.8% female). Body dissatisfaction increases the likelihood of being obese (male OR=4.50; 95%CI: 3.10, 6.54, female OR=2.83; 95%CI: 1.97, 4.06). Adjusting for age, education (<12 vs. ≥12 years), household annual income (<40,000\$ vs. ≥40,000\$), and marital status (married vs. other) increase the strength of this association (male OR=5.85; 95%CI: 3.95, 8.67, female OR=5.14; 95%CI: 3.32, 7.96). No significant association was observed between body dissatisfaction and anorexia. Conclusion: In this cohort of independent and generally healthy seniors, body dissatisfaction is quite prevalent and associated with obesity but not anorexia. Further studies will have to investigate correlates of anorexia of aging and whether body dissatisfaction is associated with underweight status and frailty.

## SESSION 1910 (SYMPOSIUM)

### BETTER CARE AND BETTER OUTCOMES THROUGH INTERDISCIPLINARY FAMILY CENTERED APPROACHES TO DELIRIUM ACROSS THE CONTINUUM

Chair: T.A. Cortes, *Nursing, NYU, New York, New York*

One of the most prevalent health issues as older adults move within the health care system is change in cognitive function. Patients with cognitive dysfunction, namely delirium and dementia, present chal-

lenges resulting in more complicated discharges and an increased length of stay. Delirium is of particular concern for older adults with and without dementia because it may not be recognized in the hospital, because patients may be transferred from the hospital to a long-term care facility before the delirium has fully resolved, and because older patients may develop delirium on transfer to the nursing home. Delirium has been described as a "medical emergency" that can lead to poor health outcomes, delayed discharge from a hospital, and re-admission to a hospital from a nursing home. This session will address the urgent need to identify and treat delirium in multiple settings and through transitions. Presentations describe the care environment, precipitating factors leading to delirium, and interventions to promote early diagnosis and resolution of delirium in acute care and in transitions to other settings through interprofessional team and family centered approaches.

### IMPACT OF A STANDARDIZED NURSING ASSESSMENT AND COMMUNICATION OF DELIRIUM ON AN ACUTE MEDICAL UNIT

L.C. Mion<sup>1</sup>, L.M. Solberg<sup>2</sup>, C. Plummer<sup>1</sup>, K.N. May<sup>3</sup>, 1. *Vanderbilt University School of Nursing, Nashville, Tennessee*, 2. *Vanderbilt University School of Medicine, Nashville, Tennessee*, 3. *Vanderbilt University Schools of Medicine and Nursing, Nashville, Tennessee*

A multi-component quality improvement study, using a 7-month pre-post nonrandomized comparative group design was completed to determine whether a structured, standardized nursing assessment for delirium, the Nursing Delirium Screening Scale (NuDESC), with a prompt in the electronic health record (EHR) to notify physicians would be feasible and demonstrate clinical utility. The Quality Improvement components consisted of a) nurse involvement in selecting the NuDESC screening tool and modifying EHR, b) didactic education on recognition of delirium to nurses and physicians, c) electronic health record modifications including prompt to notify the physician in the event of a positive NuDESC screen, and d) twice weekly rounds for ongoing feedback and reinforcement. Outcomes were measured by pre-post changes in recognition of delirium among nurses, nursing documentation of delirium, nurse to physician communication, and physician response. Results demonstrated that use of short, simple screening tool improved nurses' recognition, documentation, and communication to physicians about delirium

### INTEGRATING LANGUAGE AND PROCESSES IN A MULTI-SITE DELIRIUM INTERVENTION STUDY WITH DIFFERENT ELECTRONIC HEALTH RECORDS (EHRs)

D.M. Fick<sup>1</sup>, D. Ariosto<sup>2</sup>, L.C. Mion<sup>4</sup>, A. Yevchak<sup>1</sup>, S.K. Inouye<sup>3</sup>, 1. *Pennsylvania State University, University Park, Pennsylvania*, 2. *Vanderbilt Medical Center, Nashville, Tennessee*, 3. *Aging Brain Center, Boston, Massachusetts*, 4. *Vanderbilt University School of Nursing, Nashville, Tennessee*

Electronic Health Records (EHRs) are used to enhance patient care through structured data input screen design. Our challenge was to adapt local terminologies, screen displays, and documentation across a multi-site delirium study. Little is written on how to maintain treatment fidelity when local systems are integrated. The study objective was to create similar nursing documentation elements across multiple systems. Settings were a 200-bed community, 500-bed regional, and 1000-bed academic medical center in PA and TN. Twenty-seven concepts were organized under three delirium groupings: risk factors (e.g., dehydration), assessment, and interventions. Using the Unified Medical Language System (UMLS) search engine, terms were matched to NLM concept unique identifiers (CUIs). Interoperable data is key to facilitate data sharing across the continuum. Incorporating standard terminology early in study designs creates less disruption to existing clinical workflows,

increases ability to use the EHR data for timely reporting; and enhances the potential to quickly operationalize successful research findings

### **DELIRIUM INTERVENTION FROM ACUTE TO LONG TERM CARE**

T.A. Cortes, T.M. Easter, *Nursing, NYU, New York, New York*

Delirium is associated with complicated discharges. This pilot study examined the feasibility of implementing a process to support interdisciplinary family centered approach to early identification and treatment of patients with delirium and a systematic carryover of that care to a long term care setting. This model emphasizes the nurse and hospitalist co-management of delirium and the importance of the family member /care taker across the continuum from admission to acute care and into long term care to assess the impact of transition on the older adult. Daily from admission to acute care and through one week post readmission to long-term care the 3 Item Nursing Confusion Screen was used by nurses, and, if positive, the physician followed up with the CAM. Data was collected pre and post intervention to compare documented incidence of delirium at discharge from acute care, at admission to and after one week in long term care.

### **INTERDISCIPLINARY TEAM TRAINING FOR EARLY DETECTION AND TREATMENT OF DELIRIUM**

T. Smith, V. Fridman, *Maimonides Medical Center, Brooklyn, New York*

Delirium is often under-recognized in hospitalized older adults, contributing to poor patient outcomes and increased lengths of stay. A retrospective review of ICD-9 code assignment at a large urban medical center revealed that a smaller than expected percentage of discharged patients over age 65 were diagnosed with delirium by physicians. A pilot program was initiated on two patient care units in which nurses completed a daily CAM (Confusion Assessment Method) on older adult patients from the day of admission through discharge. Six months of data showed that 20% of older adult discharges had positive CAMs as assessed by nurses, but only 7% of these patients were assigned an ICD-9 code for delirium on discharge. To better understand this phenomenon, interdisciplinary team training on delirium detection and treatment was initiated so that nurses and physicians understood their collaborative roles in the assessment, identification and management of delirium in hospitalized older adults.

### **VALIDATION OF A SHORT DELIRIUM SURVEILLANCE SCREEN**

R.S. Young, A. Arseven, M.V. Williams, *Northwestern University Feinberg School of Medicine, Chicago, Illinois*

Delirium detection by bedside nurses and physicians is hampered by the lack of easy to use and highly sensitive psychometric screening assessments. We are currently validating a short instrument that employs common inattention tests, assessments of the patient's agitation and sedation, and patient report of having difficulty thinking clearly. Inpatients (age  $\geq$  60), with and without delirium are being assessed by clinical research assistants using the new screening instrument; these results are compared to assessments by trained physician validators using the Diagnostic and Statistical Manual of Mental Disorders IV TR criteria for delirium to determine the new instrument's sensitivity and specificity. The validated instrument would be employed in a serial Bayesian testing arrangement as a first line screening test for delirium, which if positive, would lead to a rigorous confirmatory assessment of delirium. Development of this testing arrangement would allow the implementation of systematic, interdisciplinary delirium surveillance on hospital inpatient units.

## **SESSION 1915 (SYMPOSIUM)**

### **NEUROLOGIC FACTORS RELATED TO PHYSICAL AND COGNITIVE FUNCTION: NOVEL INSIGHTS FROM THE HEALTH ABC STUDY**

Chair: *E.S. Strotmeyer, Epidemiology, University of Pittsburgh, Graduate School of Public Health, Pittsburgh, Pennsylvania*  
Discussant: *T.B. Harris, National Institute on Aging, Bethesda, Maryland*

Age-related neurologic declines are critical physiologic risk factors for cognitive and physical disability in older adults. Neurologic risk factors are important to incorporate into epidemiologic studies of cognitive and physical function. However, extensive neurologic tests are often not feasible for large epidemiologic studies in older adults due to burden on participants, length of tests, and cost-related issues. The Health, Aging and Body Composition (Health ABC) Study enrolled 3075 Medicare-eligible, well-functioning, ambulatory adults aged 70-79 years old (52% women, 42% black) in Pittsburgh, PA and Memphis, TN, in 1997-98, with contacts every 6 months continuing currently. Annual exams were through 2000-01 and bi-annually through 2006-07, with an additional 2007-08 ancillary exam to re-measure peripheral nerve function. Baseline exclusions were difficulty walking  $\frac{1}{4}$  mile, climbing 10 steps without rest, or performing basic ADLs and using mobility aids. We will relate neurologic factors feasible for epidemiologic studies of aging - peripheral nerve function, hearing, vitamin B12, and brain-derived neurotrophic factor (BDNF) - to physical and cognitive function. Poor peripheral nerve function's role in injurious falls (Strotmeyer) and lower quadriceps strength (Ward) will be described longitudinally. Evidence of a vitamin B12 threshold level, above that for clinical deficiency, in central and peripheral neurological function and decline will be presented (Leishear). BDNF will be related to 400-m walk performance (Nocera). Hearing loss associations with cognitive decline will be shown (Lin). The discussant (Harris) will critically review the current research, focusing on future directions to assess neurologic decline in studies of function among older adults.

### **POOR SENSORIMOTOR NERVE FUNCTION INCREASES THE RISK OF INJURIOUS FALLS**

E.S. Strotmeyer<sup>1</sup>, R.M. Boudreau<sup>3</sup>, J.A. Cauley<sup>1</sup>, S.M. Albert<sup>1</sup>, A.V. Schwartz<sup>2</sup>, S. Satterfield<sup>3</sup>, T.B. Harris<sup>4</sup>, A.B. Newman<sup>1</sup>, 1. *University of Pittsburgh, Graduate School of Public Health, Pittsburgh, Pennsylvania*, 2. *University of California, San Francisco, California*, 3. *University of Tennessee Health Science Center, Memphis, Tennessee*, 4. *National Institute on Aging, Bethesda, Maryland*

Older adults experience substantial sensorimotor nerve declines, though relationship to injurious falls is unknown. Seven-year nerve declines were related to semi-annual self-reported fall injuries (N=352; 248/352 self-reported medical treatment) over 2.5 subsequent years (1.6 $\pm$ 0.8 years) in 1131 Health ABC participants. Monofilament detection, sensory vibration threshold, peroneal motor nerve conduction velocity (NCV) and amplitude (CMAP) were assessed in 2000-01 (52.3% women, 32.8% black; 76.1 $\pm$ 2.8 years; 20.2% diabetes) and 2007-08 (28.9% diabetes). Cox regression showed transitioning to low (<1 nV) or sustained low CMAP had HR=1.5 (95%CI=1.05-2.25) and 1.7 (95%CI=1.01-2.73) respectively for first injurious fall and HR=2.1 (95%CI=1.25-3.62) for first medically treated fall with sustained low CMAP, adjusting for demographic, body composition, lifestyle and comorbidity variables. Sustained lack of 1.4-g monofilament detection was associated with first injurious fall: HR=1.3; 95%CI=1.02-1.74. Vibration threshold and NCV decline were not related. Poor CMAP and lack of monofilament detection over time increased injurious fall risk.

## SENSORY AND MOTOR PERIPHERAL NERVE FUNCTION PREDICT LONGITUDINAL LOWER-EXTREMITY QUADRICEPS STRENGTH

R.E. Ward<sup>1</sup>, R. Boudreau<sup>1</sup>, P. Caserotti<sup>2</sup>, T.B. Harris<sup>3</sup>, B. Goodpaster<sup>1</sup>, J.A. Cauley<sup>1</sup>, A.B. Newman<sup>1</sup>, E.S. Strotmeyer<sup>1</sup>, 1. *University of Pittsburgh, Graduate School of Public Health, Pittsburgh, Pennsylvania*, 2. *University of Southern Denmark, Odense, Denmark*, 3. *National Institute on Aging, Bethesda, Maryland*

Poor muscle strength predicts late-life disability and mortality. We assessed whether peripheral sensorimotor nerve function predicts longitudinal quadriceps strength in 1787 older adults (age=76.3±2.8, BMI=27.2±4.6, strength=96.3±34.7 Newton-meters (Nm), female=50.9%, black=34.9%, six-year strength decline=-17.0±22.4 Nm) from the Health ABC Study. Worse baseline peroneal motor amplitude ( $\beta$ =-2.0 Nm per SD lower amplitude;  $p$ <0.01) and velocity ( $\beta$ =-1.4 Nm/SD lower;  $p$ <0.05), 1.4g ( $\beta$ =-3.6,  $p$ =0.001) and 10g ( $\beta$ =-10.6,  $p$ <0.0001) monofilament detection, and average vibration perception ( $\beta$ =-3.3 Nm/SD higher,  $p$ <0.0001) were associated with lower quadriceps strength (isokinetic dynamometer) at baseline and 3 biannual follow-up visits using mixed models adjusted for age, sex, body composition, and diabetes. Strength declined over time ( $p$ <0.0001) at the same rate in all nerve function groups. Worse baseline sensorimotor nerve function predicted lower quadriceps strength but not a faster rate of strength decline longitudinally, suggesting a need for early intervention.

## VITAMIN B12 AND CENTRAL AND PERIPHERAL NEUROLOGICAL FUNCTION: IS THERE A THRESHOLD LEVEL?

K. Leishear<sup>1</sup>, R. Boudreau<sup>1</sup>, S. Studenski<sup>1</sup>, L. Ferrucci<sup>2</sup>, C. Rosano<sup>1</sup>, T.B. Harris<sup>3</sup>, A.B. Newman<sup>1</sup>, E.S. Strotmeyer<sup>1</sup>, 1. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *National Institute of Aging, Baltimore, Maryland*, 3. *National Institute of Aging, Bethesda, Maryland*

B12 deficiency may cause demyelination resulting in peripheral neuropathy and white matter damage. Threshold B12 levels, above clinical deficiency (<148 pmol/L), for central and peripheral neurological function were evaluated in 2326 Health ABC participants (76.5±2.9 years; 48.6% men; 38.4% black) with 2000-01 B12 levels and  $\geq 1$  nerve measure (1.4g/10g monofilament detection; vibration detection; peroneal nerve conduction amplitude and velocity [NCV]) or 2001-02 Digit Symbol Substitution Test [DSST] scores. Longitudinally, 1226 participants (47.1% men; 34.2% black) also had  $\geq 1$  2007-08 neurological measure. We found significant threshold levels of 390 pmol/L for higher NCV ( $p$ =0.02) and 410 pmol/L for lower DSST decline ( $p$ =0.01), adjusting for demographic/socioeconomic/lifestyle factors, CES-D, medications, and comorbidities. A 400 pmol/L threshold for 1.4g monofilament was significant unadjusted ( $p$ =0.04), but this and other outcomes became non-significant after adjustment. B12 levels around 400 pmol/L, 2.7 times the deficient cutpoint, may promote optimal neurological function and lower decline in older adults.

## EVALUATION OF BRAIN-DERIVED NEUROTROPHIC FACTOR AND PHYSICAL FUNCTION IN OLDER ADULTS FROM THE HEALTH ABC STUDY

J. Nocera<sup>1,2</sup>, K. Yaffe<sup>3</sup>, E.M. Simonsick<sup>4</sup>, J. Williamson<sup>5</sup>, A.B. Newman<sup>6</sup>, P. Caserotti<sup>7</sup>, T. Harris<sup>4</sup>, R.I. Shorr<sup>1,2</sup>, 1. *Department of Veterans Affairs, Gainesville, Florida*, 2. *University of Florida, Gainesville, Florida*, 3. *The University of California, San Francisco, San Francisco, California*, 4. *National Institutes of Health, Bethesda, Maryland*, 5. *Wake Forest Baptist Medical Center, Winston-Salem, North Carolina*, 6. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 7. *University of Southern Denmark, Odense, Denmark*

Accumulating evidence suggests that neurotrophins play a significant role in muscular function. We hypothesized that brain-derived neu-

rotrophic factor (BDNF) would be positively correlated with physical function. BDNF was assessed a part of a cognitive vitality substudy of Health ABC. We conducted cross-sectional analysis correlating levels of BDNF with walking speed among Health ABC participants completing a 400 meter walk test. 589 (51 % women; 47 % black; mean age 74.9 ± 3.0 years) subjects completed the 400 meter walk test and BDNF levels measured. Subjects in the lowest (slowest) quintile for walking speed had the highest levels of BDNF whereas those in the highest (fastest) quintile had the lowest levels of BDNF. We did not observe a positive cross-sectional correlation between walk speed and BDNF. Further studies are indicated to delineate the relationship between neurotrophins and muscle function.

## HEARING LOSS AND COGNITIVE DECLINE AMONG OLDER ADULTS

F.R. Lin<sup>1,5</sup>, K. Yaffe<sup>2</sup>, J. Xia<sup>5</sup>, Q. Xue<sup>5</sup>, T.B. Harris<sup>3</sup>, E. Purchase-Helzner<sup>4</sup>, L. Ferrucci<sup>3</sup>, E.M. Simonsick<sup>3</sup>, 1. *Otolaryngology-Head & Neck Surgery, Johns Hopkins, Baltimore, Maryland*, 2. *UCSF, San Francisco, California*, 3. *National Institute on Aging, Baltimore, Maryland*, 4. *SUNY-Downstate, New York, New York*, 5. *Johns Hopkins Center on Aging and Health, Baltimore, Maryland*

Background: Whether hearing loss is associated with cognitive decline is unknown. Methods: We studied 1984 participants (mean 77.4 years) in HealthABC who had audiometric testing in Year 5. Hearing loss was defined by a pure-tone average in the better ear of 25db or greater. Cognitive testing consisted of the Modified Mini-Mental State (3MS) and the Digit Symbol Substitution tests (DSS) performed in Years 5, 8, 10, and 11. Mixed-effects regression models were adjusted for demographic and cardiovascular risk factors. Results: Annual rates of cognitive decline in 3MS and DSS scores were 41% and 32% greater, respectively, in individuals with hearing loss versus normal hearing (3MS: -0.65 points/year [95% CI: -0.73 – -0.56] vs. -0.46/year [95% CI: -0.55 – -0.36],  $p$ =.004; DSS: -0.83 points/year [95% CI: -0.94 – -0.73] vs. -0.63/year [95% CI: -0.75 – -0.51],  $p$ =.015). Conclusions: Hearing loss is independently associated with accelerated cognitive decline in older adults.

## SESSION 1920 (SYMPOSIUM)

### THE VA HOME-BASED PRIMARY CARE MENTAL HEALTH INITIATIVE: INTEGRATED CARE FOR OLDER VETERANS IN THE HOME SETTING

Chair: M.J. Karel, VA Central Office, Washington, District of Columbia, VA Boston Healthcare System, Brockton, Massachusetts, Harvard Medical School, Boston, Massachusetts

The Department of Veterans Affairs (VA) Home-Based Primary Care (HBPC) Program provides comprehensive, longitudinal primary care by an interdisciplinary team in the homes of Veterans with complex, chronic, disabling diseases. The interdisciplinary team includes nurses, physicians, social workers, dietitians, pharmacists, and rehabilitation therapists. In 2007, the VA HBPC Mental Health Initiative integrated Psychologists and/or Psychiatrists into every HBPC team nationally, to respond to the complex mental and behavioral health needs of this population. Veterans in HBPC have high rates of depression, dementia, anxiety, post-traumatic stress disorder (PTSD), substance abuse, and serious mental illness, conditions which complicate management of chronic medical conditions. In the first paper, Dr. Thomas Edes will provide an overview of the VA HBPC model of care, demonstrated outcomes, and the rationale for the Mental Health Initiative. He will describe the emergence of HBPC in Medicare as the Independence at Home Demonstration. In the second paper, Drs. Bradley Karlin and Michele Karel will detail the roles of the Mental Health Provider on the HBPC team and discuss program implementation over the past few years. They will share results of a survey of the Mental Health Providers (N=132) and HBPC Program Directors (N=116) regarding the range of mental

health activities, clinical processes, and models for integrating mental health services in HBPC. In the third paper, Dr. Julie Wetherell, Psychologist, and Anthony Matthews, Social Worker, will describe their San Diego VA HBPC team's experience integrating mental health services into their model of care.

#### **THE VA HBPC MENTAL HEALTH INITIATIVE: PROGRAM IMPLEMENTATION AND PRELIMINARY OUTCOMES**

M.J. Karel<sup>1,2,3</sup>, B. Karlin<sup>1</sup>, *1. Office of Mental Health Services, VA Central Office, Washington, District of Columbia, 2. Mental Health, VA Boston Healthcare System, Brockton, Massachusetts, 3. Harvard Medical School, Boston, Massachusetts*

The VA Home-Based Primary Care Mental Health Initiative integrated Mental Health Providers into every VA HBPC team, to provide mental health assessment and intervention with Veterans and family members and to consult with and train the interdisciplinary team regarding mental and behavioral health issues. Since 2007, at least one Psychologist or Psychiatrist has joined each HBPC program nationally. A 2010 survey of 132 Mental Health Providers and 116 Program Directors found perceptions of fairly strong integration of mental health into the HBPC interdisciplinary care teams; clear patterns of clinical problems addressed and general clinical pathways for addressing mental health issues; and, wide variability across programs in time spent on particular mental health assessment and intervention activities. Ongoing program evaluation and development will focus on consolidating an evidence-based model of mental health care integration in HBPC and providing ongoing education and support for teams implementing this innovative model of care.

#### **INTEGRATING MENTAL HEALTH INTO HBPC INTERDISCIPLINARY TEAM CARE: A VIEW FROM THE FIELD**

J. Wetherell<sup>1,2</sup>, A. Matthews<sup>1</sup>, *1. VA San Diego Healthcare System, San Diego, California, 2. Dept. of Psychiatry, UCSD, La Jolla, California*

The HBPC team in San Diego serves approximately 90 Veterans and includes 5 nurses, 1 physician, 1 geriatric medicine fellow, 1 nurse practitioner, 1 social worker, 1 psychologist, and a part-time dietician and pharmacist, as well as 1 psychology fellow. The Psychologist joined the team in 2007. The team Psychologist and Social Worker will discuss the successes and challenges of integrating a mental health provider into the team's model of care, share what has been most helpful to the team, and how they believe Veterans and families have benefitted from integrated mental health care. The Psychologist will detail how she, and her trainees, provide interdisciplinary, collaborative, and evidence-based mental health care in the HBPC setting.

#### **HOME BASED PRIMARY CARE: FROM VA EXPERIENCE TO EMERGENCE IN MEDICARE**

T. Edes, *Dept of Veterans Affairs, Washington, District of Columbia*

The Department of Veterans Affairs (VA) is working to shift long-term care from institutional to non-institutional settings, toward optimal health, independence and safety. VA Home-Based Primary Care (HBPC) provides comprehensive, longitudinal primary care by an interdisciplinary team in the homes of Veterans with complex, chronic disabling diseases, including dementia and mental illness. The team includes physician, nurse, social worker, rehabilitation therapist, dietitian, pharmacist, and mental health provider. The VA Office of Geriatrics and Extended Care and Office of Mental Health Services collaborated to integrate a Psychologist or Psychiatrist into every HBPC team, to improve chronic disease management, alleviate suffering related to mental illness, improve quality of life, and support family caregivers. With evidence of reductions in both VA and Medicare inpatient days and total costs of care, HBPC is now emerging in Medicare in the Affordable

Care Act, with opportunity to expand access to mental health services for all Americans.

## **SESSION 1925 (SYMPOSIUM)**

#### **USING AN ADAPTIVE LEADERSHIP FRAMEWORK TO IMPROVE GERIATRIC NURSING CARE**

Chair: *K. Corazzini, Duke University School of Nursing, Durham, North Carolina*

Discussant: *R.A. Anderson, Duke University School of Nursing, Durham, North Carolina*

The 2010 IOM *The Future of Nursing* report calls for nurses to embrace "a new style of leadership" to improve care, whereby nurses develop behaviors fostering mutual respect and collaborative relationships, recognizing that "problems arise every day that do not have easy or singular solutions. Leaders who merely give directions and expect them to be followed will not succeed in this environment." (p. 222) We propose the Adaptive Leadership Model as one such "new style" of leadership that, if practiced, will ensure that patients receive the benefits of interdisciplinary team care arising from collaborative relationships and will create opportunities for patients to become full partners in care. This symposium will describe the adaptive leadership framework, based in complexity science, and describe how it has been used in research to examine clinical and managerial leadership for care of older adults. It moves nurses and other geriatric care providers to think beyond traditional, hierarchical management approaches, fostering leadership at all levels of an organization to address complex geriatric care problems. Adaptive leadership differentiates between addressing 'technical challenges' (i.e., care problems with known solutions through technical expertise, e.g., what medication to prescribe) and 'adaptive challenges', (i.e., care problems with no known solution, requiring shifting norms and belief sets, e.g., how an older adult will self-manage a complex medication regimen or how to create culture change). The symposium uses this lens to describe research being conducted at various system levels, including the provider-patient encounter, team-based transitional care, top level management, and culture change interventions.

#### **ENHANCING SELF-MANAGEMENT: THE IMPORTANCE OF PATIENT/PROVIDER INTERACTIONS**

D. Bailey, R.A. Anderson, *Duke University, Durham, North Carolina*

Prior research has described the unrelenting nature of symptoms in Chronic Hepatitis C (CHC) and recently approved therapy is expected to worsen treatment symptoms, creating a myriad of technical and adaptive challenges. Thus, this is a useful population of older adults in which to use the Adaptive Leadership model to examine provider interactions with patients and their potential to influence self-management (SM) of symptoms. This presentation will describe the AL model and how it will be applied in a longitudinal study of 18 older CHC patients and their care providers to describe technical and adaptive challenges and approaches during care encounters. We will describe our mixed-methods longitudinal case study protocol, to include data collection methods, coding, and the use of joint matrix analysis to integrate longitudinal qualitative and quantitative data.

#### **ADAPTIVE LEADERSHIP STRATEGIES INFLUENCE DISCHARGE PLANNING IN AN SNF**

M. Toles<sup>1</sup>, K. Abbott<sup>2</sup>, R.A. Anderson<sup>1</sup>, *1. Duke University, Durham, North Carolina, 2. University of Pennsylvania, Philadelphia, Pennsylvania*

Older adults require assistance from interdependent providers to plan discharges from skilled nursing facilities (SNF) to home. Using an adaptive leadership framework, we explored the technical work (e.g., patient teaching) to address technical problems and adaptive leadership

strategies (e.g., behaviors that foster information exchange and problem-solving) used by SNF staff (N=20) to facilitate the adaptive work of patients as they collaborated in discharge planning. Adaptive leadership strategies were described for three teams of patients and staff using social network analysis. Data from interviews and field observations were used to describe technical work and further explore adaptive leadership and associated discharge-planning outcomes. We found that weak mutual ties between social workers, licensed practical nurses and family members limited information exchange and problem-solving and, thereby, the timeliness, completeness and patient satisfaction with discharge planning. Our findings suggest that improved adaptive leadership strategies are important resources for effective discharge planning in SNFs.

#### RECONSIDERING HIGH NURSING HOME TURNOVER AS AN EXTREME CONDITION OF COMPLEX SYSTEMS

S.R. Hunt, K. Corazzini, R.A. Anderson, *School of Nursing, Duke University, Durham, North Carolina*

Viewing nursing homes (NH) as sluggish systems without extreme conditions fosters inattention and unpreparedness, both of which have resulted in rapid deterioration and failures in other industries. This study aims to examine NH staff turnover as an extreme condition, explore emergent behaviors in the context of extremity, and identify adaptive leadership intervention strategies. Longitudinal data from one NH case (n=97) experiencing extreme staff turnover were collected by two field researchers over a nine-month period, transcribed, and analyzed using Atlas.ti by an interdisciplinary research team. Literature-based and emergent codes facilitated analysis of the unfolding story. Coded data were sorted and analyzed for themes using matrices (Crabtree & Miller, 1999). New managers' responses to turnover intensified extremity recapitulating turnover over time. Emergent behaviors, practice conditions and care outcomes met criteria for extreme contexts; technical, command-and-control leadership by short-tenured managers failed to produce desired outcomes and highlight the need for adaptive leadership strategies.

#### IMPLEMENTING CULTURE CHANGE IN NURSING HOMES: AN ADAPTIVE LEADERSHIP FRAMEWORK

K. Corazzini<sup>1,4</sup>, J. Twersky<sup>2,4,3</sup>, H. White<sup>2,4</sup>, S.R. Hunt<sup>1</sup>, G.T. Buhr<sup>2,4</sup>, E.S. McConnell<sup>1,4,3</sup>, M. Weiner<sup>2,4,3</sup>, C. Colon-Emeric<sup>2,4,3</sup>, *1. Duke University School of Nursing, Durham, North Carolina, 2. Duke University School of Medicine, Durham, North Carolina, 3. Geriatric Research, Education and Clinical Center, Durham Veterans Affairs Medical Center, Durham, North Carolina, 4. Center for the Study of Aging and Human Development, Duke University, Durham, North Carolina*

The culture change movement in nursing homes aims to improve care by implementing person-directed care in home-like settings; it is estimated that well over 50% of nursing homes in the U.S. are engaged in some aspects of culture change (Doty, Koren, & Sturla, 2008). This study describes key facilitators and barriers to implementing culture change from the perspective of staff, using a complexity leadership framework. The study design was a qualitative, 'broad-involvement' focus group study design (Krueger & Casey, 2009) of staff perceptions in 3 nursing homes (N=8 groups of nursing staff, medical care providers, and administrators). Analysis was conducted using immersion/crystallization and template organizing techniques. Results indicate that nursing staff primarily identified adaptive leadership facilitators, whereas medical care providers and administrators articulated primarily administrative leadership facilitators. All groups identified adaptive challenges as barriers. Results are discussed in the context of developing effective leadership strategies to implement culture change.

## SESSION 1930 (PAPER)

### INTERNATIONAL APPROACHES TO OLDER ADULT CARE

#### SOCIOECONOMIC INEQUALITIES IN THE PROCESS OF DISABILITY AMONG CHILEAN OLDER PEOPLE: A LONGITUDINAL STUDY

A. Fuentes<sup>1</sup>, C. Albala<sup>2</sup>, H. Sanchez<sup>2</sup>, L. Marques<sup>2</sup>, *1. School of Public Health, Faculty of Medicine, University of Chile, Santiago, Chile, 2. Institute of Nutrition and Food Technology, University of Chile, Santiago, Chile*

**Introduction:** Developing countries are experiencing an accelerated process of population ageing in a context of growing economic inequalities. Chile is one of the Latin-American countries with more unequal income distribution, and one of the most aged countries of the region. Key to the process of human ageing is the maintenance of functionality. Environmental factors such as the socioeconomic position can play a key role in this process. **Aim:** To describe and compare the process of Chilean elderly disability by socioeconomic position, providing unprecedented information about the dynamics of disability in older adults among Latin-American countries. **Methods:** Data came from a longitudinal study following 2000-2010 the SABE cohort (Health, Welfare and Ageing). This is a probabilistic and representative sample of 1301 community-dwelling adults aged 60+y in the Chilean capital. Functional limitation was defined as difficulty or impossibility to perform 1 ADL, and/or 1 IADL and/or 3 mobility activities. Socioeconomic status was assessed combining household equipment, wealth, and education. **Results:** The initial prevalence of functional limitation was 47.3%(95%CI:44.2;50.4) with a clear socioeconomic gradient (60.1% low; 47.6% medium, and 28.7 high; p>0.001). In the following-up the gap by socioeconomic decreases, although significant differences remains. Mortality also shows large differences by SES having higher rates of death in low and middle socioeconomic levels. The gap decreased at 10 years follow-up. The annual incidence of limitation 2000-2010, is higher among older adults of high SES (4.6%) in comparison to those of the middle (4.2%) and low (3.7%) levels. **Conclusion:** This study corroborates the social stratification of health in the elderly, expressed in their functionality. In Latin-American countries, policies aimed at active aging should be focused on prevention of exposure to physical and environmental risks, and to try to compensate any deficiencies in both external and internal resources, particularly among poor older people.

#### IMPACT OF SOIL -TRANSMITTED HELMINTHIASIS ON EOSINOPHILIA AND ANEMIA AMONG ELDERLY IN THE PHILIPPINES

J.Z. Dungca<sup>1</sup>, C.M. Bermido<sup>2</sup>, *1. Research and Evaluation Office, Centro Escolar University, Manila, Philippines, 2. Centro Escolar University, Manila, Philippines*

Studies on parasitism among children are well documented, but the occurrence of parasitism among Filipino elderly, and its impact on anemia, has not been investigated. Soil transmitted helminthiasis was examined among 150 elderly (≥ 60 years old) living in the government-run institution (n=50) and in rural (n=50) and urban (n=50) communities. Stool samples of 48 males and 102 females were examined using formalin ether concentration technique. Blood samples of those who were positive for helminthes were tested for the relative eosinophil count, hemoglobin and hematocrit. The participants were also interviewed using self-made survey questionnaire on hygiene practices and health risk behavior related to parasite transmission. Infection rate was identified at 44%; 21% had multiple parasitism. *Ascaris lumbricoides* was the predominant helminth identified, followed by *Trichuris* and Hookworm. Eosinophilia was seen in 82.4% of those who were positive for helminthes; anemia was seen in 41.2% of those with eosinophilia. Very

significant positive correlations ( $p < 0.01$ ) were noted between helminthiasis and eosinophilia, and helminthiasis and anemia. A significantly higher prevalence rate was seen in older people living in the rural area (17.3%) and in government-run elderly home (16%) as compared to those in urban household (10.7%) ( $p < 0.01$ ). Direct contact with soil without foot wears, gardening, unsanitary practices, and congestion, were found as risk factors for transmitting helminthes. The results of this study have established direct evidence linking parasitism as the cause of anemia among the elderly. Deworming program and health education on helminthes' transmission should be made for this sector of society.

#### **MODIFIABLE FACTORS IN AGEING WELL: AUSTRALIAN LONGITUDINAL FINDINGS**

H. Kendig<sup>1</sup>, C. Browning<sup>2</sup>, 1. *University of Sydney, Centre of Excellence in Population Ageing, Faculty of Health Sciences, Sydney, New South Wales, Australia*, 2. *Monash University, Melbourne, Victoria, Australia*

This paper reports on an Australian longitudinal study identifying potentially improvable factors that can enable older people to 'age well', defined as continuing to live independently in the community with good self rated health and psychological well-being (these key features of ageing well were identified in qualitative research). The research was developed with support from the Victorian Health Promotion Foundation and subsequently funded by the National Health and Medical Research Council. Data were obtained from 1000 participants aged 65 years and over in the Melbourne Longitudinal Surveys of Ageing (MELSHA) in a 1994 community baseline survey at home with biennial follow-up through 2010. Survival analyses were applied to identify the most important baseline predictors for a hierarchy of ageing well outcomes. The most important risk factors for mortality were being male, older age, multi-morbidity, worse self-rated health, functional dependency, greater cognitive impairment, low strain and low levels of social activity. Similarly socio-demographic, health, and a limited range of life style factors predicted entry to residential care. Among survivors in the community, however, continuing health, independence, and well-being were predicted mainly by life style factors including physical activity, nutrition, weight, and social support. Risk factors were found to be different for men and women. The findings suggest that healthy life styles are important for quality of life among older people and the need to target health promotion interventions specifically to older men and women.

#### **SESSION 1935 (SYMPOSIUM)**

##### **EMERGING SETTINGS FOR PARTICIPANT-DIRECTED SERVICES: EXPLORING VETERANS' SERVICES, MANAGED CARE, AND BEHAVIORAL HEALTH PROGRAMS**

Chair: *L. Simon-Rusinowitz, School of Public Health, University of Maryland, College Park, Maryland*

Co-Chair: *K.J. Mahoney, School of Public Health, University of Maryland, College Park, Maryland*

Discussant: *K.J. Mahoney, School of Public Health, University of Maryland, College Park, Maryland*

The number of participant-directed (PD) programs for people of all ages, with diverse disabilities — including elders and people with cognitive impairment — has grown over the past decade. A national inventory of PD programs, including the Cash & Counseling model, identified over 240 programs nationwide. This symposium will discuss PD innovations (also called consumer-directed and self-directed) in three emerging settings: veterans' services, managed care, and behavioral health programs. The symposium will begin with an overview of PD programs. Next, Ellen Mahoney will present findings from a survey of program coordinators in the Veteran-Directed Home and Community-

Based Services Program. This program serves nursing home-eligible veterans with cognitive and functional impairments. Program coordinators rated the program's effectiveness in meeting veterans' needs and improving their ability to stay in their homes and communities. Mark Sciegaj will present findings from an inventory of PD options offered in managed care long-term services and supports programs, along with in-depth descriptions of how managed care plans, fiscal agents and participants coordinate in two states. Finally, Lori Simon-Rusinowitz will present findings from an "environmental scan" designed to understand barriers and facilitators to self-direction in behavioral health services and ascertain interest among key stakeholders. State and county program directors were invited to participate in an informative webinar, respond to a follow-up survey, and participate in follow-up interviews that explored their views and concerns. Results suggest interest in adapting and expanding the model to this important population. Kevin Mahoney will serve as a discussant

##### **HOW DO THE EXPERIENCES OF PROGRAM COORDINATORS SUPPORT SUSTAINABILITY OF VETERAN DIRECTED HCBS?**

E. Mahoney<sup>1</sup>, D. Schoeps<sup>2</sup>, D. Kayala<sup>3</sup>, H. Kapsak<sup>1</sup>, N. Foxe<sup>3</sup>, P. O'Keefe<sup>3</sup>, K.J. Mahoney<sup>3</sup>, 1. *Connell School of Nursing, Boston College, Chestnut Hill, Massachusetts*, 2. *Veterans Health Administration, Washington, DC, District of Columbia*, 3. *Boston College Graduate School of Social Work, National Resource Center for Participant-Directed Care, Chestnut Hill, Massachusetts*

Veteran Directed HCBS targets Veterans with cognitive and functional impairments who are nursing home eligible but prefer to remain at home. We conducted a national survey of Program Coordinators (N=27) from Medical Centers where 886 Veterans have participated in VDHCB as part of a process and outcome evaluation. Coordinators rated effectiveness (from 1 "not effective" to 5 "highly effective") in 4 domains: meeting Veteran's needs (M 4.1, SD 1.0), helping Veterans remain living at home (M 4.4, SD 0.8), improving satisfaction with services and care (M=4.2, SD 0.9), improving accessibility of goods and services (M=4.2, SD 0.9). Program aspects most predictive of these positive outcomes were identified from content analysis of qualitative data. Exemplars are used to gain insight into how a wide range of Veterans used the unique and flexible options to impact quality of care and quality of life. Implications for sustainability and future development will be discussed.

##### **PARTICIPANT-DIRECTED OPTIONS IN MANAGED LONG-TERM SERVICES AND SUPPORTS**

M. Sciegaj<sup>1,3</sup>, P. Saucier<sup>2</sup>, I. Selkow<sup>3</sup>, K.J. Mahoney<sup>3</sup>, 1. *Health Policy and Administration, Penn State University, University Park, Pennsylvania*, 2. *THOMSON REUTERS (HEALTHCARE) INC., CAMBRIDGE, Massachusetts*, 3. *National Resource Center for Participant-Directed Services, Boston College Graduate School of Social Work, Chestnut Hill, Massachusetts*

The number of publically funded participant-directed long-term services and supports (LTSS) programs has grown considerably over the past decade. There are also a growing number of states that either have implemented Medicaid Managed LTSS (MLTSS) or plan to in the near future. Using data from the National Survey of Publically Funded Participant-Directed Services Programs and Thomson Reuters' inventory of MLTSS, this presentation will describe the general characteristics of participant-directed options offered in MLTSS programs. Characteristics include population served, program size, financial management services (FMS) type, and services and supports offered. In addition, the presentation will provide in-depth descriptions of how managed care plans, FMS agents and participants interface in two states.

## ENVIRONMENTAL SCAN OF SELF-DIRECTION IN BEHAVIORAL HEALTH

L. Simon-Rusinowitz<sup>1</sup>, D.M. Loughlin<sup>1</sup>, B. Croft<sup>2</sup>, D. Hughes<sup>2</sup>, K.J. Mahoney<sup>3</sup>, 1. *School of Public Health, University of Maryland, College Park, Maryland*, 2. *Health Services Research Institute, Cambridge, Massachusetts*, 3. *Boston College, Chestnut Hill, Massachusetts*

> Self-direction is based on the premise that people with disabilities can and should make their own decisions about the supports and services they receive. Currently, self-directed programs (also called consumer- and participant-directed programs) help people of all ages and with all types of disabilities maintain independence by enabling them to determine what supports and services work best. However, behavioral health efforts have mainly focused on peer-provided services and shared decision-making, but not on a budget authority model. As part of an environmental scan designed to understand barriers and facilitators to self-direction in behavioral health, and ascertain interest among stakeholders, state and county agency directors were invited to participate in an informative webinar, respond to a follow-up survey, and participate in a longer interview that explored their views and concerns. Results suggest interest in adapting and expanding the model to this important population.

## SESSION 1940 (SYMPOSIUM)

### IOM REPORT ON THE MENTAL HEALTH/SUBSTANCE USE WORKFORCE FOR GERIATRIC POPULATIONS

Chair: R. Stone, *LeadingAge, Washington, District of Columbia*  
Discussant: P. Kemper, *US Department of Health and Human Services/ASPE, Washington, District of Columbia*

This symposium summarizes the findings and recommendations from a recently released Institute of Medicine (IOM) study on the current status and future of the mental health workforce caring for geriatric populations. Committee members will review the current and projected MH/SU needs of adults age 65 and older; describe the current MH/SU workforce, projected demand and barriers to successful development; identify promising MH/SU delivery models that will help to determine the knowledge, skills and competencies required of this workforce; and present the committee's policy and research recommendations. The first panelist will provide estimates of the prevalence of MH/SU conditions in the elderly population and highlight factors that will influence MH/SU trends among older adults in 2030. The second panelist will review trends in the size and composition of the MH/SU workforce caring for older adults, including family caregivers, and will discuss the challenges to improving this workforce and efforts designed to bridge these gaps. The third presentation will identify evidence-based models of service delivery to the geriatric population with MH/SU needs, highlighting implications for workforce capacity and the development of better training, education and incentives for recruitment and retention. The last panelist will summarize the committee's recommendations for improving federal and state-level policy, research and practice that include building on and implementing various Affordable Care Act provisions, developing interagency collaboration to help strengthen this workforce and targeting financial investments to this neglected area. A representative from the federal funding agency will provide closing observations and comments about next steps.

### THE GERIATRIC MENTAL HEALTH AND SUBSTANCE USE WORKFORCE. FINDINGS FROM THE IOM REPORT

M.P. Aranda, *Social Work, Univ Southern California, Hacienda Heights, California*

This presentation addresses the capacity and competence of the mental health and substance-use (MH/SU) workforce to meet the needs of the geriatric population in the U.S. Challenges exist in terms of ascertaining the nature/definition, location, qualifications, and size of work-

force with specific skills who are providing geriatric MH/SU services. Moreover, no single data source exists that provides a comprehensive picture of the workforce. The IOM committee solicited input from professional organizations on training and education, requirements and process for program accreditation, licensing and certification, and trends in the size and makeup of the workforce including direct care providers and family caregivers. We will discuss several distinct challenges in improving the geriatric workforce (e.g., stigma, lack of financial incentives and training opportunities, inadequate early career support and mentorship, difficulty recruiting racial/ethnic minority students) as well as efforts that have been implemented to strengthen the workforce.

### MENTAL HEALTH AND SUBSTANCE USE CONDITIONS IN OLDER PEOPLE: FINDINGS FROM AN IOM STUDY

K. Maslow<sup>2</sup>, R. Stone<sup>1</sup>, 1. *LeadingAge, Washington, District of Columbia*, 2. *Institute of Medicine, Washington, District of Columbia*

Older people have a wide array of mental health and substance use conditions, and many also have coexisting physical health conditions and cognitive impairment that complicate the detection, diagnosis and treatment of the conditions. The IOM Committee assembled available information to estimate the prevalence of mental health and substance use conditions in Americans age 65 and older in 2010. The Committee also reviewed factors that will influence the prevalence of these conditions in older people in 2030, including the growing diversity of the older population and existing mental health and substance use conditions and patterns of service use in the baby boom generation. After attending this session, participants will be aware of the current and future prevalence of mental health and substance use conditions in older people and implications for needed services and related workforce requirements.

### MODELS OF CARE FOR OLDER ADULTS WITH MENTAL HEALTH AND SUBSTANCE USE CONDITIONS

M. Snowden<sup>2</sup>, R. Stone<sup>1</sup>, 1. *LeadingAge, Washington, District of Columbia*, 2. *University of Washington School of Medicine, Seattle, Washington*

The mental health and substance use needs of older adults are complex and typically co-occur with other health problems. The Institute of Medicine Committee decided that to best plan for a more effective and efficient workforce, models of care developed to address chronic conditions and that to effectively treat mental health and substance use conditions should be examined to determine the implications these models have on how to optimize 1) the capacity of the workforce to yield better outcomes, and 2) the training and deployment of health care workers. The Chronic Care Model provides an overarching model for how an improved health care system can address chronic physical problems alongside mental health and substance use issues. Several examples of team-based, effective mental health and substance use programs illustrate the members and specific roles required for implementation of these models across primary care and specialty mental health and substance use settings.

### THE IOM STUDY OF THE MENTAL HEALTH/SUBSTANCE USE WORKFORCE CARING FOR GERIATRIC POPULATIONS: RECOMMENDATIONS FOR ACTION

R. Stone<sup>1</sup>, C.E. Bishop<sup>2</sup>, 1. *LeadingAge, Washington, District of Columbia*, 2. *Brandeis University Heller School, Waltham, Massachusetts*

This presentation summarizes the recommendations of a recent Institute of Medicine study committee that examined issues related to the MH/SU workforce caring for geriatric populations. It calls for relevant federal agencies (CMS, HRSA, NIMH, and SAMHSA) to be held accountable for their responsibilities in addressing the workforce concerns of older adults needing MH/SU care. The report also recommends the establishment of an interagency body within the U.S. Department



of Health and Human Services to coordinate efforts in this area including the development of core competencies, development and dissemination of model curricula and tools and support for wide scale implementation of evidence-based practices. It urges Congress to appropriate funds for training and loan forgiveness in the ACA for workforce development and to target dollars to incumbent and potential MH/SU care professionals. Finally, the study recommends a new national data collection and reporting strategy for geriatric NH/SU workforce planning.

## SESSION 1945 (SYMPOSIUM)

### PARKS, PETS, & PARSNIPS: HOW INTEGRATING AGING RESEARCH & POLICY CAN TRANSFORM THE URBAN ENVIRONMENT

Chair: *A. Glicksman, Research, Phila Corporation for Aging, Philadelphia, Pennsylvania*

Discussant: *A.J. Lehning, University of Michigan, Ann Arbor, Michigan*

An increased interest in the impact of environment and aging among researchers and policy makers alike calls for enhanced knowledge of more sophisticated methods for understanding this relationship and for finding more effective ways to translate research into policy and practice. This session will present findings from an NINR/NIH funded study of the influence that neighborhood environments have on the health of older adults, called Walkability's Impact on Senior Health (WISH). One goal of WISH is to support an effort called Age-friendly Philadelphia (AfP), catalyzed by the Area Agency on Aging, Philadelphia Corporation for Aging. Each of the four papers will demonstrate the ways in which researchers, policy makers, and practitioners from a variety of fields can together help transform cities to be more supportive of seniors. After an introductory overview, Ring will present findings from a Geographic Information Systems (GIS) driven quantitative analysis designed to examine the relation of health behaviors to the environment. Wang will describe a qualitative study of senior gardening and the relation of that study to AfP goals. The panel then turns to the translation of scientific findings into policy and practice. Clark will discuss the ways in which the AfP policy effort has used research findings, especially in regard to urban parks, and Hoffman will explain the use of research to help practitioners better understand the role of pets in the lives of seniors. Together the panelists will present an integrated research/policy effort and show the importance of these new innovative approaches.

### LOCATING PARKS, PETS & PARSNIPS: INTEGRATING GEOGRAPHIC INFORMATION (GIS) DATA INTO SURVEY RESEARCH

L.N. Ring<sup>1</sup>, A. Glicksman<sup>1</sup>, M.H. Kleban<sup>2</sup>, *1. Planning, Philadelphia Corporation for Aging, Philadelphia, Pennsylvania, 2. polisher reseach institute, north wales, Pennsylvania*

New tools for the study of environment and health are emerging from the field of spatial analyses and Geographic Information Systems (GIS). GIS based analyses promise the ability to better integrate the impact of spatial relations on health outcomes into traditional survey type research. Using these methods we tested two hypotheses from our NINR/NIH funded study regarding the impact of environment and age on health behaviors. Characteristics associated with poorer neighborhoods such as vacant properties and crime have effects on whether all adults are physically active and that lack of easy access to groceries have an effect on selected health behaviors as well. However, the interaction of age with health behaviors and environment is more nuanced than we expected. By describing the methods used to test our hypotheses and the results of those analyses we will demonstrate the value of integrating GIS and traditional survey methods in a single study.

### OLDER ADULTS AND PARSNIPS: THE SENIORS AND GARDENING EVALUATION (SAGE) STUDY

D.S. Wang, *Social Work, Long Island University, Brooklyn, New York*

Quantitative analyses allow us to examine the interaction of older adults to their environment but not to understand the motives for their behavior. Understanding the reasons for participation in activities is critical for research and policy designed to make the environment more supportive of older adults. This presentation will describe findings from a qualitative study of the reasons that older adults participate in gardening groups whose goals are to produce fruits and vegetables for consumption. The reason most often cited by respondents as a reason for gardening was the benefit to their mental health. This is a critical finding because improving mental health was not an original goal of the program but turned out to be a very important reason that people participate in this activity.

### PHILLY PETS AND SENIORS: FROM POLICY TO RESEARCH TO PRACTICE

C. Hoffman, A. Glicksman, K.O. Clark, L.N. Ring, *Philadelphia Corporation for Aging, Philadelphia, Pennsylvania*

While there is a growing literature on the impact of pets on human health, there is little research about pet ownership among older adults or about the role of pets in providing care to seniors. This presentation will describe how the Age-friendly Philadelphia effort has contributed to policy, research and practice in the area of pets and seniors. In 2010 GenPhilly, an organization of emerging leaders interested in aging, sponsored a program to bring together professionals and advocates from the animal welfare and aging service communities. A follow-up survey of participants and a new question regarding pet ownership in an omnibus health survey of the Philadelphia area have led to additional research and an informational web page for care managers and seniors called phillypetsandseniors.org. Attendees will learn how research, policy and practice can be mutual reinforcing and about the importance of 'pets and seniors' to each of these groups.

### AGE-FRIENDLY PARKS: HOW RESEARCH SUPPORTS COALITION BUILDING

K.O. Clark, *Planning, Philadelphia Corporation for Aging, Philadelphia, Pennsylvania*

Providing access to outdoor recreation facilities for older adults is a policy goal in many communities. In Philadelphia, which has extensive urban park system and a significant number of older adults with IADL impairments, ensuring that parkland is more accessible has become a key policy goal of the Age-friendly Philadelphia effort. Most parks are administered by the City's Philadelphia Parks & Recreation and fundraising for special improvements is led by the Fairmount Park Conservancy. In 2010, PCA facilitated a coalition with the two agencies and the local association of senior centers to identify, market, and ultimately program signature parks for seniors. The group drafted an age-friendly parks checklist, disseminated a white paper, created GIS maps, and then conducted focus groups. This presentation will cover this process and highlight short-term and long-term goals.

## SESSION 1950 (SYMPOSIUM)

### POLICY SERIES: CONGRESSIONAL AGING ISSUES UPDATE

Chair: *B.W. Lindberg, National Academy on an Aging Society, Washington, District of Columbia*

Discussant: *A. Montgomery, U.S. Senate Special Committee on Aging, Washington, District of Columbia* Discussant: *C. Goldstein, U.S. Senate Special Committee on Aging, Washington, District of Columbia*

Capitol Hill staff, including the Senate Special Committee on Aging, will discuss this year's legislative developments and plans for aging and health policy for 2013. Topics will include the Older Americans Act

reauthorization, income security, and health care reform implementation. Brian Lindberg, a Washington, DC, policy consultant, will moderate this session.

## SESSION 1955 (SYMPOSIUM)

### PROPOSING THAT LIFE GETS BETTER: PERSONAL ACCOUNTS, RESEARCH AND THEORY

Chair: *W. Lustbader, School of Social Work, University of Washington, Burton, Washington*

Discussant: *W. Lustbader, School of Social Work, University of Washington, Burton, Washington*

Age as decline is the dominant paradigm for physical aging based in biological processes. There is increasing support that psychologically, age may bring growth only possible in late-life. In a random telephone survey of over 340,000 Americans (Stone et al., 2010), most claimed that life had gotten better for them as they had gotten older. Theorists from Erikson to Carstensen have posited emotional strengthening, increased interest in contributing to the lives of others, and even a flowering of creativity in later life. Despite a wealth of experiential and scholarly testimony, the idea that life gets better with age still runs directly counter to the negative stereotypes about aging that prevail in American society. This symposium will probe the contention that life gets better as we get older on every level except the physical. Using ideas from her new book, *Life Gets Better: The Unexpected Pleasures of Growing Older*, Wendy Lustbader will explore the unexpected transformations that can occur when we open ourselves to the lessons that have accrued over the decades and release ourselves from prior constraints. Dialogue with symposium participants will be emphasized, following presentations incorporating both research and theory related to late-life growth and development.

### THE WAYS LIFE GETS BETTER: A JUNGIAN PERSPECTIVE

*J. Damron-Rodriguez, School of Public Affairs, University of California, Los Angeles, California*

In the last third of life, growth may come from in Carl Jung's terms "the yearning to explore the un-lived life." Jung presents seven tasks of late-life that lead to fulfillment. Erikson's late-life integrity resonates with aspects of the development of individuation described by Jung. The research of Swedish gerontologist Lars Tornstam resulted in a theory of evolvment known as gerotranscendence. Gene Cohen's descriptions of mature thought processes are further considerations of late-life psychological growth. Comparisons and contrasts of these frameworks for understanding the potential increased sense of self in late-life will be explored. The following questions will be considered: Is the proposal that "life gets better" normative or the description of a potential stage of growth that is extraordinary? If gerotranscendence is accomplished only by some are there predisposing variables that relate to reaching this late-life growth? What are the dimensions of a "better" late-life?

### WHEN LIFE GETS BETTER: VITAL INVOLVEMENT, CREATIVITY, AND ELDER INTEGRITY

*H.Q. Kivnick, School of Social Work, University of Minnesota, Saint Paul, Minnesota*

Recent research on brain physiology, arts participation, and community arts programming demonstrates unexpected potential for creative activity in older adulthood. Research also indicates that such creative activity can provide intrinsic personal satisfaction, promote positive physical and emotional health in participating elders, and contribute to overall community capacity. The construct of vital involvement (VI) (Erikson, Erikson, & Kivnick, 1986) provides a developmental framework for understanding the dynamics of creative activity as central to integrity in later life. Additionally, the VI construct provides a conceptual basis for optimizing creativity in elders, across a wide range of indi-

vidual disability, fragility, and robustness. VI also offers a blueprint for creating community structures (programs; organizations; policies) that support the expression of later-life creativity and celebrate its societal contributions. This presentation elaborates on the connection between VI, elder creativity and psychosocial health, and community vitality. The presentation provides illustrative examples from research and direct practice.

## SESSION 1960 (PAPER)

### EMPOWERING THE CONSUMER IN THE MANAGEMENT AND DELIVERY OF LONG TERM CARE SERVICES

#### FRAIL OLDER PEOPLE'S VIEWS ON RECEIVING ASSISTANCE FOR MOBILITY IN PERSONAL CARE ACTIVITIES

*A. Brandt, The National Resource Centre on Disability, Assistive Technology and Social Psychiatry, The National Board of Social Services, Århus C, Denmark*

With increasing age functional limitations may occur to such a degree that assistance from other people for mobility in personal care activities is required. Even though this kind of assistance is frequent, only little is known about how the persons who receive the assistance experience this. Once a year for three years face-to-face interviews were carried out in two Danish municipalities by experienced occupational therapists. In all 208 persons who had received assistance for a maximum of one year were interviewed by means of a structured interview guide, also including open questions. The participants' mean age was 78.3 years (SD 12.7), 57.2% were female, 35.6% lived in private homes and the remainder in sheltered housing or nursing homes. Most had several functional limitations, mostly in back/legs and arms, and suffered from dizziness. In all 12 assistance situations were investigated. The kinds of assistance the participants most frequently received were for showering, going to bed, and using the toilet. Their satisfaction and feeling of security was generally very high, while the feeling of comfort was in all situations somewhat lower. Getting help to get up from the floor after having fallen was the most uncomfortable situation. No changes between the three years and between the two municipalities were found. The main qualitative explanations for low feeling of comfort were carers' lack of experience and attention, whereas good communication and co-operation increased their feeling of comfort. Furthermore, the feeling of being dependent on other people was uncomfortable. Also concrete comments were given.

#### CHOICE-BASED POLICIES AND AGING

*P. Nadash, Gerontology, University of Massachusetts, Boston, Boston, Massachusetts*

Public policy is moving more and more toward approaches that rely on consumer choice as the driver for cost and quality improvements in health and social care, a trend which some see as the abandonment of vulnerable older individuals to the harsh mercies of the market. This presentation reviews a range of policy initiatives, in the US and abroad, that rely on this mechanism, and discusses developments in the US that fit into this paradigm. Data derive from several studies of choice-based policies conducted by the author. Specific policies discussed include the Swiss and Dutch healthcare systems; the English experiments with Personal Health Benefits (a budget allowing people to purchase a limited package of health services directly) and hospital choice; Cash and Counseling in the US; and recent proposals for transitioning Medicare toward a "premium support" model. The presentation presents a conceptual framework, incorporating findings from behavioral economics and research on older people's responses to such policies (for example, in the Medicare Part C, Part D, and Medigap markets), that suggests how the benefits of choice can be preserved while pro-

tecting those who might be overwhelmed by it. Moreover, the framework distinguishes among the types of choices that people have and identifies where choice-enhancing policies function to genuinely empower people versus where they are less likely to result in optimal outcomes.

### **DEVELOPING A HOME AND COMMUNITY-BASED PATIENT EXPERIENCE SURVEY FOR MULTIPLE POPULATIONS**

E. Frentzel<sup>1</sup>, S. Galantowicz<sup>2</sup>, 1. *Health, American Institutes for Research, Chapel Hill, North Carolina*, 2. *Thomsen Reuters, Cambridge, Massachusetts*

The number of older adults and people with disabilities who receive Medicaid-funded home- and community-based services (HCBS) has increased appreciably in the last decade. HCBS programs serve beneficiaries with a range of severe physical, mental, and developmental conditions, through an array of providers. Data have illustrated the health disparities experienced by people with disabilities; however, little is known about their experiences with HCBS programs. This study seeks to develop and validate a cross-disability patient survey that measures experiences of HCBS by individuals with age-related frailties, intellectual and developmental disabilities, acquired brain injuries, physical impairments, dementia, and behavioral health issues. Researchers obtained input from experts and conducted interviews to identify quality domains valued by people receiving HCBS. Survey items were subsequently tested in three rounds of cognitive interviews. The survey needs to work across all populations, thus the team administered two experiments comparing options for response patterns and global rating items, to evaluate recall, content, and comprehension. Frequency scales worked poorly for people with intellectual impairments, but were most appropriate for respondents with intact cognition. A dichotomous screening item paired with a frequency scale (e.g. Never/Sometimes/Usually/Always) for those capable of responding was most successful. Other findings include the challenges with ordinal scales and specific time references with intellectually-impaired respondents. For global ratings, adjectival scales (excellent to poor) and a willingness-to-recommend item performed better than numeric ratings. This research suggests that it is possible to obtain meaningful self-report by individuals with varying capabilities when accessible item wording and response options are used.

### **INCLUDING THE VOICES OF RESIDENTS, RELATIVES AND STAFF IN CARE HOME RESEARCH: CASE STUDIES FROM THE APPROACH PROJECT**

C. Victor<sup>1</sup>, C. Goodman<sup>2</sup>, A. Dickinson<sup>2</sup>, H. Masey<sup>1</sup>, S. Davies<sup>2</sup>, H. Morbey<sup>4</sup>, K. Frogatt<sup>4</sup>, S. Iliffe<sup>3</sup>, 1. *Brunel University, Uxbridge, United Kingdom*, 2. *University of Hertfordshire, Hatfield, United Kingdom*, 3. *University College London, London, United Kingdom*, 4. *University of Lancaster, Lancaster, United Kingdom*

Much research in care homes focuses upon enumerating the nature of the health and social care needs of residents; evaluating specific interventions such as fall prevention or describing the nature and composition of the care home work force with the perspectives of residents, staff and relatives rarely heard. This paper presents findings from the case study phase of a three year study of integrated working between care homes and the NHS and focuses upon the resident perspective. We focussed upon 39 residents across 6 care homes who were followed up for a year which involved reviewing residents' notes (127 reviews) and interviewing them up to 3 times (87 interviews in total) about their health care needs. We also interviewed the care home staff (n=31) and NHS and social care staff (n=38) who were involved in their care and relatives (where possible) (n=4). Care home staff often had a wealth of knowledge about residents and their (changing) needs that was not always recognised by NHS staff; residents expected that care home staff (and sometimes relatives) would act as mediators and advocates for

them when dealing with primary health care staff. By linking these perspectives with those of primary care staff we will explore these differing narratives and illustrate the resonances and, sometimes, dissonances between them. These findings indicate the importance of including the voice of residents, their families and the care home staff when undertaking work of this nature in care homes, even though this is challenging to researchers.

### **REDISCOVERING THE PERSON IN THE DELIVERY OF "PERSON-CENTERED" LONG-TERM SERVICES AND SUPPORTS**

K.G. Kietzman<sup>1</sup>, S. Wallace<sup>1</sup>, E. Durazo<sup>1</sup>, J. Torres<sup>1</sup>, A. Choi<sup>2</sup>, C. Mendez-Luck<sup>2</sup>, A. Benjamin<sup>1</sup>, 1. *UCLA Center for Health Policy Research, Los Angeles, California*, 2. *California State University, Dominguez Hills, Department of Interdisciplinary Studies, Los Angeles, California*, 3. *Oregon State University, College of Public Health and Human Sciences, Corvallis, Oregon*

The Affordable Care Act of 2010 supports consumer choice, independence, and service integration for persons with disabilities through the delivery of person-centered long-term services and supports in the home and community. A number of provisions explicitly recognize the central role of the consumer as an active participant in the delivery of care. Still, little is known about the meaning and experience of person-centered care from the home care consumer's point of view and how such definitions change over time. The Helping Older-adults Maintain independence (HOME) project investigated how over the course of one year, 33 older adults in California, dually-eligible for Medicare and Medi-Cal, managed a fragmented network of informal and formal care to continue to live independently at home. Four rounds of in-depth interviews conducted with older adults and their caregivers were transcribed and coded to identify key themes and patterns. The results move us beyond the notion that quality care is something that is passively received by consumers, revealing that it is instead the product of exchange between the individual providing care and the consumer who directs that care. These older adults illustrate how self-determination in the context of the caregiving exchange enhances their well-being, and how a sense of dignity and control are at the core of a truly person-centered approach to the delivery of care. The lessons learned can inform the realization, organization and management of person-centered care across the continuum of long-term services and supports, whether provided in the home or in an institutional setting.

### **SESSION 1965 (PAPER)**

#### **FAMILY CAREGIVING AND THE EFFECTS OF CAREGIVER SUPPORT INITIATIVES**

#### **THE STRAINS AND GAINS OF CAREGIVING: AN EXAMINATION OF THE EFFECTS OF PROVIDING PERSONAL CARE TO A PARTNER ON A RANGE OF PSYCHOLOGICAL OUTCOMES**

T. Hansen, B. Slagsvold, *Norwegian Social Research (NOVA), Oslo, Norway*

As the need for informal care rises it is important to know how caregiving affects well-being, to whom, and under which conditions. The literature so far has been limited by their scope of dependent variables and there has been little discrimination between groups of caregivers. This paper explores the effects of providing regular help with personal care to a partner along a wide range of measures of well-being (life satisfaction, marital satisfaction, self-esteem, mastery, happiness, positive and negative affect, depression, and loneliness), and sociodemographic moderators of these effects. We use cross-sectional data from the Norwegian Life Course, Ageing and Generation (LOGG) study (N~15,000, age 18-79), and two-wave panel data from the Norwegian study on Life course, Ageing and Generation (NorLAG) (N~3,000,

age 40-79). Among men, providing help with personal care to a partner has no effect on any indicator of well-being. Among women, caring for a partner has more detrimental impacts on well-being, but only to women with low-medium levels of education and only on some outcomes. Caregiving is also associated with greater sense of mastery among women. Panel analysis largely corroborates these findings. The results reviewed and presented indicate that caregiving has less detrimental effects in the Nordic countries than in other countries, highlighting the role of social policies in shaping the impact of caregiving on well-being.

#### **DEMENTIA MANAGEMENT SELF-EFFICACY: COMPARISON OF LATINO AND WHITE FAMILY CAREGIVERS**

R.H. Fortinsky<sup>1</sup>, A. Kleppinger<sup>1</sup>, J. Robison<sup>1</sup>, D. Gonzalez Sanders<sup>2</sup>, 1. *Center on Aging, University of Connecticut Health Center, Farmington, Connecticut*, 2. *Central Connecticut State University, New Britain, Connecticut*

Dementia management self-efficacy among family caregivers (CG) is an important precursor to successfully managing symptoms and accessing support services. Few studies have reported racial and ethnic group comparisons regarding dementia management self-efficacy. We compared reported dementia management self-efficacy levels between Latino and White CGs while accounting for several important covariates. Methods: We pooled data from two southern New England studies in which White and Latino (mostly Puerto Rican) CGs were asked identical questions from published measures of dementia management self-efficacy in two domains—symptom management and support service access. Each self-efficacy measure was analyzed as a dependent variable; independent variables in both multivariate regression models were Latino vs. White, gender, age, educational attainment (<high school (HS), HS grad, some college), and relationship (spouse, adult child, other relative). Results: Latino CGs (n=67) were more likely than Whites (n=76) to be female (94% vs. 66%,  $p<0.001$ ), younger (mean=51 vs 64 years,  $p<0.001$ ), more likely to have <HS education (34% vs 5%,  $p<0.001$ ), and less likely to be spouses (21% vs 46%,  $p=0.004$ ). Controlling for covariates, Latino CGs reported lower levels of dementia symptom management self-efficacy (beta=-0.262,  $p=0.012$ ), and lower levels of support service access self-efficacy (beta=-0.431,  $p<0.001$ ). CGs with <HS education also reported lower levels of support service access self-efficacy (beta=-.232,  $p=.009$ ). Conclusion: Latino CGs report substantially lower levels of dementia management self-efficacy than Whites. Latinos with low levels of education are particularly at risk for poor self-efficacy in the support service access domain, and should be targeted for community-based dementia resources.

#### **ELDERCARE CIRCUMSTANCES AND ASSOCIATIONS WITH HEALTH AND WORK-RELATED OUTCOMES AMONG MANUFACTURING SECTOR EMPLOYEES**

R.H. Fortinsky<sup>1</sup>, D. Farr<sup>1</sup>, J. Barnes-Farrell<sup>2</sup>, M. Cherniack<sup>1</sup>, 1. *Center on Aging, University of Connecticut Health Center, Farmington, Connecticut*, 2. *University of Connecticut, Storrs, Connecticut*

Little is known about circumstances and correlates of eldercare (caregiving) responsibilities among manufacturing sector employees. This report examined data from an ongoing longitudinal study of employees at six Connecticut companies. We determined associations among employee characteristics, caregiving circumstances, and family-work conflict (FWC), depressive symptoms, and self-rated health. Methods: Caregivers were those reporting that one or more adults age >65 depended on them in any way for help due to disability or chronic illness. Caregiving circumstances included: reported hours/week providing care; and whether personal care (ADL) and/or instrumental activities of daily living (IADL) help was provided. FWC was measured by a 2-item scale tapping impact of family on job, depressive symptoms by the 8-item CES-D, and self-rated health by a 5-point scale. We compared FWC, self-rated health, and depressive symptoms between care-

givers and non-caregivers; and, among caregivers, determined whether FWC, self-rated health, and depressive symptoms varied by caregiving circumstances. Results: Respondents (n=402) were: 70.6% male; mean age=49.0+11.1; 14% non-White. Caregivers (18% of sample) rated their health lower than non-caregivers ( $p=0.02$ ). Among employees aged > 55, caregivers reported greater FWC ( $p=0.02$ ) and more depressive symptoms ( $p=0.009$ ) than non-caregivers. Among caregivers, females reported more hours/week ( $p=0.003$ ), and were more likely to provide ADL help ( $p=0.01$ ), than males. Among caregivers aged >55, hours/week was positively associated with depressive symptoms ( $p=0.09$ ). Conclusions: Eldercare was associated with poorer self-rated health among manufacturing employees. Women caregivers reported providing more care time and more personal care than males. Older caregivers were particularly prone to FWC and depressive symptoms.

#### **THE EFFECTS OF SERVICE UTILIZATION ON CAREGIVER BURNOUT: SPOUSE AND ADULT CHILD CAREGIVERS COMPARISON**

J. Kim, *Sociology, Social Work and Criminal Justice, Idaho State University, Pocatello, Idaho*

This study examined how the frail elderly and their family caregivers utilized formal services; and how service utilizations were associated with caregiver burnout and health status. In the policy context, two service utilizations used in this study were proxies to measure services funded under the 1997 Balanced Budget Act and the 2000 National Family Caregiver Support Program. Conceptually, the caregiver's stress/appraisal model was modified by incorporating a relationship between formal and informal care from a health economics perspective. This study also explored moderating effects of the caregiver's relationship to older adult on structural paths in the hypothesized model. Using data drawn from the 2004 wave of National Long-term Care Survey, this study used the nationally representative sample of Medicare beneficiaries and their primary family caregivers (N=1,456). Findings indicated that older adults were more likely to receive the formal assistance for activities of daily living (ADLs) and instrumental activities of daily living (IADLs) when their primary caregivers were adult children than spouses. Adult child caregivers were more likely to utilize supplemental services than spouse caregivers. A multiple group comparison path model revealed that adult child caregivers were less likely to spend time on caring for elderly parents and were indirectly less likely to feel burden when elderly parents received the formal assistance for ADLs and IADLs. No significant findings associated with the formal assistance for ADLs and IADLs were found for spouse caregivers. Discussion and implications for research and social work policy and practice are presented.

#### **DOUBLE DUTY CAREGIVING: A KNOWLEDGE TRANSLATION INITIATIVE**

C. Ward-Griffin, J. Keefe, J. Brown, M. Kerr, O. St-Amant, *Western University, London, Ontario, Canada*

Double duty caregiving (DDC) - when health professionals provide care at home and at work- is likely to increase in a time of an aging population, aging health care workforce and a shortage of human health resources. Given the potential adverse health effects of DDC, it is important to invest in knowledge translation (KT) strategies to create and sustain healthy work environments and health care workforces. Based on evidence from our previous qualitative and quantitative investigations, the overall goals of this research are to: 1) identify refinements to DDC policies and practice; 2) engage in a collaborative, pan-Canadian development of these refinements; and 3) create collaborative opportunities for advocacy and implementation of practice and policies relevant to DDC and health human resources. In order to meet these project goals, a Transformative Knowledge Translation Workshop was conducted to bring together practitioners, administrators and policy makers for dialogue, reflection and action on this important health human resources issue. The workshop represented the cutting edge of theory-driven

knowledge exchange by working the intersections between integrated, end-of-grant, and transformative knowledge exchange. This presentation will highlight how the generation of practice-based evidence about DDC was accomplished through a socially interactive, action-oriented dialogue among the workshop participants. Furthermore we will discuss how this KT strategy enabled the creation of successful research and community partnerships that aimed to facilitate the uptake of research evidence into practice, policy and other areas to address DDC and health human resource challenges now and in the future.

## SESSION 1970 (PAPER)

### IMPROVING ACCESS AND QUALITY OF CARE IN COMMUNITY BASED LONG TERM CARE

#### A FORMATIVE EVALUATION OF THE VALUE OF COLLABORATION IN A MULTI-AGENCY CASE MANAGEMENT CONSORTIUM

N. Giunta<sup>1</sup>, J.K. Johnson<sup>2</sup>, C. Morano<sup>1</sup>, 1. Hunter College, City University of New York, New York, New York, 2. New York University, New York, New York

In response to significant budget cuts to home and community-based services for older adults, four urban case management service providers formed an innovative inter-organizational case management consortium to serve 1,000 homebound older adults. This formative evaluation used a participatory, mixed-methods approach to examine the structure and process of case management delivery through this inter-organizational model. The construct of partnership synergy, introduced by Lasker and colleagues, was used as a conceptual framework for this study. Results from 33 semi-structured in-person interviews, four focus groups, and an anonymous web survey with consortium staff suggest that a consortium model of service delivery offers an improved approach to providing case management, and addresses some common challenges of service delivery. Improvements over a single agency model include client and case manager access to a greater pool of resources (e.g., a wider breadth of knowledge about services and treatment modalities for specific issues, diverse cultural resources, and technological tools for improved communication and safety in the field). The consortium model also provides a single-point of entry into the case management system, which is valued as a mechanism to effectively align client needs with provider characteristics. Guided by participatory research principles, the results of this formative evaluation were shared with case management providers to design a subsequent examination of the relationship between the structure and process of the consortium and client outcomes. Implications of this evaluation for service delivery, policy, and future research will be discussed.

#### POTENTIALLY AVOIDABLE HOSPITALIZATIONS AMONG MEDICAID HOME AND COMMUNITY-BASED SERVICES WAIVER BENEFICIARIES

J. Wiener<sup>1</sup>, E.G. Walsh<sup>1</sup>, M. Freiman<sup>1</sup>, S. Haber<sup>1</sup>, A.W. Bragg<sup>1</sup>, J.G. Ouslander<sup>2</sup>, 1. *Aging, Disability and Long-Term Care, RTI International, Washington, District of Columbia*, 2. *Florida Atlantic University, Boca Raton, Florida*

Health and long-term care are fragmented for older people, reflecting that Medicare is the primary payer for acute care for older people and Medicaid is the primary payer for long-term care. As a result of this fragmentation, the medical care system neglects the long-term care needs of older people with disabilities and the long-term care system neglects their medical care needs. Using 2005 Medicare and Medicaid claims data, this study examines potentially avoidable hospitalizations among people who are dually eligible for Medicare and Medicaid and participating in Medicaid home and community-based services (HCBS) waivers. By federal law, waiver participants must need a nursing home level of care. Using the same criteria for people in the community and

residents in nursing homes, people in the community had 408 potentially avoidable hospitalizations per 1,000 person years, higher than for Medicaid nursing home residents but less than for people receiving Medicare-covered skilled nursing facility care. Over 40% of hospitalizations were potentially avoidable. Using a more restricted definition of potentially avoidable hospitalizations that takes into account that some medical conditions, once developed, cannot be safely treated at home, waiver beneficiaries had 250 potentially avoidable hospitalizations per 1,000 person years. Using the conservative definition of potentially avoidable hospitalizations, the hospitalization cost was \$463 million in 2005. The cost to Medicare for each potentially avoidable hospitalization was \$6,415; the cost to Medicaid was only \$325. Multivariate analyses suggests that states with well developed HCBS systems have lower rates of potentially avoidable hospitalizations among Medicaid waiver beneficiaries.

#### RACIAL AND ETHNIC DIFFERENCES IN USE OF LONG-TERM SUPPORTS AND SERVICES

A. Chattopadhyay, University of California at San Francisco, San Francisco, California

U.S. elders are increasingly of racial/ethnic minority, many of whom need long-term services and supports (LTSS) because of disabilities. Racial/ethnic minority groups are known to underutilize formal (paid) LTSS leading to higher levels of unmet needs and negative outcomes. The extent to which minorities underutilize the institutional and non-institutional components of formal LTSS and whether care setting mitigates racial/ethnic differences in formal LTSS use is unknown. Data on 2780 disabled adults aged 65+ from the 2002 Medicare Current Beneficiary Survey is used to determine racial/ethnic differences in the type of formal LTSS. Multivariable logistic and Poisson regression models on institutional service and home health (HH) visits were estimated. Coefficient estimates from both models were converted to relative-risks. Standard errors correct for the complex sampling design of MCBS. One thousand and fifty three disabled older adults had used institutional services; 861 used HH services. Controlling for age, gender, income, education, marital status and family size, all minority groups showed significantly lower likelihood of using institutional services compared to Whites (Black RR .67,  $p < .001$ ; Latino RR=.41,  $p < .001$ ; Asian RR=.50,  $p < .002$ , respectively), while Blacks and Asians used significantly more HH services than whites (RR=1.77,  $p < .001$  and RR=1.78,  $p = .04$ ). Latinos' use of HH services did not differ significantly from that of whites. Policy implications of the study results for LTSS delivery and reduction in racial/ethnic differences in formal LTSS are discussed

#### CMS NATIONAL BALANCING INDICATORS PROJECT (NBIP): DIRECT SERVICE WORKFORCE DATA COLLECTION

C. Blakeway<sup>1</sup>, S.A. Larson<sup>2</sup>, D. Foney<sup>1</sup>, 1. *The Lewin Group, Falls Church, Virginia*, 2. *ICI at the University of Minnesota, Minneapolis, Minnesota*

As the U.S. population ages and individuals below the age of 65 face permanent or long-lasting disabilities, the demand for long-term services and supports (LTSS) increases. Most of this population prefer to live in the community rather than in nursing facilities, thus states are working to re-orient their LTSS delivery systems toward home- and community-based settings and away from institutional ones. To do this, states need reliable information about their LTSS systems to identify successes, progress and service gaps. Currently, policymakers are hampered by a lack of reliable information about their Direct Service Workforce (DSW). The Centers for Medicare and Medicaid Services, together with IMPAQ International, LLC and The Lewin Group, assisted seven states to conduct universal surveys of: (a) individuals working as independent providers in LTSS programs and (b) employer organizations of workers serving older adults and people with disabilities through Medicaid-funded programs. After attending this session, participants will

better understand: (1) the state of the DSW workforce in these seven states, including workforce demographics, volume, stability, (e.g., turnover and vacancy rates), compensation, training needs, and recruitment and retention challenges; (2) implications of these findings for state LTSS reform and systems change; (3) the experience of the participating states in designing and fielding these surveys, and; (4) the potential advantages and disadvantages of routinely collecting workforce data using this same methodology.

## SESSION 1975 (POSTER)

### AGE AND COGNITION

#### AGE-RELATED CHANGES IN MONITORING AND CONTROL IN DISSOCIABLE LEARNING SYSTEMS

M.A. Gorlick, D. Schnyer, W. Maddox, *Psychology, University of Texas at Austin, Austin, Texas*

Cognitive psychology emphasizes two learning systems; a reflective system that is under conscious control and a reflexive system that functions implicitly. Research from our lab (Glass et al., 2011) found an age-related deficit in reflective learning but an age-related advantage in reflexive learning. During reflective learning, conscious knowledge about the current state of learning is updated (monitoring) and used to guide strategy selection (control). However, reflexive learning is an implicit process and does not rely on these mechanisms. Age-related declines in monitoring and control likely influence differences in reflective learning. Older adults both (a) struggle to monitor their learning and (b) have difficulty applying that knowledge to select the appropriate strategy. The present study provides evidence for an age-based deficit in monitoring reflective learning leading to poor control. Participants learned to classify exemplars modified from one prototype (AN; reflexive learning) or two prototypes (AB; reflective learning) and were then tested on both categories. During test, participants provided a confidence rating as a measure of online monitoring. Replicating Glass et al, older adults were less accurate than younger adults in the reflective task indicating poor control, but older adults outperformed younger adults in the reflexive task. Older adults revealed poorly calibrated monitoring relative to younger adults in the reflective task. Also as predicted, there were no age-related monitoring differences in the reflexive task. Overall, our results suggest that older adults are less successful than younger adults at monitoring reflective learning, potentially contributing to deficits in control that are critical for learning.

#### EFFECTS OF AGE, MARITAL STATUS AND COMPLEXITY ON PREFERENCES FOR COLLABORATIVE DECISION MAKING

C.L. Ortiz, J.M. Jacobs-Lawson, *Gerontology, Univ of Kentucky, Lexington, Kentucky*

When making decisions, older and younger individuals may actively involve others in the decision process. Research has shown that decisional and personal characteristics influence preferences for collaborating with others. The purpose of this study was to examine the effects of age, marital status, and decision complexity on women's preferences for collaborative decision making. In the study, married and widowed women (aged 50-90 years) were asked to make a hypothetical medical treatment decision. Half of the participants made a simple decision (deciding among three options) and the other half of the participants made a complex decision (deciding among six decisions). After completing the decision task, they were asked to indicate the degree to which they would prefer to collaborate with someone from their social network if they were to complete the decision task again. Separate regression models were conducted for married and widowed women. Results indicated that for married women, age and an age by task complexity interaction were significant predictors of collaboration. However for widowed women none of the predictors were significant. These results

suggest that married women may prefer collaboration based on their age and the complexity of the task. Understanding how age, marital status, and complexity influence preferences for collaboration will allow researchers to develop decision aids that coincide with individual preferences so that individuals can be effective decision makers.

#### A CROSS-CULTURAL PERSPECTIVE ON AGING AND MEMORY: COMPARISONS BETWEEN BANGLADESH AND SWEDEN

O. Sternä ng<sup>1,2</sup>, Z.N. Kabir<sup>4</sup>, J.D. Hamadani<sup>5</sup>, ÅKE. Wahlin<sup>3,2</sup>, *1. Institute of Gerontology, School of Health Sciences, Jönköping University, Jönköping, Sweden, 2. Stockholm Brain Institute, Stockholm, Sweden, 3. Department of Psychology, Stockholm University, Stockholm, Sweden, 4. Division of Nursing, NVS, Karolinska Institutet, Stockholm, Sweden, 5. International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), Dhaka, Bangladesh*

Most studies on cognitive aging have been conducted in economically developed countries (mainly on Western populations). It is of importance to test the generalizability of obtained results with studies in cultural settings with different living conditions. However, the share of research conducted in cross-cultural cognitive aging is rather small, especially on memory. The main aim of this study was to compare relative importance of some commonly used predictors (age, sex, years of education, systolic blood pressure, vascular diseases, sensory-motor functioning, and processing speed) for episodic and semantic memory performance in older people ( $\geq 60$  years) from Bangladesh ( $n = 400$ ) and Sweden ( $n = 1098$ ), respectively. A main finding was that age variations did not have as much impact on episodic and semantic memory performance in Bangladesh as in Sweden, and sex was of greater importance for semantic memory performance in Bangladesh. In the western world, chronological age is believed to be strongly associated with memory performance in cross-sectional studies, especially in people above 60 years of age. This study indicates that the difference between the two countries (in relative importance of the predictors included in this study) is mainly due to that years of education is connected to age in the western world but to sex in Bangladesh. It remains to be examined whether earlier selective survival is also responsible for the relative absence of cognitive age differences in Bangladesh.

#### RELUCTANCE TO DESCRIBE "DISLIKED" OTHERS AS WE AGE

L.J. Medvene<sup>1</sup>, K. Nilsen<sup>1</sup>, B. Latronica<sup>1</sup>, C.K. Coleman<sup>2</sup>, M. Wachlarowicz<sup>1</sup>, *1. Psychology, Wichita State University, Wichita, Kansas, 2. University of Kansas, Lawrence, Kansas*

Socioemotional selectivity theory proposes that as we age we engage in emotional self-regulation with the goal of seeking positive emotional responses and avoiding negative ones (Carstensen et al, 1999). The present studies extend this line of research to a social perception task: assessing individuals' ability to describe others in relatively complex ways. The Role Category Questionnaire (RCQ) has been used to measure the number of psychological constructs used to describe "liked" and "disliked" others, and is correlated with person-centered communication-an ability related to satisfaction in caregiving relationships (Grosch, Medvene & Wolcott, 2008) and positive relationships more generally. Two studies were carried out using the RCQ as a measure of person perception. In the first study 24 residents of two geriatric care facilities and 23 certified nurse aides (CNAs) responded to the RCQ. CNAs used significantly more constructs than seniors to describe others. This difference was solely attributable to the finding that residents used fewer constructs to describe "disliked" others:  $M = 1.75$  versus  $M = 5.79$ ,  $p < .05$ . Results in the second study, involving 82 university undergraduates and 50 seniors recruited from the university's Center for Aging and Physical Activity, followed the same pattern. Seniors used significantly fewer constructs to describe "disliked" others:  $M = 5.12$  versus  $M = 8.7$ ,  $p < .05$ . These results suggest that as we age we use fewer cognitive resources to process negative information about "disliked" oth-

ers. Attendees of the session will learn about our reluctance to describe “disliked” others as we age.

### **CLOCK READING IN CENTENARIANS**

T.M. Neary<sup>1</sup>, S.L. Andersen<sup>1</sup>, M.H. Silver<sup>2</sup>, T.T. Perls<sup>1</sup>, *1. Medicine/Geriatrics, Boston University School of Medicine, Boston, Massachusetts, 2. Beth Israel Deaconess Medical Center, Boston, Massachusetts*

**Objective:** To evaluate clock reading errors in centenarians. **Methods:** Data were collected for a 12-item Clock Reading Test (CRT) with two conditions (with and without numbers). Subjects were 21 women and 5 men, 100 to 108 years of age, who were participants in the New England Centenarian Study (n=74). **Results:** A total of 253 clock readings were administered, with 138 readings (55%) answered correctly and 115 (45%) readings answered incorrectly. 122 errors were identified and categorized into 8 error types. The most prevalent error type (26%) occurred when participants did not account for the relative length of the clock hands. Another common error type (18%) was misreading the minute hand by five minutes or the hour hand by one hour. 16% of errors were categorized as stimulus-bound (i.e., reading the minute hand as both the minute and hour) and 4% of errors occurred as a result of a verbal problem (e.g., reading 4:20 as “20 of 4” rather than “20 past 4.”) 18% of error types were identified as “other.” **Conclusions:** Our results indicate that clock reading errors may reveal conceptual deficits as well as perceptual deficits in cognitive function. These results differ from some previous research that concludes that the CRT does not require executive processing. However, further research on clock reading with other populations is needed to determine if centenarians differ from other age groups in error types and if there is a similar incidence of specific neurodegenerative disorders.

### **CHILDHOOD DISADVANTAGE AND COGNITIVE FUNCTIONING: THE MEDIATIONAL ROLE OF PSYCHOSOCIAL AND BEHAVIORAL LIFESTYLE FACTORS**

J. Lyu<sup>1</sup>, S. Agrigoroaei<sup>2</sup>, *1. UMass Boston, Boston, Massachusetts, 2. Brandeis University, Waltham, Massachusetts*

There is accumulated evidence for the early childhood influences on health outcomes measured later in life. However, a small number of studies have focused on the impact of childhood disadvantage on cognitive functioning in adulthood. The purpose of this study was to investigate this relationship in a national longitudinal sample and to explore whether it is mediated by psychosocial and behavioral lifestyle factors. We used data from the Midlife in the United States (MIDUS) national longitudinal study. Childhood disadvantage, assessed at Time 1, was based on father’s education, mother’s education, childhood welfare, and financial level growing up. Cognitive performance was measured at Time 2 using the Brief Test of Adult Cognition by Telephone (BTACT). Psychosocial and behavioral lifestyle factors included control beliefs, quality of social support, physical exercise, and cognitive activity. Adjusted for age, gender, race/ethnicity, and respondent’s education, the results revealed a negative significant association between childhood disadvantage and executive functioning. In addition, the level of social support and engagement in cognitive activities partially mediated the association between childhood disadvantage and executive functioning. These findings suggest that childhood disadvantage is associated with different lifestyle factors which in turn explain individual differences in cognitive performance.

### **TASK SPECIFIC MIND WANDERING AND DIFFICULTY MEDIATE THE RELATIONSHIP BETWEEN ANXIETY AND PERFORMANCE**

C.B. Rosnick, J. Meeks, A. Ciskowski, *Psychology, Southern Illinois University Edwardsville, Edwardsville, Illinois*

There is a large body of literature that reports a negative relationship between anxiety and cognitive performance. Further, research sup-

ports the idea that intrusive thinking is negatively related to cognitive performance. However, this literature has not examined the role of task specific intrusive thinking and task difficulty on cognitive outcomes. A total of 227 participants ranging in age from 18-88 were used for the current analyses. The participants completed eight cognitive tasks that assessed several cognitive domains. Three of the cognitive tasks were administered on the computer and five of the tasks were in a paper-pencil format. After each cognitive task, participants were to rate the difficulty of the task and report the degree their mind wandered during the task. In addition, participants completed the STAI four times during the study protocol. Three multiple regressions were performed to test a three-path mediation model between anxiety, task specific mind wandering, task difficulty, and cognitive performance. The results revealed a significant three-path mediation model for the cognitive tasks that were administered in the paper-pencil format. Specifically, self-reported anxiety levels during the study period were positively related to mind wandering, mind wandering was positively related to task difficulty, and task difficulty was negatively related to performance. The model using the computerized cognitive tests was not significant. The current findings suggest that the relationship between anxiety and performance is mediated by task-specific mind wandering and difficulty for cognitive tests that participants must use paper and pencil but not for computerized assessments.

### **SUBJECTIVE MEMORY COMPLAINTS, HEALTH, MOOD, AND STRESS: CCRC RESIDENT EXPERIENCES**

K.B. Dassel<sup>1</sup>, H. Ewen<sup>2</sup>, *1. Western Kentucky University, Bowling Green, Kentucky, 2. Miami University, Oxford, Ohio*

Subjective memory complaints within the older adult population have been found to be related to a variety of factors including mood, stress, and general health. However, many of these studies have examined memory complaints in clinical rather than community settings. The purpose of the current study is to explore the relationship among subjective memory complaints, mood, stress, and health in a group of residents (n = 48) living in a continuing care retirement community (CCRC). Study participants were 76.7 years old (sd = 4.6), 56% were married, and 48% were female. The Metamemory Questionnaire (MQ) was used to assess subjective memory complaints in a variety of domains including word finding difficulty, disorientation while driving, and keeping track of appointments. Self-reported mood and overall health were obtained from the SF-36 and the total number of stressful life events was derived using the Holmes Rahe Social Readjustment Rating scale. This population of study participants functioned at a high level with 92% of respondents rating their health as “good” or “excellent”; 88% experienced three or fewer stressful events in the preceding year; 93% reported a positive mood; and 91% reported minor or no complaints regarding their memory. Pearson correlation coefficients were used to assess the relationship among the variables, and no significant associations were found. The results of this study suggest that subjective memory in high functioning community-dwelling older adults may be attributed to factors other than health, mood, and life stress.

### **EFFECTS OF A HOLISTIC MEMORY CLINIC FOR OLDER ADULTS**

L. Hyer<sup>1</sup>, C.V. Scott<sup>2</sup>, J. Dhahliwala<sup>3</sup>, *1. Georgia Neurosurgical Institute & Mercer University School of Medicine, Macon, Georgia, 2. Georgia Neurosurgical Institute, Macon, Georgia, 3. Medical Center of Central Georgia, Macon, Georgia*

Studies have shown that cognitive training for older adults is an asset to improving attention and working memory. Recent studies show promise that a more “holistic” and integrated approach are beneficial to less cognitively fit older adults. This analysis will examine whether the implementation of a 6-session, manualized memory training program can

assist with improving function and overall well-being. Consented participants (N = 112) from the Central Georgia community with Age Associated Memory Impairment (AAMI), Mild Cognitive Impairment (MCI), or mild dementia were asked to participate in memory training on cognitive habits, and attitudes, as well as function and adjustment. Compliance was also measured. We also had a Control group (N=30) who received no training. Finally, we classified participants by Risk Status—Low, Medium and High. Results showed that on the pre-measures the Memory Clinic group did not differ from the Control group. This pattern was also true of the post measures for the two groups. When the groups were separated by risk, however, the Low Risk Group was superior to the other groups, including Control, and continued to be superior in post measures on most cognitive assessments. Compliance also made a difference as those who complied performed better than those who did not. These tended to be Low and Medium Risk subjects. There were differences too on memory complaints and adjustment, again for the Low and Medium Risk Groups. Identifying high and low risk subjects was most helpful, resulting in clear differences between memory complaining subjects.

### THE EFFECTS OF AGE, DECISION STYLES, AND INFORMATION-PROCESSING STYLES ON THE CONSUMER CHOICE BETWEEN HEDONIC AND UTILITARIAN GOODS

X. Ma, *University of Houston Clear Lake, Houston, Texas*

Previous research has shown that consumer perceptions and preferences included both hedonic and utilitarian dimensions (e.g., Batra & Ahtola, 1990). For example, consumers choosing among different apartments may consider about utilitarian features (e.g., distance to work) as well as about hedonic features (e.g., the view of the apartment). The current study examined how consumer choice between two goods, one of which is seen as superior on a hedonic dimension and the other is seen as superior on a utilitarian dimension, was influenced by consumers' age, decision making styles, and information-processing styles. Sixty young (18-25 years old) and 60 older adults (over 60 years old) participated in the current study. They finished the apartment decision task, maximization and regret scale (Schwartz, Ward, Monterosso, Lyubomirsky, White, & Lehman, 2002), and the Rational-Experiential Inventory (REI; Epstein, Pacini, & Norris, 1998). Results showed that older adults were more likely to choose the apartment that was superior on hedonic features than young adults. Further, participants with lower maximization tendency were more likely to choose the apartment that was superior on hedonic features. In contrast, participants with higher rationality scores and higher regret scores were more likely to choose the apartment with superior utilitarian features. The current study made important contributions to our understanding of the factors that influence us make the fundamental trade-offs between hedonic and utilitarian goods.

### SESSION 1980 (POSTER)

#### AGEISM

#### CULTURAL PERSPECTIVES OF THE AGING SEMANTIC DIFFERENTIAL: ATTITUDES TOWARDS OLDER ADULTS AMONG COLLEGE STUDENTS IN CHINA

J. Tan<sup>1</sup>, E. Gonzales<sup>2</sup>, L.A. Marchiondo<sup>3</sup>, *1. Bridgewater State University, Bridgewater, Massachusetts, 2. Washington University in St. Louis, St. Louis, Missouri, 3. University of Michigan, Ann Arbor, Michigan*

Objectives. The Aging Semantic Differential (ASD, Rosencranz & McNevin, 1969) is the most widely utilized instrument to measure attitudes towards older adults within the United States. Our objective was to translate it to Mandarin Chinese and to examine its validity. Methods. Self-administrated anonymous paper-based questionnaires were distributed to a convenience sample (N = 380) of college students in

Shanghai, China. The structure of the data was analyzed using exploratory factor analysis (EFA) with maximum likelihood extraction and oblimin rotation. We then used confirmatory factor analyses (CFA) to confirm the resulting latent variables and compare them to Rosencranz's factors. Results. EFA revealed three meaningful ASD factors in China: (1) personality and mental health, (2) societal participation (social, financial, occupational), and (3) physical health. In a CFA, all items significantly loaded onto their hypothesized factors, and goodness of fit statistics revealed good fit. While Rosencranz's "personal acceptability" category overlapped well with our first factor, the items from his "instrumental-ineffective" and "autonomous-dependent" categories were divided primarily between our last two factors. A second CFA was conducted using Rosencranz's three factors. Comparison of the two CFAs revealed that our model fit the ASD data in China significantly better ( $\Delta df = 87$ ,  $\Delta\chi^2 = 577.2$ ,  $p < .001$ ). Implications. It is possible to use the ASD to assess young adults' attitudes in China. This finding poses implications for other cross-national comparisons of ageism, as well as interventions.

#### THE RELATIONSHIP BETWEEN SYMPTOM EXPERIENCE, AGEIST BELIEFS ABOUT SYMPTOM MANAGEMENT, AND SELF-EFFICACY IN KOREAN OLDER ADULTS

H. Yeom, *Nursing, Dongguk University, Gyeongju, Gyeongbuk, Republic of Korea*

Age-related beliefs and self-efficacy are important issues related to self-care for health problems in older people. The purposes of this study were 1) to examine the extent to which older adults have symptoms and negative ageist beliefs about symptom management and 2) to investigate how experiencing symptoms and negative beliefs about symptom management influence self-efficacy in Korea. Participants were 142 community-dwelling older women, aged 65 and over (M=76.2 yrs). Women completed structured, instruments about demographic information, comorbid health problems, symptoms, negative beliefs about symptom management and self-efficacy. The effect of symptom experience and negative ageist beliefs about symptom management on self-efficacy were tested using hierarchical multiple regression analyses. Women reported an average of nine symptoms (possible range=0-37). The number of symptoms was not significantly related to negative ageist beliefs about symptom management and self-efficacy. Negative ageist beliefs about symptom management was a significant predictor of self-efficacy ( $\beta = -.15$ ,  $p = .03$ ), after controlling for age, education, and the number of comorbid health problems and symptoms, as indicating that older women who had more negative ageist beliefs about symptom management were likely to have lower levels of self-efficacy. This study provides evidence that negative and stereotyped belief about old age is detrimental to self-efficacy of older adults. It highlights the importance of age-related beliefs for better health outcomes and suggests the need for psycho-educational interventions to modifying erroneous and stereotyped beliefs about old age.

#### SOCIAL CONTACT WITH THE ELDERLY AND DEGREE OF COLLECTIVISM AS CORRELATES OF AGEISM IN CAUCASIAN AND ASIAN-AMERICAN POPULATIONS

A. Beatty, *1. Chicago School of Professional Psychology, Elmhurst, Illinois, 2. Midwestern University, Downers Grove, Illinois*

Ageism is a multidimensional form of discrimination involving social, economic, and cultural components. This cross-sectional study correlated level of contact with the elderly and social values and degrees of individualism and collectivism with attitudes toward ageing and the elderly in European-American and Asian-American college students. Participants in this study were undergraduate students (N=114) enrolled in Midwestern community colleges. Ageism was measured by the Aging Semantic Differential. Individualism and collectivism were measured by the Individualism-Collectivism (INDCOL) scale. Level of con-



tact with the elderly was measured by the Hale social contact scale. Results of this study using Pearson's  $r$  correlations indicated that ageism was negatively correlated with collectivism and negatively correlated with contact with the elderly. However, results obtained using multiple regression analysis found that when the variable contact with the elderly was controlled, the contribution of collectivism to ageism was non-significant. The results suggest that ageism is both a socially and culturally related phenomena. Future research should investigate the social and cultural correlates of ageism, with specific emphasis on the origins and developmental influences these correlates have on the onset and maintenance of ageist beliefs.

### **OLDER DRIVERS: ROAD THREAT OR STEREOTYPE THREAT?**

M.J. Polito, M. Lachman, *Psychology Department, Brandeis University, Waltham, Massachusetts*

Driving research has focused on cognitive, perceptual, and physical changes with age to explain the driving performance of older adults, largely ignoring social influences such as stereotypes. There is good evidence that stereotype threat influences performance of older adults in other domains such as memory, but the effects of stereotypes on older adults' driving performance has received little attention. A first step is to clarify the nature of the age-related stereotypes associated with driving. A sample of 146 adults aged 18-85 participated in an online survey assessing general and personal views of older drivers compared to other ages. We found that those under age 50 personally endorsed more negative views of older drivers than those over age 50, though the views of both age groups were negative overall. In addition, both groups believed that most others in the US held views even more negative than their own. Analysis of the items on specific driving behaviors revealed that respondents believed older drivers drive too slowly, react too slowly to situations that arise, get overwhelmed on highways, and have trouble seeing while driving. In contrast, older drivers were seen as less likely to engage in risky behaviors such as driving while using a cell phone, driving while intoxicated, and speeding. Future research will use a stereotype threat paradigm to explore the consequences of these stereotypes on older adults' driving behavior.

### **AGE-IMPLICIT ASSOCIATION TEST (IAT): MEASURING CHILDREN'S STEREOTYPES OF OLDER ADULTS**

R.L. Babcock<sup>1</sup>, E.E. MaloneBeach<sup>1</sup>, B. Hou<sup>1</sup>, J. Hannighofer<sup>2</sup>, *1. Central Michigan University, Mount Pleasant, Michigan, 2. Berlin Institute of Technology, Berlin, Germany*

To examine the existence of stereotypes toward older people in children, a child-friendly version of the Implicit Association Test (IAT) was developed. To ensure efficacy of the Age-IAT for Children, a similar version of the IAT was first used, which was intended to detect a preference for flowers over insects. Besides the expected preference for flowers over insects, results indicated that 3rd and 4th grade children have a clear preference for young persons over older ones. Moreover a paired comparison task and a Smiley Rating Scale were used to measure explicit attitudes toward flowers/insects and older/young persons. Comparing implicit and explicit attitudes brings a clear divergence to light. Children at the age of about 9 years already show differences between their implicit and explicit attitudes toward older people. Assuming that self-presentation goals already influence children's expressions at this age, the importance of measuring implicit attitudes becomes clear. Having developed an Age-IAT for Children moreover offers the opportunity to ascertain whether children younger than those tested in this study would also possess such implicit attitudes toward older people. The possibility of using the Age-IAT for Children to further examine stereotypes and potential interventions is discussed.

### **PERCEPTIONS OF ELDERLY IDENTITIES AND AGEISM AMONG COLLEGE STUDENTS**

C.F. Brito<sup>1</sup>, S.M. Rauch<sup>2</sup>, A.N. Jones<sup>1</sup>, D.J. Pelletier<sup>1</sup>, G.M. Geraci<sup>1</sup>, H.A. Catan<sup>1</sup>, A.N. Hebron<sup>1</sup>, B.A. Byers<sup>1</sup>, *1. Psychology, Eastern Illinois University, Charleston, Illinois, 2. Providence College, Providence, Rhode Island*

The "reverse" golden section hypothesis suggests we organize information in a ratio of only 38.2% positive and 61.8% negative. We examined this pattern with several elderly identities, and their relationship to ageism. Participants (N=213) were administered (1) a questionnaire where they were presented with several identities (e.g., Elderly Person, Senior Citizen, Old Man, Old Woman) and adjective pairs with positive and negative poles (e.g., generous—stingy, unpleasant—pleasant), (2) the Fraboni Scale of Ageism (FSA), and (3) the Crowne-Marlowe Social Desirability Scale (SDS). The average number of times that each identity was assigned a positive pole (% positive) was calculated; and, the relationship among the elderly identities and FSA examined via partial correlations with SDS as the control variable. Participants expressed more positive attitudes toward elderly labels than those predicted by the reverse golden section hypothesis (38.2%). However, the labels for Elderly Person (42% of the time assigned a positive adjective), Senior Citizen (48%), and Old Woman (48%) were still below 50%; the "Old Man" identity was the most positive, at 50%. Correlations between the ratings of the identities and the FSA were small, but significant ( $r = -.202$  for elderly person,  $r = -.162$  for senior citizen, and  $r = -.159$  for old woman.) Ratings of the "Old Man" identity were the only ones that did not relate to ageism ( $r = -.08$ ). Overall, results show that certain elderly identities seem to evoke negative perceptions, perhaps suggesting stigmatization; and, most of these perceptions are somewhat related to ageist attitudes.

### **AN INTERVENTION TO REDUCE AGEISM IN CHILDREN**

B. Hou, R.L. Babcock, E.E. MaloneBeach, *Central Michigan University, Mount Pleasant, Michigan*

The purpose of this research was to determine the effectiveness of a 4-week intervention intended to reduce ageism in young children. At weeks 1 and 6, pre- and posttests were administered to all students in a local middle school (grades 3-5 inclusive). A four-part intervention with a 5th grade class (N=32) was implemented on four subsequent Thursdays. The interventions included the presentation of learning modules on aspects of aging (1. physical/biological; 2. Vision/audition; 3. Olfaction/taste; 4. Social/intergenerational). Each module included small-group discussions with an older adult, a writing session, an illustration, and the development of a glossary of new vocabulary words. The written material and illustrations from each child were compiled into a book; the children received copies of their books; the older adults received copies of the books developed by their group and the 5th grade teachers received copies of the teaching modules. The analyses tested for immediate effects of the intergenerational intervention, and for more peripheral effects on the other classes of children. The results found that children's levels of ageism were not decreased by this intervention. Ideas for improved intervention and evaluation will be discussed. Further, issues for implementing programs that include college students from multiple departments, the local Commission on Aging, and a public school will be discussed.

### **ARE INSTITUTIONAL REVIEW BOARDS FOR HUMAN SUBJECTS RESEARCH AGEIST?**

B.G. Knight<sup>1</sup>, N.A. Pachana<sup>2</sup>, C. Juang<sup>1</sup>, N.M. Peel<sup>2</sup>, *1. University of Southern California, Los Angeles, California, 2. University of Queensland, Brisbane, Queensland, Australia*

Institutional Review Boards (IRBs) for the protection of human subjects frequently raise concerns about research with older adults. A key question is whether the concerns are appropriate or represent stereotypes of older adults as always being frail cognitively or physically.

Sixty-one participants with doctoral level education were recruited and responded to questionnaires online. Content analysis was conducted to classify common themes of ethical issues raised by the IRBs. Results indicated that concerns regarding older adults' cognitive capacity to give consent (49%), concerns about physical frailty and stamina to endure the research protocol (40%) and to provide valid data (28%) were the most common. Implications of these ethical concerns are discussed. Thirty-one percent of the participants disagreed with IRB's comments, and three issues emerged as common complaints: inappropriate bias about all older adults' abilities (33%), overly broad concerns and restrictions (24%), and lack of knowledge of aging research (19%). The results suggested a need to educate IRBs regarding a more nuanced and accurate view of older adults abilities and so target their concerns more precisely.

## SESSION 1985 (POSTER)

### AGING ACROSS CULTURES

#### AGE DIFFERENCES IN TRUST: UNIVERSAL OR COUNTRY-SPECIFIC?

T. Li, H. Fung, *Psychology, The Chinese University of Hong Kong, Hong Kong, China*

Population aging is a global challenge in the twenty-first century. However, few psychological studies have studied age differences across multiple countries. As social relationships contribute significantly to older adults' well-being and trust lays the foundation of constructive social interactions, it is theoretical and practical significant to examine age differences in trust in a worldwide sample. The current study examined age differences in generalized trust and trust toward family members, friends, neighbors, and strangers, using data from the World Value Survey based on 57,497 individuals from 38 countries. We also tested whether the pattern of age differences in trust differed across countries as the result of varying country-level factors (i.e., income inequality, developing status, and individualism). Using hierarchical linear modeling, we found that age was positively related to all the five types of trust across the 38 countries. The magnitude of age differences in trust toward closer groups (family or friends) was relatively smaller than that in trust toward more distant groups (neighbors or strangers). Moreover, the magnitude of age differences in some types of trust was moderated by the country-level factors. From this study, one can obtain a global picture about how people's trust varies with age. We also speculate the possible mechanisms for the positive association between age and trust. Enhancing trust toward others may be the result of older adults' positive reappraisal. Through such process, older adults may maintain emotional connectedness with others. Future studies are encouraged to further investigate the underlying mechanism of age differences in trust.

#### STIGMATIZING HEALTH CONDITION IN NEPAL: EXTERNAL ATTRIBUTION AND INTERNALIZED CONSEQUENCES

J. Subedi<sup>1</sup>, J. Brown<sup>1</sup>, M. Tausig<sup>2</sup>, K. Basnyat<sup>1</sup>, S. Subedi<sup>1</sup>, *1. Sociology & Gerontology, Miami University, Oxford, Ohio, 2. University of Akron, Akron, Ohio*

An extensive literature has documented the stigmatization of poor health, especially mental health in industrialized nations. Less work, however, has examined this issue in the developing world, and even less research has focused on the consequences of internalizing that stigma for older adults in poor health. In this study, we use the Kathmandu Mental Health Survey and the Jiri Health Survey from Nepal to examine two questions: (1) what social factors predict the level of stigma that a healthy older person in Nepal attributes to a person with mental illness, and (2) what are the mental health consequences for an individual, especially for an older adult, who has internalized the negative stigma about their poor health status? Our results show that men in

particular are more likely to stigmatize mental illness in Nepal than women, while other predictors such as age and education are not related to this process. Among those who have poor health, being female and being older are related to having poorer mental health, while being married is related to better mental health outcomes. Additionally and more importantly, internalization of such stigma is related to increased risk of depression. We discuss the implications of these findings for both academic work in aging and health as well as for aging and health policy in Nepal.

#### A META-ANALYSIS OF THE FACTOR STRUCTURE OF THE GERIATRIC DEPRESSION SCALE (GDS): THE EFFECTS OF LANGUAGE

C. Huang<sup>1,3</sup>, G. Kim<sup>2,1</sup>, J. DeCoster<sup>4</sup>, A.N. Bryant<sup>1</sup>, *1. Department of Psychology, University of Alabama, Tuscaloosa, Alabama, 2. Center for Mental Health and Aging, University of Alabama, Tuscaloosa, Alabama, 3. Center for Community-Based Partnership, University of Alabama, Tuscaloosa, Alabama, 4. Center for Advanced Study of Teaching and Learning, University of Virginia, Charlottesville, Virginia*

**Objectives:** The Geriatric Depression Scale (GDS) has been widely used in diverse cultural groups and has been implemented in more than 30 different languages. The present meta-analysis examined whether the factor structure of the GDS varies by language. **Methods:** A total of 26 published studies (14,669 participants; 10 languages) met the inclusion criteria and were included in the meta-analysis. Exploratory factor analyses were conducted to examine the factor structure of the GDS in the overall sample as well as in each language, including Chinese, English, Greek, Hindi, Iranian, Italian, Japanese, Korean, & Portuguese. **Results:** The analysis of the overall sample resulted in a four-factor structure, whereas the analyses of the individual languages produced structures with 4 to 6 factors. The mean variable cosines comparing the observed factor structures of the GDS across different languages ranged from .780 to .854, suggesting that the different languages produced distinct factor structures. The three factors of dysphoria, social withdrawal-apathy-cognitive impairment, and positive mood were commonly observed across different languages. **Conclusions:** The findings provide strong evidence of language differences in the factor structure of the GDS. It is suggested that researchers and clinicians exercise caution when administer the GDS in different languages. Structural differences should be taken into account when interpret the scores yielded from different language versions of the GDS.

#### THE SECRETS TO LONGEVITY: THE IMPACT OF TRADITIONAL CUSTOMS AND SPIRITUALITY IN THE AMAMI ARCHIPELAGO

M. Takahashi<sup>1</sup>, K. Tomizawa<sup>2</sup>, *1. Northeastern Illinois University, Chicago, Illinois, 2. Ritsumeikan University, Kyoto, Kyoto, Japan*

This project explored possible longevity factors in the Amami islands (Amami-oshima, Tokuno-shima, and Yoron-to) of Japan where the centenarian ratio is significantly higher than that of the neighboring Okinawa (126.24 vs. 66.04 centenarians per 100,000). In particular, we focused on the psychological outlook associated with their traditional customs and spiritual practices. We "shadowed," documented, and interviewed nine oldest old (mean age=93.2) and three of their relatives, two local ethnographers, and two shamans among others who were involved in traditional rituals and festivals. The transcribed qualitative data were analyzed by a Modified Grounded Theory Approach (M-GTA). The overall results reveal four psychological longevity factors that are unique to this culture: a) a sense of interdependency cultivated through shared historical events (e.g., being a target of ethnic and religious discrimination) and severe climate; b) a strong sense of belongingness in the community in which a genuine respect for older adults is fostered and displayed in various rituals

and ceremonies throughout the year; c) a sense of spirituality derived from a indigenous “religious” belief that integrates animism, ancestor worship, Shintoism, Buddhism, and Christianity, and d) perhaps as a result of the above factors, the older adults in the Amami enjoy a slow, relaxed life style that revolves around its unique tradition. In addition to the conventional biogenetic factors, these results suggest that the interplay between the traditional customs/spirituality and the associated psychological outlook may play a significant role in promoting longevity.

### **CROSS-COUNTRY COMPARISON OF CHANGES IN CLINICAL RISK IN U.S., ENGLAND, MEXICO, TAIWAN, AND INDONESIA**

J. Kim, E. Crimmins, *University of Southern California, Los Angeles, California*

Recent longitudinal biomarker data in several countries provide an opportunity to examine changes in markers of physiological status with age as well as the onset of biological risk and factors that are associated with those changes across countries. This study examines the link between age and the values of clinical biomarkers. Using two waves of national datasets from five countries (U.S., England, Mexico, Taiwan and Indonesia), we examine changes in systolic and diastolic blood pressure and BMI in the five countries. Our analysis includes respondents age 50+ who participated in the physical examination and blood collection. We categorize the change in biological risk into those who moved into the high risk category, those who stayed in the normal range, those who stayed high risk, and those who got better, and use multinomial logistic regression to look at variability in change with age. The results show that persons at older ages are less likely to remain in and return to the normal range for BMI in Mexico and Indonesia; older ages are less likely to return to normal BMI in England; and older ages are less likely to maintain normal BMI but more likely to get worse in the United States. Older ages were more likely to be related to change in blood pressure status except in Mexico. This study provides a better understanding of physiological aging in different environmental and cultural circumstances.

## **SESSION 1990 (POSTER)**

### **AGING AND EMOTIONS**

#### **POSITIVITY EFFECTS IN OLD AGE – A QUESTION OF AROUSAL AND MODALITY?**

B. Streubel, U. Kunzmann, *Department of Psychology, University of Leipzig, Leipzig, Germany*

Positivity effects in older adults’ affective information processing have been demonstrated in attention and memory. This study investigated positivity effects in subjective and cardiovascular reactions to negative pictures differing in arousal. Proceeding from the idea that positivity effects will be evident on the level of controlled rather than automatic processes, we predicted that, in comparison with their younger counterparts, older adults will show smaller reactions to the negative pictures at later rather than early stages of information processing and only if the stimuli are low rather than high in arousal. Forty-one younger and 46 older adults rated their emotional experience of 58 negative pictures from the International Affective Picture System in terms of unpleasantness. In addition, phasic heart rate changes were assessed online and considered as an indicator for the allocation of attentional resources during picture viewing. As predicted, and consistent with previous findings, in comparison to their younger counterparts, older adults reported less unpleasantness in response to low-arousing negative pictures; however, there were no age differences in subjective reactions to pictures with high arousal. As to cardiovascular reactions during picture viewing, there were no age differences in the initial heart rate

deceleration; however, in comparison with their younger counterparts, older adults showed less pronounced mid-interval deceleration suggesting less sustained attention. Together, the present findings provide support for the idea that positivity effects in old age are evident on different levels of emotional functioning (i.e., subjective and physiological) and refer to controlled rather than automatic processes.

### **AGE DIFFERENCES IN EMOTION RECOGNITION: THE EFFECTS OF CONTEXT AND EMOTION QUALITY**

C. Wieck, U. Kunzmann, *University of Leipzig, Leipzig, Germany*

Past work suggests age deficits in various emotion recognition tasks. In these tasks, emotions are typically presented in isolated faces, voices, or written texts and little information about the contexts of these emotions is provided. Proceeding from the idea that age deficits in effortful cognitive processes such as emotion recognition can be reduced if the task is context-rich and age-relevant, the present study asked young and old adults to view twelve film clips, each portraying a woman while she relieved an emotional memory. The clips varied in the age of the protagonist (young vs. old), the emotional quality (anger, sadness, joy) and the age-relevance of the memory (young adults, older adults, age-neutral). After each film, participants rated the protagonists’ emotions via a list of 16 adjectives. Emotion recognition performance was computed as intraclass correlation between a participant’s other-ratings of the target’s emotions and the target’s self-ratings of her emotions. Preliminary analyses suggested age deficits in anger and sadness recognition, but only if the task was of little relevance to older adults or of no particular age-relevance. As predicted, age differences in negative emotion recognition were diminished if the task was of high relevance to older adults. Together, this evidence points to motivational processes that can compensate age deficits in cognitive demanding tasks.

### **CONTEXTUAL INFORMATION DISAMBIGUATES EMOTIONAL FACIAL EXPRESSIONS FOR OLDER ADULTS**

J.T. Stanley<sup>1,2</sup>, F. Blanchard-Fields<sup>2</sup>, *1. University of Akron, Akron, Ohio, 2. Georgia Institute of Technology, Atlanta, Georgia*

Young adults are more accurate than older adults at identifying emotional facial expressions (e.g., anger, sadness) in traditional laboratory tasks of emotion recognition. But the traditional emotion recognition task lacks context. In the present study, we investigated whether adding contextual information reduces age differences in emotion recognition accuracy. Seventy-six young adults (19-28 years) and 66 older adults (61-80 years) completed three emotion recognition tasks: a facial task, a lexical task, and a combined facial plus lexical task. The facial task was similar to the traditional emotion recognition task where participants viewed 35 static photos of facial expressions (5 each of anger, fear, disgust, happiness, sadness, surprise, and neutral) and chose an emotion label from a list. In the lexical task, participants heard 35 sentences presented in a neutral tone of voice and chose an emotion to identify what the character was feeling. In the combined task, participants viewed the 35 facial expressions while they simultaneously heard the emotionally-congruent sentences, or “context”. Again, participants chose an emotion from a list for each item. Consistent with our hypothesis, the addition of contextual information (in the combined condition) improved the emotion recognition accuracy of older adults more than that of young adults. Interestingly, age differences for anger recognition persisted, even in the combined condition. Overall, these findings suggest that contextual information can help disambiguate emotional information, especially for older adults. They also suggest that past work on aging and emotion recognition may have underestimated older adults’ ability to recognize emotions in daily life.

## ANXIOUS MOOD INDUCTION: USE OF A MUSIC AND MEMORY PROCEDURE WITH OLDER AND YOUNGER ADULTS

S. Rastegar, B.G. Knight, *Department of Psychology, University of Southern California, Los Angeles, California*

Mood induction procedures (MIPs) are a powerful tool for examining mood states under experimental conditions. MIPs have not frequently been used to evoke anxiety in older adults. Forty-one older and 76 younger adults were randomized to anxious or calm MIPs, involving mood-congruent music and autobiographical memory. Visual analog scale (VAS) anxiety ratings and 10-item Spielberger Trait Anxiety Inventory – State (STAI-S) scales were given at baseline, following MIPs, after a cognitive task, and following booster MIPs. Repeated-measures ANOVA analyzed the effects of the MIPs over time by induction and age group. Between-subjects results indicated that the MIPs produced differences in anxiety level by induction group (VAS anxiety:  $F(4,113)=50.023$ ,  $p<0.0001$ ; STAI-S:  $F(4, 112)=24.567$ ,  $p<0.0001$ ). There were no significant between-subjects age x induction interactions. Significant within-subject three-way interactions between time, age, and induction group were found on both the VAS anxiety (cubic interaction,  $F(4,113)=4.067$ ,  $p<0.05$ ) and the STAI-S (quadratic interaction,  $F(4, 112)=7.470$ ,  $p<0.01$ ). Post-hoc independent-samples t-tests revealed that, following the cognitive task, older adults no longer differed in anxiety ratings by induction group (VAS anxiety,  $t=-0.308$ ,  $p=0.759$ ; STAI-S,  $t=-0.300$ ,  $p=0.766$ ), whereas younger adults scores by induction group remained significantly different (VAS anxiety,  $t=-4.934$ ,  $p<0.0001$ ; STAI-S,  $t=-4.440$ ,  $p<0.0001$ ). Our findings suggest that an anxious MIP using music and autobiographical memory is effective in producing mood change in both older and younger adults, although it appears older adults may more quickly regulate their mood following these MIPs. Results add to research suggesting that older adults more rapidly recover from MIPs (Larcom & Isaacowitz, 2009).

## DAILY CO-OCCURRENCE OF AFFECT AND STRESS RESIDUE IN OLDER ADULTS

J.L. Ramsey<sup>1</sup>, S.D. Neupert<sup>1</sup>, D. Mroczek<sup>2</sup>, A. Spiro<sup>3</sup>, *1. Psychology, North Carolina State University, Raleigh, North Carolina, 2. Purdue University, West Lafayette, Indiana, 3. VA Boston Healthcare System and Boston University School of Public Health, Boston, Massachusetts*

Studies have indicated that increased emotional complexity, operationalized as daily co-occurrence of affect in this study, is related to reduced stress in older adults. Older age has been associated with a greater likelihood of experiencing positive and negative emotions at the same time. Research also suggests that stress residue from one day to the next may differentially impact an individual's ability to respond in a resilient and adaptive manner when faced with stress which continues to be present across days even if the original stressor no longer remains. The present study examined the relationship between daily co-occurrence of affect, stress residue, and negative affect in 311 older adults (60-89 years) responding to a daily diary study of the VA Normative Aging Study. Daily co-occurrence of affect was measured for each participant as their intraindividual correlation between positive and negative affect over the 8 days. Stress residue was operationalized as the within-person relationship between a stressor on one day and affect on a subsequent day, controlling for affect on the previous day and same-day reactivity. Results indicated a Daily Co-Occurrence of Affect X Stress Residue; people with a higher co-occurrence of affect tended to exhibit less stress residue while people with a lower co-occurrence of affect tended to exhibit more stress residue. These results suggest that daily co-occurrence of affect may be an important resilience factor for older adults.

## LIFE SATISFACTION, EMOTIONAL SUPPORT, AND HEALTH: THE IMPACT OF RACE-BASED REJECTION

Y. Cheng, D. Grün, *Department of Psychology, NC State University, Raleigh, North Carolina*

Chronic social rejection may have negative long-term effects on individuals' mental (e.g., life satisfaction) and physical health. In the present study, we investigate the effects of chronic rejection in the context of race. Race-based rejection is social rejection due to one's race or ethnicity. It can affect individuals' well-being both directly (e.g., emotional distress) and indirectly (e.g., social barriers in obtaining health care). We expect that individuals experiencing more race-based rejection not only report more rejection-related mental and physical symptoms, but also report poorer general physical and mental health and lower life satisfaction. To test this idea, we used data from the Behavioral Risk Factor Surveillance System (BRFSS), a representative telephone survey of U.S. adults. As part of an optional module, 10 states included questions about treatment compared to other races and physical and mental symptoms due to race-based rejection. For our research question, we only included non-white adults ( $N = 12,230$ ). Age ranged from 19 to 99 ( $M = 49.0$ ,  $SD = 16.7$ ). To address our research question, we analyzed path models including age and sex as predictors for both treatment and symptoms of race-based rejection. Both race-based rejection variables then were predictors for the three outcome variables: life satisfaction, emotional support, and physical health. In general, race-based rejection had negative effects on all outcome variables. Moreover, older adults reported lower race-based rejection than younger adults. Age also moderated the relationship between treatment and related symptoms. Findings are discussed in the context of theories of rejection.

## THE DIFFERENTIAL EFFECT OF CHOICE ON REGRET IN OLDER AND YOUNGER ADULTS: GIVEN THE SAME CHOICES, YOUNGER ADULTS REGRET THEIR DECISION MORE THAN OLDER ADULTS

M. Feng, G.C. Davison, *University of Southern California, Los Angeles, California*

Older adults have reported experiencing fewer regrets than younger adults; however it is unclear whether this age difference is due primarily to older adults' avoidance of potentially negative consequences or to differences in reaction to an unfavorable outcome. The proposed study employs a methodology that minimizes the use of antecedent-coping strategies to control their environment. We examined whether younger and older adults differed in their level of regret when reacting to a hypothetical scenario where they must choose between two airline flights. As the negative consequences of their choice unfold, participants rate their level of regret at different points throughout the scenario. A control condition engages participants in the same scenario but without the choice point. Analyses revealed a marginally significant interaction between age and choice condition on regret,  $F(1,180) = 3.55$ ,  $p = .06$ ,  $\eta^2 = .02$ . A significant main effect of age was found,  $F(1,180) = 5.28$ ,  $p = .02$ ,  $\eta^2 = .03$ ; however a main effect of choice condition was not significant  $F(1,180) = .09$ ,  $p = .77$ ,  $\eta^2 < .001$ . Post-hoc analyses revealed that younger adults were more regretful than older adults in the choice condition,  $F(1,92) = 14.26$ ,  $p < .001$ , whereas no age differences were found in the control condition,  $F(1,92) = .90$ ,  $p = .35$ . Results from this study suggest that older adults experience lower levels of post-decision regret than younger adults, even when encountered with the same choices and decision outcome.

## INTERPERSONAL DAILY STRESSORS AND PSYCHOLOGICAL WELL-BEING IN PERSONS WITH MILD COGNITIVE IMPAIRMENT

E.A. Hahn, W.E. Haley, R. Andel, *School of Aging Studies, University of South Florida, Tampa, Florida*

Introduction: Daily stressors may contribute to greater psychological distress in the daily lives of persons with mild cognitive impairment (MCI), but research examining daily experiences and their relationship to psychological well-being has been limited. This study

examined daily stressors in relation to psychological well-being by contrasting MCI and cognitively healthy older adults. Methods: A convenience sample of 13 MCI and 23 cognitively healthy participants were recruited from a university-based memory clinic. Participants completed a baseline interview and up to eight days of interviews, consisting of self-reported daily stressors, daily positive affect (PA) and daily negative affect (NA). Daily stressors were examined first as “any” stressors, and then as interpersonal (e.g., spousal conflict) and non-interpersonal (e.g., transportation problem). Controlling for depressive symptoms, multi-level modeling was used to examine within- and between-person daily stressors as predictors of PA and NA. Results: Most participants were female, White, married, had more than a high school education, and averaged 15 on the CES-D (SD=10.69). MCI participants had higher depressive symptoms, reported similar overall stressors, more interpersonal stressors, lower PA, and higher NA than controls ( $p < .05$ ). Reporting any daily stressor was not associated with affect. For both groups, on days when a participant reported an interpersonal stressor, they had decreased PA (Est=-0.20,  $p = .032$ ); for persons with MCI, only, they had higher NA (Est=0.22,  $p = 0.01$ ) compared to controls. Non-interpersonal stressors were not associated with affect. Discussion: MCI participants appeared to have worse psychological well-being than controls, and interpersonal stressors may contribute to distress in their daily lives.

### **INTRUSIVE THOUGHTS MEDIATE THE ASSOCIATION BETWEEN PERCEIVED DISCRIMINATION AND COGNITIVE PERFORMANCE IN ADULTS**

E. Munoz, J. Smyth, M. Sliwinski, *The Pennsylvania State University, University Park, Pennsylvania*

Perceived discrimination (PD) describes the extent to which individuals feel that they are treated unfairly in their daily lives. PD is a source of stress that is associated with poor physical and mental health (Hunte, 2011; Kessler, 1999). The emotional and cognitive responses associated with PD, such as negative affect (NA) and intrusive thoughts (IT), have been hypothesized to mediate the association between PD and various health outcomes (Jackson et al., 2006). This study focused on measures of cognitive health and sought to determine whether NA and IT mediate the association between PD and cognition. Because different theoretical perspectives may predict age-related deficits or increases in emotion-regulation abilities, we explored whether older adults were more or less affected by PD-related responses. A sample of adults ( $N = 324$ ) aged 19 to 83 years (Mage=49, SD=17; 50% female; 53% white, 37% black, 10% other) completed a battery of cognitive tasks and measures of PD, IT, and NA. Results indicated that PD was negatively associated with performance on working memory ( $\beta = -.04$ ,  $p < .01$ ), primary memory ( $\beta = -.03$ ,  $p < .01$ ), and fluid intelligence ( $\beta = -.18$ ,  $p < .05$ ). As hypothesized, IT mediated the association between PD and each cognitive measure ( $\beta$ s =  $-.05$  to  $-.01$ ,  $p < .01$ ), but NA did not. Contrary to expectations, age did not moderate the mediation results for IT. These findings demonstrate that IT may comprise an important pathway through which PD influences cognitive performance and suggests that older adults are just as affected as younger adults by experiences of IT.

## **SESSION 1995 (POSTER)**

### **ARTFUL AGING**

#### **CATHY RIGBY RETURNS TO NEVERLAND AT AGE 58: HOW ONE WOMAN REFUTES AND DEFINES FRAMES OF GENDER AND AGING**

K. Moody<sup>1</sup>, M. Rivera-Hernandez<sup>2</sup>, 1. *The University of Iowa, Iowa City, Iowa*, 2. *Miami University, Oxford, Ohio*

For years, Cathy Rigby defied traditional gender roles in society as the titular character of the Broadway musical *Peter Pan*, and was even

nominated for a Tony Award for her performance as the “boy who refuses to grow up” in 1991. Twenty years later, Rigby returned to the role as star and producer, and her story has changed from the discussion of her gender and its effect on performances to how her age has become a discussion point regarding her portrayal of Peter Pan. This study used discourse analysis and framing of news stories gathered over a six-month period from publications that specifically focus on theatrical productions and Broadway musicals, such as *The New York Times*, *The New Yorker*, and *Playbill*. In it, we explored how writers – and even Rigby herself – addressed the issue of aging, and extrapolate this information to provide a cultural perspective of aging within modern culture. Themes of possibility, impossibility, and perseverance are discussed, along with how modern entertainment media constructs aging by contrasting Rigby’s age with those of younger performances. Even the way that Rigby defines her own identity displays a personal frame of aging as one of dichotomy in self-efficacy, where her conflict stems from how she is able to negotiate her body’s ability to perform by contrasting herself against younger performers. These frames expand the literature of both communication studies about framing and the popular consciousness of aging within entertainment media.

### **FROM THE STAGE TO THE INTERNET PAGE: SOCIAL MEDIA’S INFLUENCE ON PERCEPTIONS OF LATE LIFE POTENTIAL**

J. Eaton, *University of Utah, Salt Lake City, Utah*

Aging and the arts literature emphasizes the ability of the arts to highlight potential in the aging individual. While older adults may experience increased self-efficacy, mastery, and possibility, the question arises as to the ability of the arts to enable others to acknowledge that same potential. Social media is untapped in terms of analysis of perceptions to aging and the arts. The purpose of this qualitative study is to better understand audience perceptions of artistic performance via social media. Purposive sampling was used to identify a professionally created online video, found on a popular social media site, incorporating older adult performance and popular music to increase heterogeneity of viewers. Ben Kwell’s *Penny on the Train Track* (2007) was chosen and included 62,983 views as of July 18, 2011. A total of 60 comments were posted to the video and analyzed using In Vivo coding, followed by a second cycle of coding to identify patterns. Comments focused on feelings of joy, self-reflection, personal hope for the future, respect, infantilization, and aging bias. Audiences were forced to view aging outside of their assumptions which was uncomfortable for some, but expanded the reactions of others demonstrating the opportunity of artistic performance to alter reactions to the aging experience. This study establishes a need for greater understanding about the influence of late life performance on perceptions of the social media audience. Future studies need to focus on performance utilizing individuals with a variety of abilities and levels of independence.

### **EVALUATING AN INTERACTIVE ART PROGRAM FOR OLDER ADULTS AND CAREGIVERS**

R.L. Berman<sup>1</sup>, K. Kiehn<sup>2</sup>, 1. *Leonard Schanfield Research Institute, CJE SeniorLife, Chicago, Illinois*, 2. *CJE SeniorLife, Chicago, Illinois*

Evaluating creative arts programs can pose significant challenges for researchers, particularly in community settings where attendance at multiple sessions is voluntary. This poster presents a case study of the process of designing and implementing an evaluation of Art in the Moment (AIM), developed in collaboration with the Art Institute of Chicago and based on Meet Me at the MOMA. AIM utilizes art as a vehicle for older people, including those with dementia, to communicate, reminisce, and reflect on their life experiences with caregivers and other companions. Participants engage in viewing and discussing famous works of art with a trained docent, followed by a related art-making activity. The anticipated program outcomes are improvement in mood

and meaningful personal interactions and dialogue between care partners and other participants. The evaluation process encompassed: 1) initial collaboration with program staff to clarify outcomes and identify feasible evaluation strategies, 2) development of specific methods to measure outcomes, and 3) ongoing review and use of interim results, and 4) modification of evaluation strategies for the final year of the project. Evaluation methods include a pre- and post- measure of mood (single item faces scale from Meet Me at the MOMA), self-report items regarding confidence in self expression and communication, satisfaction questions, open-ended phone interviews, and observations of participant engagement. Critical analysis of this case study in evaluation raises important issues and implications for evaluating the outcomes of arts-based interventions and programs.

#### **ART & ALZHEIMER'S: PARTICIPANTS' VIEWS OF THE ANDY WARHOL ART ENGAGEMENT ACTIVITY**

J.D. Flatt<sup>1</sup>, A. Liptak<sup>3</sup>, J. Googan<sup>2</sup>, T. Varner<sup>2</sup>, J. Lingler<sup>3</sup>, 1. *University of Pittsburgh Graduate School of Public Health, Pittsburgh, Pennsylvania*, 2. *Andy Warhol Museum, Pittsburgh, Pennsylvania*, 3. *University of Pittsburgh School of Nursing, Pittsburgh, Pennsylvania*

**Purpose:** To describe persons with Alzheimer's (AD) and their caregivers' subjective views and experiences regarding participation in an art engagement activity. **Methods:** Four focus groups were conducted with participants in a novel art engagement activity at the Andy Warhol Museum. Immediately following the completion of the activity, we recruited 10 persons with AD or cognitive impairment and 10 caregivers to share their views and experiences. Open-ended questions were asked in each focus group and we used the qualitative method of grounded theory to analyze the data. Participants also completed a brief satisfaction survey and associations were examined using nonparametric statistics. **Findings:** Three key themes were identified that described the aspects that participants' enjoyed overall: cognitive stimulation, social connections, and a sense of self. In addition, we identified programmatic issues such as participant characteristics, activity-specific concerns and program logistics that can be utilized to improve future program offerings. We also found that past experience with art and perceived social cohesion were correlated with participants' overall level of enjoyment of the program ( $r=.54$ ,  $p<.05$ ,  $r=.71$ ,  $p<.01$ , respectively). **Health Implications:** It is important to explore how meaningful activities such as the arts may benefit persons with AD and their caregivers. Enjoyment and a sense of connection with others may have important implications for improving quality of life and minimizing the stigma associated with AD and other dementias.

### **SESSION 2000 (POSTER)**

#### **ASSESSMENT AND MEASUREMENT**

##### **COMPONENT STRUCTURE OF THE GERIATRIC ANXIETY SCALE IN A SAMPLE OF OLDER ADULTS**

A. Mueller, D.L. Segal, M. Marty, *Psychology, University of Colorado at Colorado Springs, Colorado Springs, Colorado*

**Introduction:** The Geriatric Anxiety Scale (GAS; Segal et al., 2010) is a promising new self-report screening measure of anxiety. The measure was developed to have three theoretically derived subscales (cognitive, affective, and somatic) which require empirical validation. The purpose of this study was to test the component structure of the GAS in a large sample. **Method:** Community-dwelling older adults ( $N=386$ ;  $M$  age = 72.13 years,  $SD = 7.57$ ; 63% European American; 62% women) recruited from a community mental health clinic and the voter registry of El Paso County completed the GAS as part of two larger studies. **Results:** The 25 items of the GAS were subjected to principal components analysis (PCA). PCA indicated the presence of five components with eigenvalues exceeding 1, explaining 41.5%, 5.7%, 4.9%, 4.4%, and 4.2% of the variance, respectively. Based on the screeplot, we

decided to retain the first two components, and PCA was conducted forcing two factors using a direct oblimin rotation. The two component solution explained 47.3% of the variance. The majority of items that loaded onto the first component were from the cognitive and affective subscales, and the majority of items that loaded onto the second component were from the somatic subscale. There was a strong positive correlation between the two components ( $r = .63$ ). **Discussion:** The GAS appears to have two primary components. The first appears to measure a combination of cognitive and affective symptoms of anxiety whereas the second appears to measure primarily bodily symptoms. Further validity studies of the underlying components are needed.

##### **THE MARWIT-MEUSER MINI CAREGIVER GRIEF INVENTORY (MMM-CGI)**

J. Strong, B.T. Mast, *Psychological and Brain Science, University of Louisville, Louisville, Kentucky*

The Marwit-Meuser Caregiver Grief Inventory (MM-CGI) is a 50 item questionnaire designed to assess three aspects of caregiver grief: personal sacrifice/burden (A), heartfelt sadness/longing (B), and worry/felt isolation (C). We sought to create and test a 10 item short form of the MM-CGI in 80 dementia caregivers. Ten items were selected based upon (1) their ability to discriminate between caregivers with high and low levels of grief/burden, (2) item-total correlations, and (3) their representation of the three subscales from the full MM-CGI. Based on this approach, we constructed a shorter version consisting of 10 items (four subscale A items, three items each for subscales B and C). The short-form had high internal consistency (Cronbach's alpha = .87) and the short form total score was highly correlated with the 50-item total score (0.96). The short-form subscale totals were highly and significantly correlated with the short-form total score at the  $p<0.001$  level (subscales A: 0.88; subscale B: 0.80; subscale C: 0.84). The short-form total score was also highly correlated with measures of depression (Geriatric Depression Scale: 0.43), another measure of anticipatory grief (Anticipatory Grief Scale: 0.75) and a measure of burden (Zarit Burden Interview: 0.70). Caregiver grief can be measured in a brief, yet reliable and valid manner, thus increasing its appeal for use in clinical settings.

##### **PREDICTORS OF PERFORMANCE-BASED INSTRUMENTAL ACTIVITIES OF DAILY LIVING**

E. Schmidt, L.A. Ross, K. Ball, *University of Alabama at Birmingham, Birmingham, Alabama*

Normal neurocognitive decline during aging can impinge on a range of cognitive domains, including memory, reasoning, and processing speed. Elevated chronic stress and depression have also been linked to greater cognitive dysfunction and may even be predictive of later mild cognitive impairment and dementia. Furthermore, cognitive functioning is strongly associated with the ability to independently perform instrumental activities of daily living (IADLs) such as driving, cooking, paying bills, and managing medications. Yet it remains unclear which cognitive assessments best predict functional performance on IADLs in at-risk adults. Additionally, psychological factors, such as depression and perceived stress, are often overlooked when evaluating IADL performance. This study investigates (1) the relationships of several cognitive constructs (memory, reasoning, and processing speed) to, and (2) the impact of psychological factors (depression and perceived stress) on performance-based IADLs in a sample of sedentary older adults with impaired processing speed ( $N=233$ ; mean age=75,  $SD=5.9$ ). Linear regression revealed that after accounting for age and education, significant predictors of IADL performance were measures of memory (Hopkins Verbal Learning-Recognition; Benton Visual Retention Test), reasoning (Letter Series), and processing speed (Complex Reaction Time),  $ps < .05$ . Additional regressions on subsamples investigated the impact of perceived stress ( $n=146$ ) and depressive symptoms ( $n=229$ ) on IADL performance. Implications, as well as the utility of objective performance-based measures of everyday functioning (versus self-report measures), will be discussed.

## THE FAUX PAS TEST PREDICTS CHANGES IN SOCIAL FUNCTIONING AT 15-MONTH FOLLOW-UP IN COMMUNITY-DWELLING OLDER ADULTS

S.V. Rowe<sup>1</sup>, J. Shouse<sup>2</sup>, B.T. Mast<sup>2</sup>, 1. *Salem Veterans Affairs Medical Center, Salem, Virginia*, 2. *University of Louisville, Louisville, Kentucky*

Theory of Mind (ToM) is the ability to infer the mental states of others and the self. Two measures of advanced ToM, the Faux Pas Test (FPT) and the Eyes Test, have demonstrated utility in distinguishing clinical populations with marked social deficits. There is evidence that ToM performance may decline with age, though empirical links between ToM and social functioning have not been established in community-dwelling older adults. In the baseline sample of the Study of Thinking and Relationships (STAR), no relationship was found between the ToM measures and multiple measures of social functioning (negative social exchanges, social inappropriateness, social support, and social network size) in community-dwelling older adults. The current study examines the longitudinal relationship between ToM performance at the STAR baseline and changes in social functioning at 15-month follow-up. Preliminary data analysis of 24 participants indicates that poor baseline FPT performance, but not Eyes Test performance, is associated with increases in socially inappropriate behaviors (FPT Content:  $r = .45$ ,  $p = .03$ ) and increases in negative social exchanges (FPT Empathy:  $r = .368$ ,  $p = .05$ ) 15 months later. The FPT Content score, which reflects an individual's ability to describe the faux pas in a given story, independently predicted increases in socially inappropriate behaviors after controlling for age, education, estimated verbal IQ, and global cognitive functioning ( $\beta = .52$ ,  $p = .02$ ). Though preliminary, the current results suggest that the FPT may be particularly sensitive in detecting underlying neurological or cognitive changes that have implications for adaptive social functioning in community-dwelling older adults.

## UTILITY OF THE DRS-2 SUBSCALES IN PREDICTING SOCIAL NETWORK CHANGES IN OLDER ADULTS

J. Shouse, S.V. Rowe, B.T. Mast, *Dept. of Psychological and Brain Sciences, University of Louisville, Louisville, Kentucky*

Recent research has demonstrated an association between cognitive functioning and social network size (SNS). The Dementia Rating Scale-2 is one of the most widely used screening measures with older adults. The present study examined the extent to which the DRS-2 subscales might be useful in identifying older adults with smaller social networks. Specifically, this study hypothesized that the Memory, Initiation/Perseveration and Conceptualization subscales would be related to social network sizes (SNS) as measured by the social convoy method. Executive functioning, represented in the I/P and Conceptualization subscales, has been linked previously with social functioning, while memory problems could also present social challenges (e.g. maintaining social contact and remembering significant events). Consistent with study predictions, among the DRS-2 subscales, Memory ( $r = .298$ ,  $p < .01$ ), I/P ( $r = .266$ ,  $p < .05$ ) and Conceptualization ( $r = .239$ ,  $p < .05$ ) emerged as significant correlates of fewer outer circle social network contacts. I/P was the only subscale which maintained significance after inclusion of demographic and control variables in a linear regression ( $\beta = .306$ ,  $p < .05$ ). The finding emphasizes the importance of executive functioning in maintaining an extended social network. These results suggest possible avenues of intervention for older adults experiencing social deficits and potential utility of the DRS-2 to identify socially at-risk elders. Dysregulation of inhibition and goal directed behavior observed in elders with lower EF, in addition to memory deficits, might accelerate network changes predicted by socioemotional selectivity theory.

## TOOLS TO ASSESS PAIN IN LONG TERM CARE PATIENTS WITH DEMENTIA: WHAT PROGRESSES HAVE WE MADE?

S. Zwakhalen, J. Hamers, *HSR, University Maastricht, Maastricht, Netherlands*

In recent years, research in the field of pain among elderly people with dementia focused on the development of tools to assess pain ade-

quately. In 2006 we presented the results of a systematic review (Zwakhalen et al., 2006). In this study we present an update that review and answer the following questions; 1. What tools are available to assess pain in elderly people with dementia? 2. What are the psychometric properties of these tools? 3. What is the clinical usefulness of the tools? We reviewed the relevant publications detected by an extensive search strategy, involving computer searches in Medline, Psycinfo and CINAHL. In addition references were screened and unpublished manuscripts were searched for. The search strategy focused on publications published after the review of 2006 by Zwakhalen. Data were extracted from the publications and quality judgment criteria were used to evaluate the psychometric properties. Currently over 20 tools are available. They differ extensively in quality, content, scoring methods and format. Although the majority of tools were developed to assess pain in an overall nursing home population, more recently specific tools became available. To assess pain in elderly osteoarthritis patients or other subgroups. The amount of scales become overwhelming and keep on growing. In comparison to the review of 2006 progresses have been made with regard to psychometric evaluation of the tools. However, none of the tools seems the best silver standard yet.

## SAFE SEX FOR OLDER WOMEN: ADAPTING THE SEXUAL RISKS SCALE

P. Weitzman<sup>1</sup>, L. Xing<sup>1</sup>, H. Chen<sup>1,2</sup>, 1. *Environment and Health Group, Inc., Cambridge, Massachusetts*, 2. *Harvard Medical School, Brookline, Massachusetts*

HIV is on the rise among American women over the age of 50. The increase coincides with the rise in gray divorce. Despite the rise in HIV infections among older women, there is a relative absence of research that examines older women's perceptions of their own sexual health risks. In tandem with that is a relative absence of measures to assess older women's knowledge about HIV risk, attitudes about safe sex, and intention to practice safer sex. DeHart & Birkimer (2001) developed a 38-item Sexual Risks Scale (SRS) for use with college students. It measures key domains related to HIV risk: attitudes about safer sex, normative beliefs, intention to try to practice safer sex, expectations about the feasibility of safer sex activity, and perceived susceptibility to HIV/AIDS. Based on the empirical literature, we adapted the SRS for use with older women. A focus group with older women was convened to test consumer response to the scale, and further adapt it. Adaptations centered on language that specifically references older women and menopause, as well as language about alcohol use to make it more appropriate for an older adult as compared to a college student. A total of 7 items were modified. Our next step is to conduct validity research.

## COGNITIVE COMPLAINTS UNRELATED TO CANS-MCI COMPUTERIZED MEMORY MEASURES JAMES SCANLAN, PHD\*, JOANNE LABOFF, MSW\*, EMORY HILL, PHD\*, \*SCREEN INC. SEATTLE, WA

J.M. Scanlan, J. LaBoff, E. Hill, *Screen, Inc., Seattle, Washington*

Objective: To compare subjective cognitive complaints with memory measures obtained by computerized testing. Subjects: 7778 subjects were tested in 347 US medical facilities (6/22/2011-2/15/2012) with the CANS-MCI, a self-administered, touch-screen computerized cognitive examination designed to detect early MCI. Sample included normal, mildly impaired and demented patients: age=67.9 (SD=15), 59% female. Median test time=34 min. Methods: We examined the relationships between memory measures and three subjective patient questions concerning mental clarity, concentration and memory. In a subset, CANS-MCI measures were also compared with clinician administered neuropsychological measures. Results: Patients self-reporting problems with mental clarity and concentration actually performed better on immediate, delayed and cued recall (all  $p < .0001$ , all  $F > 25$ ). Regression found the most powerful predictor of self-reported cognitive complaints was age, younger people reporting more than 65+

patients. Analyses restricted to > 65 yrs. old found weak, but similar relationships between mental clarity and concentration complaints with memory measures. In all age groups, subjective memory complaints were unrelated to computerized memory measures. In the > 65 cohort, the strongest predictors of self-reported cognitive complaints were depression, pain, and head injury history. Conclusions: Self-reported cognitive problems don't match objective memory measures and may mislead medical professionals, as age, depression, and pain all effect cognitive complaints. While the utility of caregiver/family assessment is indisputable, asking patients to self-identify memory problems is not. The failure to obtain positive results in this very large data set suggests that clinicians using subjective patient memory concerns as substitutes for objective testing are often misguided.

#### **MEASURING FUNCTIONAL STATUS CHANGES AMONG INSTITUTIONALIZED OLDER ADULTS WITH DEMENTIA**

M.E. Bowen<sup>1,2</sup>, M. Rowe<sup>2,1</sup>, 1. *HSR&D/RR&D Research Center of Excellence, James A. Haley Veterans Hospital, Tampa, Florida*, 2. *University of South Florida, Tampa, Florida*

**Objective:** Few tools have been developed specifically to measure functional status (FS) changes in older adults with dementia; of these, most have floor and ceiling effects—capturing early or severe declines in function. Given that it is the process of FS decline that offers the most opportunities for intervention, this study will examine a range of tools with varying sensitivity and specificity to increase our understanding of FS changes in this population. **Methods:** Using single-subject design, the FS of 20 residents was measured weekly for 4 months using 6 tools [Katz ADL, Barthel, Functional Independence Measure (FIM), Resident Assessment Instrument (RAI), Tinetti Gait and Balance, and grip strength]. These tools consisted of informant report (health care staff) and/or observational measures (e.g., eating, ambulating). **Results:** Using an expert as the gold standard, 7 residents experienced a FS change (e.g., infection, dementia-related behavior change). The Katz ADL was not sensitive to FS changes while Tinetti Gait and Balance and grip strength scores varied within persons by  $\geq 25\%$  when there were no FS changes. In other tools, weekly variation in informant reports (use of grab bar for shower/toilet in the FIM) and incontinence (FIM and Barthel) indicated FS changes when there were none. **Conclusion:** Of the tools tested, the RAI may be most sensitive to subtle changes in FS, largely because it does not rely entirely on informant reports or bowel/bladder incontinence. Other tools that combine informant ADL items with performance-based measures may be sensitive to early changes in FS in this population.

#### **THE RELATIONSHIP BETWEEN DEPRESSION, EXECUTIVE FUNCTION, AND PROSPECTIVE MEMORY IN A COMMUNITY-BASED MEMORY CLINIC**

B.N. Renn, *Psychology, University of Colorado, Colorado Springs, Colorado Springs, Colorado*

The present study examined executive function as a mediator of self-reported memory impairment in a low-cost community-based memory clinic. The clinic provides brief neuropsychological screening for individuals on a sliding-fee scale. Measures include a comprehensive demographic questionnaire, the Prospective and Retrospective Memory Questionnaire (PRMQ), the World Health Organization Well-Being Index (WHO-5), and a 45-minute screening battery, consisting of the Mini-Mental Status Examination (MMSE) as well as tests of auditory and visual memory, executive function, working memory, and attention and concentration. The average self-referred client was 68.78 years old, Caucasian-American (87.4%), female (65.8%), earning less than the area's median annual household income, and likely to have a family history of dementia (43.6%). Previous research suggests that depression is associated with impaired executive function and an increased likelihood of self-reporting memory impairment. Furthermore, impaired executive

function is associated with increased prospective memory difficulty. Test results from 199 clients indicate that in general, older clients endorsed less depressive symptomatology than their younger counterparts. After controlling for age, depression significantly predicted self-reported retrospective and prospective memory difficulty. Depression also significantly predicted impaired performance on a test of executive function (Trails B) after controlling for age. However, after controlling for depressive symptomatology, executive function did not predict self-reported prospective memory difficulty. Taken together, the results indicate that within a self-referred community-based older adult population, executive function does not seem to mediate the relationship between depression and self-reported memory impairment.

#### **FINANCIAL CAPACITY IN THE PRESENCE OF DIFFUSE CORTICAL ATROPHY: A SINGLE CASE STUDY**

L. Mitchell, G. Byrne, J. Wilson, C. Tilse, N.A. Pachana, *School of Psychology, University of Queensland, St Lucia, Queensland, Australia*

Financial capacity assessments are becoming increasingly important in the context of patients surviving longer after experiencing events such as stroke and traumatic brain injury, or receiving a diagnosis of dementia or other progressive neurological disease. Despite their importance, such assessments are often difficult, with decisions at times based on subjective, sometimes biased or inadequate, information. In addition, decisions on capacity can tend towards a focus on noting whether or not the person has capacity, when a person-environment fit approach, including consideration of areas of strength and deficit, may be warranted. This case study aims to illustrate the importance of a person-environment fit approach to financial capacity assessment. It presents the results of a financial capacity assessment for a 62-year-old female with diffuse cortical atrophy, diagnosed with probable dementia, who continued to perform well on financial-based tasks and cognitive assessments, including the Financial Competence Assessment Scale and the Addenbrooke's Cognitive Examination-Revised. The assessment was carried out as part of a larger Australian research project aiming to validate an objective approach to financial capacity assessment. Despite the atrophy and the diagnosis, she continues to manage household financial tasks with limited assistance. These results demonstrate the importance of an individualized approach to financial capacity assessment, devoid of assumptions based on physiological damage or diagnosis. As such, it further highlights the importance of identifying both areas of strength and deficit, allowing for compensatory and support strategies to be implemented, and maximizing level of independence and quality of life for the individual.

### **SESSION 2005 (POSTER)**

#### **CANCER**

#### **EMPLOYMENT, VOLUNTEERISM, AND THE WORK OF TRANSITIONAL CANCER SURVIVORSHIP: CRITICAL CASE PERSPECTIVES OF RURAL COMMUNITY-DWELLING OLDER ADULTS AND THEIR SUPPORT PERSONS**

R. Klimmek, J. Wenzel, *Johns Hopkins University School of Nursing, Baltimore, Maryland*

Transitional cancer survivorship (TCS) work is defined as survivor tasks, performed alone or with others, to carry out a plan of action for managing one or more aspects of life following primary cancer treatment. Theoretically, survivors engage in 3 reciprocally-interactive lines of work: (1) illness-related; (2) biographical; and (3) everyday life work. A prospective longitudinal dyadic study of rural community-dwelling African American older adults with cancer and their support persons was conducted using the concept of TCS work as a lens on survivor-



ship experiences. The purpose of the study was to understand the validity and utility of application of the concept of TCS work to survivorship outcomes within a population historically-impacted by health disparities. Dyads were followed from around the time of diagnosis with early-stage cancer through the first several months following completion of primary cancer treatment. In-depth interviews, geographic data, logs of bi-weekly phone calls to participants, daily participant journals, and self-report measures collected throughout the study were analyzed using recommended procedures for case study analysis. Part-time employment and volunteerism emerged as important components of transitional cancer survivorship. This poster will present theoretical perspectives on the roles and relationships between employment, volunteerism, TCS work, and survivorship outcomes. Critical cases of TCS work, derived from dyadic analyses, will be used to further detail and illustrate the emergent theory. An understanding of the role, complexities and importance of employment and volunteerism during survivorship may contribute to provider understanding of patient and caregiver experiences as well as recommendations during this period.

### **THE IMPACT OF CONTEXT AND CANCER EXPERIENCE ON OLDER ADULTS DECISION MAKING COMPETENCE**

C.C. Gayer<sup>1,2</sup>, J.M. Jacobs-Lawson<sup>1</sup>, M. Schumacher<sup>1</sup>, *1. University of Kentucky, Lexington, Kentucky, 2. Cancer Support Community, Philadelphia, Pennsylvania*

Older adults are increasingly likely to face difficult decisions in life threatening contexts as they move probabilistically closer to death, become increasingly likely to be diagnosed with life threatening diseases, and encounter more death within their social network, than younger adults (Greenberg, 2011). The purpose of the current study was to understand the impact of a life-threatening decision context centered around cancer, and personal experience with cancer diagnosis, on older adult's decision making competence. Participants age 55-90 (N=202) were randomly assigned to either a mundane or life threatening decision context condition and then completed the corresponding survey packet containing the measurement questionnaire. Analyses consisted of a series of 2 (condition-mundane/life-threatening) x 2 (cancer experience-previous diagnosis/no previous diagnosis) ANOVA's. The dependent variables were 3 major components of the DeBruin et al (2007) Adult Decision Making Competence Scale: (a) Resistance to Framing, (b) Resistance to Sunk Cost Bias, (c) Over/underconfidence, in addition to a measure of Maximizing Tendency (Diab et al., 2008). Analyses revealed mixed results. Specifically, decision context predicted older adult's ability to resist the sunk cost bias ( $F(7, 191) = 4.877, p = .000, R^2 = .152$ ). The results pertaining to the impact of Cancer Experience on older adult's decision making competence are more robust. Significant interactions between decision context and cancer experience occurred for resistance to framing ( $F(1,183) = 3.476, p = .064$ ), resistance to attribute framing ( $F(1,189) = 4.139, p = .043$ ), mean decision accuracy ( $F(1,198) = 3.662, p = .000$ ), and subjective appraisal of decision making competence ( $F(1,198) = 6.235, p = .013$ ). Main effects were also found for 4 of the 5 dependent variables. Results highlight the lasting impact of cancer survivorship on decision making competence and have implications in health care, psycho-oncology, and treatment decision making domains

### **SUCCESSFUL NAVIGATION OF PREVIOUS LIFE EXPERIENCES MAY MITIGATE CANCER DISTRESS IN OLDER ADULTS**

E.A. Mulligan<sup>1,2</sup>, A.L. Jahn<sup>1,2</sup>, A.D. Naik<sup>3</sup>, J. Gosian<sup>1</sup>, A. June<sup>1,2</sup>, L. Herman<sup>3</sup>, J. Moye<sup>1,2</sup>, *1. VA Boston Healthcare System, Brockton, Massachusetts, 2. Harvard Medical School, Boston, Massachusetts, 3. Michael E. DeBakey VA Medical Center and Baylor College of Medicine, Houston, Texas*

By age 69 1 in 6 men and 1 in 10 women will have been diagnosed and treated for cancer. Some older adults respond to cancer with dis-

tress, whereas others are resilient and report growth. Previous life events may influence how individuals cope with the stress of cancer. For example, older adults may view their diagnosis differently if they have witnessed family members recovering from cancer than if their family members have passed away from cancer. Among military veterans, coping style following combat exposure may also influence responses to cancer. The purpose of the current analysis was to investigate the relationships between prior life events and both cancer-related distress and cancer-related growth in a sample of veterans. 115 military veterans (mean age=65.4, SD=8.9) completed quantitative and qualitative interviews 6 months after receiving a diagnosis of head and neck, colorectal, or esophageal/gastric cancer. Participants reported a variety of prior life stressors, including a personal history of other cancer(s) (30%), family death from cancer (53%), and combat (46%). Veterans with family members who survived cancer reported significantly fewer depressive symptoms in response to their own diagnosis than those without a family history of cancer survival ( $t = 2.0, p < .05$ ). Additionally, in comparison to both veterans who did not experience combat and veterans with current combat-related posttraumatic stress disorder (PTSD), combat veterans without PTSD reported significantly fewer symptoms of cancer-related PTSD ( $F = 15.2, p < .001$ ) and depression ( $F = 9.3, p < .001$ ). Previous adaptation to life threatening events may enhance resilience when confronted with cancer later in life.

### **HEALTH AND DEPRESSIVE SYMPTOMATOLOGY OF AGING MALE CANCER SURVIVORS: A MATCHED COMPARISON DESIGN**

A.L. Townsend<sup>1</sup>, Y. Oh<sup>1</sup>, K.J. Ishler<sup>1</sup>, J. Rose<sup>2</sup>, *1. Mandel School of Applied Social Sciences, Case Western Reserve University, Cleveland, Ohio, 2. School of Medicine, Case Western Reserve University, Cleveland, Ohio*

With an aging U.S. population, incidence and prevalence of cancer is expected to rise dramatically, and many cancer survivors are living longer (NCI, 2011). Evidence regarding physical and mental health of long-term cancer survivors is limited (IOM, 2006), particularly for males. This study drew on Verbrugge and Jette's (1994) disablement process model to (1) compare health status between 139 married male cancer survivors (M age = 59.8) and 139 married males matched on age (M = 59.7) and race/ethnicity but with no reported history of cancer and (2) investigate whether cancer status moderates the relationship of health to depressive symptomatology (CES-D8). Data were drawn from the 1992 Health and Retirement Study. Types of cancer varied broadly among survivors and years of survivorship ranged from < 1 to 20+ (M = 5.71). Cancer survivors reported significantly worse global health, more fatigue, doctor visits, bed days and physical limitations due to health, and greater prevalence of pain than their matched comparisons ( $p < .05$  in paired t-tests). There were no significant differences on number of comorbidities, sensory impairments, or depressive symptoms. In OLS hierarchical regression models, poor global health and pain more strongly predicted depressive symptomatology in men without a history of cancer, whereas greater health-related physical limitations more strongly predicted depressive symptomatology in cancer survivors. Findings highlight the need for long-term monitoring of male cancer survivors' health but challenge assumptions that their poor health will necessarily predict greater depressive symptomatology.

### **PREVALENCE OF MAMMOGRAPHY USE IN OLDER WOMEN BY 5-YEAR LIFE EXPECTANCY**

E.S. Breslau<sup>1</sup>, K. Bellizzi<sup>2</sup>, M.A. Schonberg<sup>3</sup>, *1. Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, Maryland, 2. University of Connecticut, Storrs, Connecticut, 3. Harvard Medical School, Boston, Massachusetts*

Background: Some older American women are physically and cognitively robust while others are frail, have reduced functional ability,

or have multiple comorbid illnesses. To assist cancer screening decision-making beyond recommended guideline age cut-offs, we examined mammography use by 5-year life expectancy in older women. Methods: Our analytic sample consisted of 1,453 community dwelling women aged > 74 years who responded to the 2010 National Health Interview Survey. A validated index used 11 variables to categorize women into high, intermediate and low 5-year life expectancy. Results: The overall rate of breast cancer screening was 56.0%. When stratified by 5-year life expectancy, mammography screening rates were 68.0% in women with high life expectancy ( $\geq 48.0\%$  probability of 5-year mortality), 51.2% in women with intermediate life expectancy (16.0% to 47.0% probability), and 38.8% in women with low life expectancy ( $\leq 15.0\%$  probability). In multiple logistic regression analysis, variables related to higher rates of mammography use include women who were < 80 years of age (Odds ratio (OR) 2.30; 95% Confidence Interval (CI): 1.33-3.95). Lower use was seen in poorer women with incomes less than \$14,000 (OR 0.39; 95% CI: 0.21-0.72, and those with an intermediate life expectancy (OR 0.58; 95% CI: 0.37-0.93). Conclusions: A high proportion of older women with intermediate or low 5-year life expectancy continue to be screened for breast cancer despite the low likelihood of a survival benefit. Results suggest that a 5-year prognostic indicator may be of value when prioritizing clinical recommendations to prevent over testing and over treatment, or under treatment among the healthy.

### PROVIDING SUPPORTIVE CARE ACROSS THE CANCER CONTINUUM

A. June<sup>1</sup>, J. Moye<sup>1</sup>, E.A. Mulligan<sup>1</sup>, A.L. Jahn<sup>1</sup>, J. Gosian<sup>1</sup>, L. Herman<sup>2</sup>, A.D. Naik<sup>2</sup>, 1. VA Boston Healthcare System, Brockton, Massachusetts, 2. Michael E. DeBakey Medical Center and Baylor College of Medicine, Houston, Texas

Most adults with cancer are older, but the needs of older adults after cancer treatment have not been well studied. 80 Older (mean age 65+ 11) patients receiving care in the Veterans Health Administration were interviewed at 12-months post diagnosis of head/neck/esophageal (N=43) and gastric/colorectal (N=37) cancers, stages I or II (N=46%), III (N=32%), or IV (N=22%). Patients' understanding of their prognosis varied as "Active/Relapsed" (10%, N=7), "Remission/Cured" (60%, N=48), or "Unsure" (30%, N=24). Surprisingly, there was no relationship between cancer stage and the patients' perspective of their prognosis. Many patients endorsed elevated levels of pain (29%), fatigue (16%), depression (14%), and anxiety (16%). Patients who were "unsure" of their prognosis reported worse physical health (F=3.71; p=.03) and emotional health (F=2.48, p=.09), but not social health. Patients had high levels of interest in referrals for help with physical problems: nutrition/diet (63%), exercise (58%), PT or OT (48%), genetic risks (39%), and fertility (16%); emotional problems: psychopharmacology (45%), psychotherapy (38%), and in person support groups (33%); and with social problems: like finances (39%) and relationships (24%). Interest across domains was generally highest in Stage III patients. Patients reported that they avoided asking for help for reasons including being "tired of it all" (36%), afraid (23%), unsure how to ask (13%), and transportation (10%). Improving links between survivorship and palliative care is needed to provide support across all stages of cancer, with targeting of support considering the patients stage, perception of prognosis, and obstacles to care.

### EXPERIENCES AND KNOWLEDGE OF PAIN: WHAT DO OLDER ADULTS REALLY UNDERSTAND ABOUT THEIR CANCER-RELATED PAIN?

M.L. O'Connor<sup>2</sup>, T. Baker<sup>1</sup>, 1. University of South Florida, Tampa, Florida, 2. Psychology, University of Virginia, Charlottesville, Virginia

Data show that several vulnerable populations (e.g., older adults, cancer patients) are more likely to experience pain and endure inadequate pain treatment. However, little is known about older cancer

patients' subjective experiences of their pain, or how knowledgeable they are about their pain (e.g., addiction risks, medications). This study examined predictors of two outcome variables, self-reported knowledge of cancer pain and experiences managing chronic pain, among Black and White cancer patients 55+ years of age. Predictors included: demographics (age, income, education, gender, and race); health characteristics (self-efficacy for managing pain, physical functioning, pain severity, and co-morbidities); and patient satisfaction (satisfaction with pain treatment, communication with physicians, and trust of physicians). Hierarchical multiple regression analyses were performed for each outcome, with demographic variables entered first, health variables entered second, and patient satisfaction variables entered last. For pain knowledge, final model  $R^2 = 0.25$ ,  $p < 0.01$ ,  $\Delta R^2$  relative to the first model = 0.04. Higher income and self-identifying as Black were significantly associated with greater knowledge of pain ( $p < 0.05$  for all). For pain experiences, final model  $R^2 = 0.51$ ,  $p < 0.01$ ,  $\Delta R^2$  relative to the first model = 0.48. Higher self-efficacy, better physical functioning, and lower pain severity were significantly related to more positive experiences with pain ( $p < 0.05$  for all). These results show that socioeconomic status may significantly influence knowledge about pain above and beyond indicators of health and patient satisfaction, while experiences managing pain may be most strongly related to physical health.

### AGE DIFFERENCES IN QUALITY OF LIFE AND COPING WITH BREAST CANCER

A. Begovic-Juhant<sup>1</sup>, A. Chmielewski<sup>2</sup>, M. Milidonis<sup>1</sup>, B. Stanko<sup>1</sup>, 1. Health Sciences, Cleveland State University, Cleveland, Ohio, 2. Case Western Reserve University, Cleveland, Ohio

The objective was to examine age differences in quality of life and coping with breast cancer. The participants consisted of 99 women diagnosed with breast cancer in the last five years, and they ranged in age from 23 to 79 years (M = 50.74, SD = 10.06). Out of 99 participants, 61% were Caucasian and 37% were African American. Participants completed a semi-structured questionnaire consisting of instruments assessing coping with cancer (CCQ), proactive coping (BAPC-C), quality of life (EORTC QLQ-BR23 and FACT-G) along with demographic questions and questions related to breast cancer. The results revealed that there were no significant age differences in overall proactive coping and coping with breast cancer. However, task oriented coping was significantly higher for older women than young women, and young women were more likely to use emotion coping strategies. In addition, stress and breast cancer worry were lowest for older women and highest for the youngest group. In terms of quality of life, emotional adjustment to breast cancer was significantly better for older women as opposed to younger women, and older women were less concerned with their body image. In conclusion, the results of this study did show that breast cancer and associated treatments affected quality of life of all participants. However, it appears that older women adjusted to breast cancer diagnosis and treatment better than younger women. The clinical implication is for healthcare providers to encourage task oriented coping strategies for older women with breast cancer.

### OLDER BREAST CANCER SURVIVORS DRAGONBOAT PADDLE TO RECOVERY: A NEW FRONTIER FOR SURVIVORSHIP PROGRAMS

M.H. Parker, Institute for Palliative & Hospice Training, Inc., Oakpark, Virginia

The poster presents results from an Internet survey of breast cancer survivors sent to identified E-mail contacts for Breast Cancer Survivor Dragonboat Teams. The survey collected opinions of breast cancer survivors about their cancer experience and dragonboat paddling as a recovery activity. In 2011, results were received from 268 U.S. and Canadian women aged 60 to 80, 49% of the 542 respondents. As a result of paddling, 73% of older women reported exercising more than before their cancer and 88% reported finding new friends and social support

in the Team. 78 % reported their health as excellent or very good and 89% reported themselves as more fit (45%) or somewhat more fit than other women their age. 21% had lymphedema; 47% reported paddling improved their lymphedema; 44% reported no effect; 0% reported it worse. Older paddlers identified dragonboating as a life changing and affirming activity: "I never thought I would compete at my age!" 2012 survey data from BCS teams in Australia, New Zealand and South Africa and will be included in the poster. **CONCLUSION:** Dragonboat paddling provides a beneficial and supportive exercise activity for older breast cancer survivors. Dragonboat teams are a dynamic alternative to traditional meeting/talking support groups, combining the benefits of exercise (an important recovery and health benefit) with the psychosocial support of interaction and new friendships with women who have also experienced breast cancer. Survivor support programs should recognize the benefits of active team sports in helping older women return to fitness after cancer.

## **SESSION 2010 (POSTER)**

### **CARDIOVASCULAR DISEASE**

#### **PERCEPTIONS OF LIFESTYLE BEHAVIOR MODIFICATION AMONG OLDER WOMEN WITH AND WITHOUT CORONARY HEART DISEASE**

L.L. Lefler<sup>1,3</sup>, J.B. Meaux<sup>2</sup>, J. McSweeney<sup>1</sup>, K.K. Garner<sup>3,1</sup>, 1. *University of Arkansas for Medical Sciences, Little Rock, Arkansas*, 2. *University of Central Arkansas, Conway, Arkansas*, 3. *Central Arkansas Veterans Healthcare System, Little Rock, Arkansas*

**Purpose:** Risk factors for coronary heart disease (CHD) are at epidemic proportions among older women but few recognize their actual risk. Our purpose was to compare and contrast knowledge and attitudes concerning CHD lifestyle modification behaviors among older women without a CHD diagnosis with those who had experienced a cardiac event. **Method:** Using a mixed-methods design, we measured standard cardiac risk factors to determine actual risk and obtained measures of self-perceived risk among 20 older women, 6-12 months post cardiac event, and 24 community-dwelling women ( $\geq 60$  years) without a CHD diagnosis. Semi-structured interviews were conducted for knowledge and attitudes regarding CHD prevention and risk. Narratives were analyzed using content analysis and constant comparison. **Results:** Of the 44 women, 30% were African-American and 64% had some college education, with a mean age of 72 years. Despite a mean of 5.84 vs. 4.46 CHD risk factors (event vs. no CHD) indicating "high-risk" for both groups, personal risk perceptions were unrealistically low 4.47 vs. 1.95 (0-10 scale). Narrative data indicated a general lack of understanding in both groups regarding risk factors and lifestyle behaviors that would reduce probability for experiencing a first or recurrent cardiac event. Few engaged in lifestyle risk factor modification and felt limited control of their health or did not think change was necessary. Most felt that taking daily medications and visiting their Provider were sufficient. **Conclusions:** Tailored interventions that consider knowledge and attitudes about CHD risk and risk factors are needed to promote lifestyle behavior modification.

#### **HEART FAILURE AND COGNITIVE FUNCTIONING AMONG OLDER ADULTS**

J. Alwerdt<sup>1</sup>, P. Athilingam<sup>1</sup>, M.L. O'Connor<sup>2</sup>, E. Valdes<sup>1</sup>, J.D. Edwards<sup>1</sup>, 1. *Aging Studies, University of South Florida, Lutz, Florida*, 2. *University of Virginia, Charlottesville, Virginia*

Cognitive impairment may be a growing problem in heart failure (HF) treatment. Cognitive functioning is important for adhering to a treatment regimen and making decisions regarding health and independence, but the effects of HF on cognitive abilities have not been well-studied longitudinally. The current study utilized data from the Advanced Cognitive Training for Independent and Vital Elderly study

to examine baseline differences and five-year changes in memory, reasoning, and speed of processing among older adults. Some participants had HF at baseline (N=138), some developed HF over time (N=119), and some never had HF during the study (N=2533). Multivariate analysis of variance was used to examine baseline cognitive differences between the three groups, and mixed effects models extended these analyses longitudinally. At baseline, participants who never had HF performed better than those who had HF at baseline ( $p < .05$ ); both of whom performed better than those who developed HF over time ( $p < .05$ ) in memory (Auditory Verbal Learning Test) and speed of processing (Useful Field of View Test and Digit Symbol Substitution). Longitudinally, the three groups showed significantly different patterns of change for reasoning (Word Series). Participants without HF and those who developed HF showed improved reasoning, while participants with HF at baseline showed declines in reasoning over time. The results indicate that cognitive difficulties in memory and speed may occur prior to HF; while reasoning declines more rapidly subsequent to HF. HF disease progression may cause differing cognitive manifestations. Future studies should investigate if cognitive interventions could improve cognition and treatment outcomes.

#### **REDUCE RACIAL DISPARITIES IN HEART FAILURE BY PHYSICIAN AND PATIENT COMMUNICATION**

U. Piamjariyakul, C.E. Smith, *University of Kansas School of Nursing, Kansas City, Kansas*

**Background:** Physician-patient relationship has an important impact on disparities in medical care. Discussions after hospital discharge in clinic visits have been shown to vary depending on the race of the patient and if the patient has a list of questions for the physician visit. **Methods:** Patients completed a post-hospital survey about what was discussed in follow-up physician clinic appointments. Survey items included patients' home management of their medications, diet and symptoms. Patients were also asked about discussions of their next appointments, daily weighing and exercise and taking a list of questions to the appointment. **Results:** A total of 185 patients discharged with heart failure (HF) were enrolled. Eighty (43%) were African Americans. Age ( $M = 62$ ,  $SD = 13.4$  years) and 65.4% completed high school to 2-year college. Study patients (66% - 80%) reported discussing some aspects of home HF management practices with their doctors. Only 33% of patients brought a list of questions to the post-hospital discharge appointment. About 72% to 81% of patients discussed exercise or daily weight; 77% discussed diet/sodium; and 63% to 67% discussed medication concerns. At the visit 81% were instructed on what to do if their HF symptoms got worse. A significantly ( $p < .03$ ) greater percentage of white versus African Americans received an appointment for a follow-up visit. Notably 78% received a follow-up appointment. **Conclusions:** Physician and patient communication could promote HF self-management and reduce racial disparities. Patients and family members should be encouraged to bring their list of questions to their clinic appointments. Physician education programs now emphasize communication across racial groups.

#### **PATTERNS AND CONSEQUENCES OF HEALTH-RELATED SPOUSAL INFLUENCE ATTEMPTS FOR PATIENTS AND SPOUSES COPING WITH CHRONIC HEART FAILURE**

J. Kellough<sup>1</sup>, B.G. Knight<sup>1</sup>, M.J. Rohrbaugh<sup>2</sup>, V. Shoham<sup>2</sup>, 1. *University of Southern California, Los Angeles, California*, 2. *University of Arizona, Tucson, Arizona*

Coping with chronic heart failure (CHF) requires careful adherence to a complex medical regimen. Spouses are often the primary source of support for dealing with illness management. This analysis used path modeling to examine how spousal involvement in illness management affects both patients' and spouses' physical and mental health among 60 couples coping with CHF. Using data from the Arizona Family Heart Project, we examined the nature of spouses' attempts to influence the

patient to adhere to the treatment regimen, and the consequences of those attempts for patient and spouse physical and mental health. Influence attempts included positive behaviors like praising and engaging in desired behavior change with the patient and negative behaviors like arguing or criticizing the patient for not following the regimen. Consistent with the hypothesis, spouses' positive influence attempts had an indirect positive effect on the patients' physical health and mental health symptoms via patient compliance with the medical regimen. Contrary to the hypothesis, negative influence attempts had no effect on physical and mental health outcomes or on patient compliance. Positive influence attempts did not demonstrate the hypothesized protective effect on spouses' own physical or mental health. However, spouses' negative influence was significantly associated with poor mental health outcomes for the spouse, with no effect on spouses' physical health outcomes. These findings suggest that spouses' use of positive influence tactics can benefit the patient both mentally and physically, while the use of negative tactics are ineffective in helping the patient and can be detrimental to the spouse.

#### **STATE OF SCIENCE: TELEHOMECARE AND HEART FAILURE**

Y. Kang<sup>1</sup>, K.H. Bowles<sup>1</sup>, M. Topaz<sup>1</sup>, K.H. Dansky<sup>2</sup>, *1. Nursing, The University of Pennsylvania, Philadelphia, Pennsylvania, 2. Pennsylvania State University, University Park, Pennsylvania*

**Background:** Telehomecare (THC) may be a useful intervention for home care patients with heart failure (HF) to effectively communicate with health care providers and assist in managing their health conditions. No systematic review of telehealth studies focusing specifically on the home care HF population has been conducted in the United States. **Methods:** Pubmed, EMBASE, and CINAHL were searched for randomized controlled trials from January 2001 to November 2011 using the MeSH terms "telemedicine", "home telehealth", "telemonitoring", "home telecare", and "telehomecare" in conjunction with the keyword "heart failure". **Results:** Twenty-two studies met the selection criteria for this qualitative review. The majority of studies did not demonstrate a positive effect of THC intervention on patient outcomes. Nearly 70% of the studies reported participants with New York Heart Association class III, indicating that the majority of studies targeted older adults with advanced stage HF. Hospitalization rate was the most common outcome measure, along with quality of life, and length of the hospital stay. This review suggests that HF telehealth studies to date have not demonstrated optimal benefits due to a variety of reasons such as patient characteristics, lack of power to detect significance, and problems with adherence, recruitment and retention. In addition, great variation in the THC interventions and outcome measures makes it difficult to draw conclusions across the body of research. **Conclusion:** Future studies should include standardized outcomes to determine effect sizes, larger sample sizes, control for covariates, and subgroup analyses to determine which types of patients achieve the best response.

#### **SESSION 2015 (POSTER)**

##### **COMMUNICATION AND CREATIVITY**

##### **VERBAL PLAY AS AN INTERACTIONAL DISCOURSE RESOURCE IN HEALTHY AND DISORDERED AGING**

S. Shune<sup>1</sup>, M.C. Duff<sup>1,2</sup>, *1. Department of Communication Sciences and Disorders, The University of Iowa, Iowa City, Iowa, 2. Department of Neurology, Division of Behavioral Neurology and Cognitive Neuroscience, The University of Iowa, Iowa City, Iowa*

Verbal play, or the creative and playful use of language, is a pervasive and enjoyable component of social communication, serving important interpersonal functions. The effects of aging (healthy and disordered) on the use of verbal play, however, have not been examined. Using quantitative group comparisons and detailed discourse analysis,

we documented and characterized the quantity, quality, and interactional functions of verbal play in 1) healthy younger and older adults, and 2) individuals with very mild Alzheimer's disease (AD), each interacting with a familiar partner while completing multiple trials of a collaborative referencing task. All participants, irrespective of age or presence of AD, initiated and contributed to verbal play episodes. For healthy older and younger pairs, although there were no differences in the quantity of verbal play, striking age-related differences in the function and quality of verbal play emerged. For healthy older pairs, verbal play episodes were extended and used to support the communicative interactions between trials more than during the task. In contrast, healthy younger pairs engaged in shorter episodes for successful task completion. This finding suggests that age influences interactional discourse resources in communicative interaction, perhaps reflecting changes in the goals of social interaction across the lifespan. In AD, there were no differences in quantity or quality of verbal play between AD and demographically matched comparison pairs highlighting an area of preserved social communication. Verbal play is a rich discourse practice that is present and successfully deployed to create meaningful communication in both healthy and disordered aging.

##### **BEHAVIORAL RECIPROCITY IN PERSON-CENTERED CARE: AN ANALYSIS OF RESIDENTS AND NURSE AIDES**

L.J. Medvene, A. Runyan, K. Nilsen, *Psychology, Wichita State University, Wichita, Kansas*

Resident/aide relationships in long-term care are an important source of resident (Bowers et al., 2001) and aide satisfaction (Mittal et al., 2009). Recent work has focused on aides' person-centered abilities. Innovatively, the present study highlights the resident's role in creating and maintaining relationships with aides. This study adapted two operational coding measures previously used to assess aide's person-centered behaviors: the Person-Centered Caregiving Behavioral Inventory (PCBI) and the Global Behavioral Scale (GBS; Lann-Wolcott et al., 2011). Participants were 20 independent, distinct resident/aide dyads who were videotaped in 48 caregiving episodes. Independent raters used the caregiving videos to assess person-centeredness of residents by coding for nine verbal and three nonverbal relationship- and communication-based behaviors, as well as seven global categories. Good concurrent validity of the behavioral inventory and the global rating scale was found:  $r(48) = .38, p < .05$ . A strong relationship was found between residents' PCBI-R scores and their respective aides' PCBI scores:  $r(48) = .65, p < .05$ . A moderate relationship was found between resident's GBS-R and their aides' GBS ratings:  $r(48) = .35, p < .05$ . These correlations indicate substantial reciprocity between the aide and resident in engaging in person-centered behaviors, and suggest that residents influence their relationships with aides. Future research should explore how residents can be empowered to use their communication skills to influence their care and satisfaction even more. Attendees of the session will be able to assess residents' communication skills in contributing to the person-centeredness of their relationships with aides.

##### **FOR OLDER ADULTS, BETTER HEALTH IS JUST A CLICK AWAY**

C.J. O'Brien<sup>1,2</sup>, J. Davy<sup>2,3</sup>, E. Gross<sup>2</sup>, *1. University of Illinois at Chicago, Chicago, Illinois, 2. Mather LifeWays Institute on Aging, Evanston, Illinois, 3. University of Chicago, Chicago, Illinois*

Despite having the highest incidence of health-related problems, older adults have the lowest level of health literacy of any age group. While an increasing number of older adults are seeking health information online, there is little evidence as to whether or not these endeavors are beneficial. eHEALS is the most widely-used scale of e-health literacy. Studying the relationship between eHEALS and health outcomes enables us to: 1) assess the validity of the e-health literacy construct, and 2) provide preliminary evidence as to the benefits of this type of literacy. In this study, we used a cross-sectional survey design to

examine whether e-health literacy is correlated with three outcomes associated with health literacy: self-efficacy in doctor/patient interactions, self-reported health, and preventive health behaviors. The survey was distributed to a diverse sample of 84 older adults recruited from five locations in Chicagoland. We conducted correlation and regression analysis, controlling for a variety of demographic characteristics and personal traits. We found that e-health had small to moderate correlations with self-efficacy in doctor/patient interactions (.402,  $p=.001$ ), self-reported health (.339,  $p=.008$ ), and preventive health behaviors (.288,  $p=.022$ ). Our study provides preliminary evidence that increases in e-health literacy yield some of the same benefits as increases in health literacy. It further suggests that programming to increase e-health literacy may represent a promising strategy to improve the health of older adults. In addition to discussing these findings, we will describe an ongoing pilot program which provides electronic health literacy courses to older adults in the Chicago area.

### **COMPREHENSION OF MEDICAL INFORMATION AMONG ELDERLY FILIPINO AMERICANS: IMPLICATIONS FOR HEALTH LITERACY**

T.O. Santos, H. Ulatowska, *University of Texas at Dallas, Dallas, Texas*

According to the Institute of Medicine (2003), more than 90 million adults have difficulties comprehending and acting on medical information. Older adults, in particular, present with challenges in reading medical prescriptions or adhering to medical instructions. These difficulties are attributed to age-related decrements accompanying aging: poorer reading skills, as well as age-related cognitive declines. In a society dependent on written medical information - be it from health care information on the internet, health newsletters from AARP, or pamphlets at the physician's office, there is a need to address adequate comprehension of medical information among the elderly. Inadequate health knowledge negatively impacts one's health, resulting in low adherence to medical instructions, higher health care costs, and increased mortality. With the emerging field of narrative medicine, researchers are discovering the value of utilizing narratives in communicating health information to ethnically diverse groups. Utilizing health information adapted from the NIH Senior Health website, this study compares how elderly adults comprehend medical information presented in narrative versus expository genres. Comprehension of information is further evident in the themes pertinent to illness: symptoms, risk factors, timeline and treatment. The study discusses the influence of information structure on comprehension and the strategies employed by the elderly when reading written medical information. It also provides insight on how to better transmit health information in order to meet the needs of an aging, ethnically diverse America.

### **PERFORMANCE OF OLDER ARTISTS AND OLDER NONARTISTS ON THE ABBREVIATED TORRANCE TEST OF CREATIVITY**

R.E. Rieger, S.M. Zoller, L. Oglander, B.D. Carpenter, *Washington University, St. Louis, Missouri*

Recent research has suggested that older adults involved in creative pursuits may experience improved physical and psychological functioning. Although several standardized instruments exist to measure creativity, few of these instruments have been used with older adults. The purpose of this study was to examine the performance of older adults on the Abbreviated Torrance Test for Adults (ATTA). Eighty-five people over age 65 (Mean age = 76.3) participated in the study, including 43 artists and 42 nonartists. Artists were older adults whose artwork had been chosen for at least one juried art show, had been awarded a prize in at least one competition, or had been commissioned for a public or private venue. Multivariate analyses suggested no differences between artists and nonartists on the seven primary ATTA indices, Pillai's trace = .120,

$F(7,75) = 1.46, p = .20$ . Moreover, the ATTA was not significantly correlated with two other measures of creativity, the Runco Ideational Behavior Scale ( $r = .07$ ) and the Remote Associates Test ( $r = .14$ ), calling into further question the construct validity of the ATTA. Possible explanations include imprecise scoring criteria, low internal consistency reliability, and administration and scoring procedures that penalize older adults. Results from this study suggest that the ATTA may not be a valid instrument to measure creativity in older adults. In order to explore the benefits of creative engagement in older adults, future research is needed to develop and validate instruments to assess their creativity.

## **SESSION 2020 (POSTER)**

### **DEATH AND BEREAVEMENT**

#### **THE DUAL PROCESS MODEL OF BEREAVEMENT: THE ROLE OF MOTIVATION IN COPING WITH BEREAVEMENT**

K.M. Bennett, L. Arnott, V. Lowers, *Psychology, University of Liverpool, Liverpool, United Kingdom*

Stroebe and Schut (1999) propose two types of coping processes in their Dual Process Model (DPM) of bereavement. The first is loss-oriented and the second is restoration-oriented with oscillation between them. Within each type of coping process there are a number of specific stressors, three of which, in particular, are associated with engagement in activity: taking up new activities; distraction; and new roles/identities/relationships. Bennett et al. (2010) found that distraction was associated with poor psychological adjustment, new roles/identities/relationships were associated with good psychological adjustment, whilst new activities did not influence either types of adjustment. How can we explain why these different activity-related stressors have different adjustment outcomes? Qualitative interviews with 16 older widowed people examined the reasons why people engaged in new activities or continue with existing ones. The results indicate that it is the motivation underlying the commencement, or maintenance, of these activities that influences adjustment. Widow(er)s who undertake an activity as a means of distracting themselves from their loss are less likely to be adjusting well. On the other hand, widow(er)s who undertake activities for intrinsic interesting or because those activities add meaning to widow(er)s lives are more likely to be adjusting well. There is evidence, too, that whilst an activity may begin as a means of distraction it may develop into an activity providing new roles or identities, and therefore, in time, lead to better adjustment. Finally, a model of motivation and activity is proposed to further advance the Dual Process Model of bereavement and our understanding of adjustment to bereavement.

#### **INVESTIGATING WIDOWER'S EXPERIENCES OF INSTRUMENTAL INDEPENDENCE**

L.K. Soulsby, K.M. Bennett, *University of Liverpool, Liverpool, Merseyside, United Kingdom*

Bennett et al. (2010) investigated instrumental independence following spousal bereavement in British widows, evaluating the nature of changes in instrumental independence and factors that facilitated or hindered independence. This paper builds on Bennett et al.'s findings and attempts to explore men's instrumental independence following spousal bereavement. The research adopts a mixed methods design, using questionnaire data from 200 US widowers and qualitative interviews with a sample of 20 UK widowers. The questionnaire data supports Bennett et al.'s four typologies of instrumental independence (dependent (before)/dependent (after); dependent/ independent; independent/ independent; independent/ dependent). Importantly, unlike the widows in Bennett et al.'s study, a high proportion of older widowers report being independent in the home both before and after bereavement. There are, however, some differences when

individual domestic tasks (e.g. shopping; meal preparation) are considered. The qualitative interview data reveals similar patterns of change in instrumental tasks following bereavement. Further, the interviews reveal physical health, relationships with family and pre-bereavement levels of independence as predictors of adjustment to instrumental tasks in widowhood. Comparisons can also be made about the experiences of US and UK widowers in relation to changes in independence over time. Together, the findings enhance our understanding of instrumental independence in widowhood in later life and may be used to inform service providers on the delivery of instrumental support to older widowers.

### THE EFFECTS OF STRUCTURAL AND FUNCTIONAL SOCIAL SUPPORT COMPONENTS ON WELL-BEING DURING THE FIRST TWO YEARS OF WIDOWHOOD

S.M. Powers<sup>1</sup>, T. Bisconti<sup>1</sup>, C. Bergeman<sup>2</sup>, 1. *University of Akron, Akron, Ohio*, 2. *University of Notre Dame, Notre Dame, Indiana*

The death of a spouse can be one of the most challenging events an older adult can face in later life. Social support, which can be broken down into functional and structural components, has been shown to differentially influence the overall well-being of widows. The current study evaluated the predictive values of structural and functional support at 1 month postloss on changes in depression and life satisfaction across the first 2 years of widowhood in a sample of 57 recently bereaved women. Utilizing 8 time points at 2 and 4 month intervals, the use of growth curve modeling allowed us to understand well-being trajectories across time as predicted by levels of social support at baseline. Life satisfaction trajectories showed a curvilinear trend, whereas depression trajectories yielded a significant downward linear trend (i.e., decreased depression across time). Additionally, Perceived social control was a marginally significant predictor of depression. The results further our understanding of widowhood as a dynamic process and how social support has a protective role in that process. Understanding levels of depression and overall life satisfaction allow for the identification of key points during the transition into widowhood, which may have implications for formal health services and interventions.

### GROUP DYNAMICS MATTER: USING SUPPORT GROUPS AS A WAY TO ASSIST BEREAVED PERSONS

R. Utz<sup>1</sup>, D. Lund<sup>2</sup>, M. Caserta<sup>1</sup>, 1. *University of Utah, Salt Lake City, Utah*, 2. *California State University, San Bernardino, San Bernardino, California*

Bereavement support groups provide camaraderie, resources, and education to those who have experienced a recent loss. This presentation focuses on the longitudinal outcomes (depression, grief, loneliness, stress-related growth) of 328 recently bereaved spouses who participated in the Living After Loss study, a randomized intervention trial designed to evaluate the effectiveness of two models of facilitator-led support groups. The content of the two groups differed, but the timing, frequency, and length did not. Participants were randomized into one of the two models of support groups. Altogether there were 35 separate support groups (roughly half of each model), with an average of 9.4 persons per group. We used hierarchical linear modeling (HLM) to identify both individual and group-level characteristics that were associated with differential participant outcomes. Our analyses showed that outcomes were nearly identical for those assigned to support group model #1 versus #2. However, the participants in groups that had greater levels of group cohesion, more positive assessments of the facilitator, and a more prevalent exchange of support among group members had significantly more favorable levels of depression, loneliness, and stress-related growth over time. Thus, support groups, especially those that are well-led and have high levels of

group cohesion, do have the potential to support and assist recently bereaved persons, independent of the specific content or substantive focus of that group. Although the dynamics that lead to higher levels of group cohesion often occur organically, well-trained facilitators may help encourage higher levels of group cohesion among support group participants. (NIA R01-AG023090)

### ATTITUDE AND BELIEFS ABOUT DEATH, DYING, AND END-OF-LIFE CARE AMONG OLDER PEOPLE IN THE HINDU COMMUNITY IN THE U.S

P. Patel<sup>1</sup>, H. Matsuo<sup>2</sup>, L. Willoughby<sup>2</sup>, 1. *India Heritage Research Foundation, Rishikesh, Uttarakhand, India*, 2. *Saint Louis University, St. Louis, Missouri*

In 2005 there were approximately 1.7 million Hindus of Indian decent permanently living in the United States. This number is projected to increase drastically in the coming decades. The increase in cultural and religious presence coupled with the advancement of technology in medicine has raised serious concerns regarding the extent to which current medical care, especially at the end of life, is complimenting Hindu beliefs. This study explores the beliefs that older American Hindus of Indian decent hold regarding death, dying, and end-of-life care. Two major constructs examined were Attitudes on Death and Dying and Beliefs about Death and Dying. Two scales under each construct were created using cluster analyses (Positive thoughts about death, Negative thoughts about death, Active spiritual belief, and Passive spiritual belief). The survey instrument was translated into Gujarati and administered face-to-face by the first author. Data (n=33) were collected from Indian Hindu older adults who were 61 years of age or older (mean age = 69.42) in the greater Saint Louis area in Missouri. Most participants preferred that their pain be removed even if it means immediate death (80.6%). Among males, age and negative thoughts about death were positively correlated ( $r=0.705$ ,  $p<0.05$ ), such that older men have more negative thoughts about death than younger men. This correlation was not present among females. However, among females, passive spiritual belief and negative thoughts about death were positively correlated ( $r=0.587$ ,  $p<0.01$ ). These results provide some implications about end-of-life care among Hindu communities in the United States.

### "I'LL NEVER BE THE SAME AGAIN." UNDERSTANDING IDENTITY CHANGE IN WIDOWHOOD

L.K. Soulsby, K.M. Bennett, *University of Liverpool, Liverpool, Merseyside, United Kingdom*

This paper attempts to uncover the process of identity change involved in the adjustment to becoming widowed. Adopting a qualitative methodology, semi-structured interviews were conducted with 23 widowed men and women from the UK and transcripts were analysed using grounded theory. Interview questions focused on the respondents' social networks and supportive exchanges. During the interview respondents spontaneously described changes in their social and private identities following the death of their spouse. The data reveal that widowhood prompts a process of identity reconstruction for men and women, and particularly interesting is the relationship between identity change and social participation. Specifically, the construction of the social network, exchange of social support and nature of social activities, which shape an individual's sense of identity, suffer significant disruption in widowhood. These changes in social participation lead to the loss of the socially constructed self and trigger a process of identity reconstruction as a consequence of the adjustment to a new social role. Further, identity and social participation have a bi-directional relationship where identity, in turn, exerts an influence on social participation and provides an opportunity for personal growth. Experiences of identity

reconstruction are found to vary by age, gender and marital quality. These findings enhance the understanding of the experience of widowhood and highlight social participation as a facilitator and outcome of identity reconstruction and adjustment following spousal bereavement.

#### **AFFIRMING LIFE MEANS AFFIRMING DEATH? ATTITUDES TOWARD DYING AND DEATH AND SWB IN THE OLDEST-OLD**

O. Reidick<sup>1</sup>, O.K. Schilling<sup>1</sup>, H. Wahl<sup>1</sup>, F. Oswald<sup>2</sup>, 1. *Institute of Psychology, Department of Psychological Aging Research, Heidelberg University, Heidelberg, Baden-Württemberg, Germany*, 2. *Interdisciplinary Aging Research, Faculty of Educational Sciences, Goethe University, Frankfurt am Main, Hessen, Germany*

Recent empirical findings demonstrate that in spite of the large confirmation of the well-being satisfaction paradox into very old age, subjective well-being (SWB) shows significant decline close to death. Such findings serve as additional support for the assumption that facing the end of our life is possibly the most challenging developmental task of lifespan development. In the light of this indication, we examined the relationship between attitudes toward dying and death (ADD) and SWB (satisfaction with life, positive valuation of life, environmental mastery, autonomy, purpose in life and self-acceptance) in very old age. We hypothesized that anxiety of dying and death, two major components of ADD, and SWB should be negatively associated, whereas death acceptance, a third major component of ADD, and SWB should be positively correlated. Data were drawn from the first measurement wave of the project LateLine (N=113; age range 87-97 years, 78% female). Findings support our hypotheses, i.e. low anxiety of dying is predictive for high satisfaction with life and environmental mastery; moreover, death acceptance predicts high satisfaction with life, positive valuation of life and autonomy. Results were controlled for sex, age and education with the latter predicting purpose in life. Our results underpin the need to empirically address ADD in relation to SWB in late life. Due to declining SWB close to death and the need to face mortality in very old age, the significant relations of SWB and ADD variables demonstrated here provide a useful insight into the possibly last developmental task for the older person.

#### **“WIDOWERHOOD:” MASCULINITIES AND SPOUSAL LOSS IN THE 1960’S**

J. Bandini, E.H. Thompson, *Sociology and Anthropology, College of the Holy Cross, Worcester, Massachusetts*

Spousal bereavement and widowhood have rarely been studied from the perspective of what “widowerhood” means. Especially during the 1960s when gender was more restrictive, masculinity norms expected men to be partnered for life and to maintain a tough and independent front. We examined 19 widowers’ adaptations to spousal loss using longitudinal data from the 1960’s Harvard Bereavement Study. The study contained interviews conducted 3 weeks, 8 weeks, 13 months, and 2-4 years after the wife’s death. Our findings indicate that masculinities cannot be ignored with evaluating the ways in which men cope with spousal loss and being widowers. Men discussed the difficulties regarding whether or not to express their emotions, divulge their unspoken dependency and ask for help, and try to singlehandedly care for their children’s needs. Many men felt a need to bury themselves in a work environment as a distraction from their grief and as a way to gain social support without having to feel dependent. They also sought to reclaim masculinity, sometimes through remarriage and other times through added risk-taking, such as increased drinking and smoking. Further research is needed to fully understand how masculinity influences the bereavement experiences among contemporary samples of widowers.

## **SESSION 2025 (POSTER)**

### **DEMENTIA**

#### **WHAT CHARACTERISES RESILIENT SPOUSAL CARERS OF PEOPLE WITH DEMENTIA?**

K.M. Bennett, W.J. Donnellan-Smith, *Psychology, University of Liverpool, Liverpool, United Kingdom*

Much is known about the factors that make caring for a spouse with dementia burdensome. However, relatively little is known about factors that help some spouses become resilient. We undertook 13 in-depth qualitative interviews with spousal caregivers to examine factors contributing to resilience. They were asked about their married lives before their spouses were diagnosed with dementia and about their lives around the time dementia was diagnosed or suspected. Finally, they were asked about their lives since that time and how their lives were currently. Resilience was defined as “the process of negotiating, managing and adapting to significant sources of stress or trauma. Assets and resources within the individual, their life and environment facilitate this capacity for adaptation and ‘bouncing back’ in the face of adversity” (Windle & Bennett, 2012, p. 219). A third of the sample were resilient, and in addition, some participants gave evidence to suggest that they were moving towards resilience. Key features associated with resilience included learning about the condition, learning to be a ‘better person’ and the demonstration of expertise. Resilient carers also used more downward comparisons. Further, they were more likely to maintain continuity between pre- and post-dementia lives, where it was possible. As part of the process of moving towards resilience, carers discussed adapting to the transitions between spouse and carer. The study also considers what might help carers of spouses with dementia achieve resilience.

#### **LIVING WITH MCI: EXPERIENCES OF OVER A 7-YEAR PERIOD AMONG 17 INDIVIDUALS EVALUATED AT A MEMORY CLINIC**

A. Berg<sup>1,2</sup>, A. Wallin<sup>2</sup>, A. Nordlund<sup>2</sup>, B. Johansson<sup>1</sup>, 1. *Department of Psychology, University of Gothenburg, Gothenburg, Sweden*, 2. *Institute of Neuroscience and Physiology, The Sahlgrenska Academy at Göteborg, Gothenburg, Sweden*

MCI (Mild Cognitive Impairment) is a state of mildly impaired cognitive functioning but with an intact capability of performing basic daily activities. A major challenge in current research is to develop methods for better predictions of the likelihood for conversion from MCI to dementia, but few studies have targeted personal narratives of the process of being classified as and living with MCI. In the present study we explore individual experiences of living with a MCI-classification over a 7-year period. At a memory clinic, 17 individuals were classified as MCI-cases at 4 occasions over a time period 7-years. They were interviewed about their personal experiences of living with MCI and then in a second step asked to explore the role of life events, daily hassles and stress, coping mechanisms, psychosocial resources, and lifestyle behaviors. Interpretative phenomenological Analysis of the interview transcripts generated themes revolving around the life situation and events related to the first visit at the memory clinic, adjustment strategies in coping with lower cognitive capacity with the aim of enhancing quality of life, and worries about dementia and further cognitive deteriorations. The experiences of life with a long-term MCI classification indicate that changes in life situations such as long-term stress, retirement, the loss of relatives, perceived heritability of dementia, should be explored in the context of individual interpretation and personal meanings of their cognitive functioning. Addressing the intra-personal dynamics of cognitive functioning in the boundary between normal and pathological cognitive aging could improve diagnostic accuracy and guide the development of psychological interventions in the MCI group.

## PHYSICAL REACTIVITY TO STRESS AND INCIDENT DEMENTIA: 34-YEAR FOLLOW-UP OF THE SWEDISH TWIN REGISTRY

E.A. Hahn<sup>1</sup>, R. Andel<sup>1,2</sup>, M. Crowe<sup>3</sup>, N.L. Pedersen<sup>4,5</sup>, M. Gatz<sup>4,5</sup>, 1. School of Aging Studies, University of South Florida, Tampa, Florida, 2. International Clinical Research Center, St. Anne's University Hospital, Brno, Czech Republic, 3. Department of Psychology, University of Alabama at Birmingham, Birmingham, Alabama, 4. Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, SE-171 77, Sweden, 5. Department of Psychology, University of Southern California, Los Angeles, California

**Background:** Repeated exposure to stress can have negative physiological effects, including chronic dysregulation of the hypothalamic-pituitary-adrenal axis and increased proinflammatory cytokines, which in turn may facilitate neurodegeneration. We examined self-reported physical reactivity to stress as a risk factor for dementia. **Methods:** In 1967 or 1970, 10,366 twins responded to a questionnaire that included self-report of multiple, single, or no physical symptoms in response to stress (e.g., headache, stomachache, heart beating rapidly); dementia was identified using national medical records up to 34 years later. **Results:** Multi-symptom stress reactivity was associated with increased risk of dementia (hazard ratio [HR]=1.41,  $p<.05$ ) and Alzheimer's disease (HR=1.48,  $p<.05$ ), controlling for age, sex, education, financial difficulties, lack of time, vascular problems, smoking, drinking, and exercise. In stratified analyses, the reactivity-dementia association was stronger for women (HR=1.39,  $p=0.06$ ), less-educated participants (HR=1.57,  $p<.01$ ), former blue-collar workers (HR=1.89,  $p<.01$ ), those drinking alcohol excessively (HR=1.84,  $p<.05$ ), and those engaging in no/little exercise (HR=1.38,  $p<.05$ ). In co-twin control analyses, the covariate-adjusted dementia risk was more than double for twins with multi-symptom stress reactivity compared to co-twins reporting no symptoms (odds ratio=2.27,  $p<.01$ ). **Discussion:** Stress reactivity at mid-life increases risk of dementia later, particularly among women, less-educated individuals, and blue-collar workers. Interventions targeting positive health behaviors may reduce the negative effects of physical reactivity to stress on brain aging.

## CAREGIVER AGREEABLENESS PREDICTS RATE OF FUNCTIONAL DECLINE IN PERSONS WITH ALZHEIMER'S DISEASE

M.C. Norton<sup>1</sup>, C. Clark<sup>1</sup>, E.B. Fauth<sup>1</sup>, K. Piercy<sup>1</sup>, R. Pfister<sup>1</sup>, P. Rabins<sup>2</sup>, C. Lyketsos<sup>2</sup>, J. Tschanz<sup>1</sup>, 1. Family Consumer & Human Development, Utah State University, Logan, Utah, 2. the Johns Hopkins University, Baltimore, Maryland

Caregiver personality has been linked to caregiver mental and physical health. Few studies have examined its effect on clinical progression of dementia in care recipients. In a population-based sample of incident dementia cases, we previously demonstrated that high relationship closeness and more cognitively-stimulating activities predicted slower rates of cognitive and functional decline in persons with Alzheimer's disease (PWD). We now report results examining associations between five caregiver personality traits and functional decline in PWD. The functional status of 161 PWD (61% females; age  $M=83.1$ ,  $SD=6.0$  years) was assessed with the Clinical Dementia Rating Sum of Boxes, every 6-18 months (median 6.0 years follow-up). Neuroticism, Extraversion, Openness, Conscientiousness, and Agreeableness were self-reported by caregivers with the NEO-FFI or NEO-PIR. Caregivers were 55 spouses, and 106 adult offspring. Linear mixed models of functional trajectory were estimated separately for each domain, starting with dementia onset. When an overall personality domain was significant, individual facets were analyzed separately. Higher scores on Agreeableness overall (beta =-0.019 ;  $p=0.049$ ) and higher scores on facets of Compliance (beta =-0.021;  $p=0.042$ ) and Modesty (beta =-0.021;  $p=0.039$ ) were associated with slower functional decline in the PWD.

Caregiver kin relationship (spouse vs. offspring) did not moderate any associations. None of the other personality traits were significantly associated with functional trajectory. Caregiver agreeableness may be an important aspect of the caregiving environment, affecting clinical progression in PWD. Future work will examine possible mediation through reduction in PWD neuropsychiatric disturbances, better caregiver coping strategies, and greater PWD engagement in cognitively stimulating activities.

## WHY WORRY? EXPLAINING ALZHEIMER'S FEARS

L.G. Hodgson<sup>1</sup>, J. Gardner<sup>1</sup>, E. Hodgson<sup>1</sup>, S. Cutler<sup>2</sup>, 1. Sociology, Quinnipiac University, Hamden, Connecticut, 2. University of Vermont, Burlington, Vermont

According to recent studies, Alzheimer's disease (AD) is one of the most feared diseases of adult men and women, second only to cancer and more feared than heart disease or stroke. In 2000, Cutler and Hodgson conducted a baseline study (T1) of 258 middle-aged men and women on their personal concerns about developing AD. In 2005, 2nd wave (T2) follow-up data were collected from 80% of the original sample ( $N=206$ ); and in 2011, 3rd wave (T3) follow-up data were collected from 86% of the T2 sample ( $N=177$ ). This paper discusses one aspect of the T3 qualitative findings: reasons for personal concerns about developing AD. Of all respondents, 70% were either "very" or "somewhat" concerned; 30% were "not very" or "not at all" concerned. Respondents were then asked to explain their answers in depth. Grounded theory was employed to discern patterns and themes within the data. For those who reported concerns about developing AD, two explanatory themes stood out: a family history of the disease and fears of dependence. For those who reported little or no concern, three explanatory themes emerged: no family history of AD, other health/life concerns that took precedence, and fatalism. Exploring the basis for AD concern will allow researchers to better inform evidence-based practice as it relates to dealing with the dementia anxieties of middle-aged and older men and women.

## DEPICTION OF ALZHEIMER'S DISEASE FEATURES IN CHILDREN'S STORYBOOKS

E. Sakai, R.E. Rieger, B.D. Carpenter, Psychology, Washington Univ—EPS, St Louis, Missouri

**Introduction:** Enhancing health literacy about Alzheimer's disease (AD) is an important public health matter. Among the methods for educating the public, children's storybooks are understudied. The purpose of this study was to examine features of AD depicted in children's storybooks. **Methods:** Qualitative and quantitative analyses were conducted with 33 children's storybooks published between 1988 and 2009, written in English for ages 4-12. **Results:** The majority (88%) of storybooks labeled the phenomenon as "Alzheimer's disease," though none used the term "dementia." Only 18% made a distinction between AD and normal aging. Seventy-five percent of the storybooks did not discuss the diagnostic process, and 64% did not address prognosis. Few addressed whether there was a cure (21%) or treatments (18%) for AD. The prevalence of AD symptoms in the storybooks was variable relative to epidemiological data. Across the storybooks, 100% depicted at least one cognitive symptom, 42% at least one emotional symptom, 36% at least one behavioral symptom, and 21% at least one functional symptom. Nonetheless, symptom presentation was widely variable across storybooks. **Conclusions:** What children can learn about AD from storybooks depends on the book they read. Across books, there are notable gaps in essential information. Authors may leave out information they perceive as distressing or difficult for a young child to understand. Comprehensive, professionally reviewed storybooks are essential to adequate health literacy. Methods for creating recommended reading lists might adopt a more empirical approach.



## DEMENTIA CAREGIVING IN THE LATINO FAMILY: BEHAVIOR PROBLEMS, COPING, AND MAJOR CHALLENGES

R.M. Turner<sup>1</sup>, L. Hinton<sup>1</sup>, D. Gallagher-Thompson<sup>2</sup>, R. Valle<sup>3</sup>, 1. *University of California Davis, Sacramento, California*, 2. *Stanford University, Stanford, California*, 3. *San Diego State University, San Diego, California*

While a number of studies have found that Latino elderly with dementia dwelling in the community have higher levels of dementia neuropsychiatric symptoms compared with white non-Hispanics, we know relatively little about how Latino family caregivers recognize and cope with these symptoms in their day-to-day lives. In this qualitative study we analyze data from four focus groups of 42 Latino caregivers to elderly recipients with dementia. Goals of the study are to: 1) identify the most problematic behaviors experienced by caregivers, 2) explore the coping strategies caregivers used when managing difficult behaviors, and 3) describe the major challenges associated with caring for a loved one with dementia. Using an iterative coding technique, three independent raters reviewed transcribed data to determine themes for the three categories of constructs and then coded data using derived themes. Results indicate that diminished body function, diminished hygiene, aggression, wandering, and overt sexuality were the most challenging behaviors caregivers in this cohort dealt with. Caregivers described a range of productive coping strategies used to handle problem behaviors: acceptance, love, patience, assertiveness, flexibility, and the establishment of routine were used by caregivers to successfully navigate caregiving demands. Major caregiving challenges related to behavior problems were difficulties with healthcare providers, problematic family characteristics, limited knowledge of resources, emotional distress, and financial strains. These findings provide valuable information on how Latino caregivers perceive and experience dementia problems that may inform the development of culturally-tailored intervention strategies.

## NEUROPSYCHOLOGICAL AND CLINICAL FACTORS AFFECTING WANDERING BEHAVIOR OF COMMUNITY DWELLING OLDER ADULTS WITH MILD DEMENTIA

Y. Lim<sup>1</sup>, K. Park<sup>2</sup>, Y. Lee<sup>2</sup>, S. Park<sup>3</sup>, 1. *Yonsei Univ Wonju College of Medicine Department of Nursing, Wonju, Gangwon-do, Republic of Korea*, 2. *Yonsei University Wonju College of Medicine, Wonju, Gangwon-do, Republic of Korea*, 3. *Yonsei University, Wonju, Gangwon-do, Republic of Korea*

The purpose of the study was to determine neuropsychological and clinical factors affecting wandering behaviors of community dwelling older adults with mild dementia in Korea. This study used secondary data that was obtained from the survey for early detection and treatment of dementia among community dwelling older adults by the Korean Association for Dementia, and Ministry of Health and Welfare in 2011. The total sample in this study was 104 elders diagnosed with mild dementia over 65 years old in one rural area in Kangwon province. Logistic regression was used to test the hypothesis that wandering is a behavior predicted by neuropsychological and clinical factors. Instruments were constructional praxis test, constructional praxis recall test, GDS, and the Korea version of Short Blessed Test (SBT-K). For elders with mild dementia, constructional praxis delayed recall (OR=.459, p=.034) and the Korean version of Short Blessed Test (OR=1.224, p=.035) were predictors of wandering behavior, indicating that the odds of constructional praxis recall for elders with wandering behavior are 46% lower than the odds of constructional praxis recall for elders with no wandering behavior, and elders with wandering behavior are 1.22 times more likely to have high scores of SBT-K as elders with no wandering behavior. Results show that disorientation, poor concentration and impaired constructional praxis recall significantly influenced the wandering

behavior of elders with mild dementia. Implications of these findings for further research and application to health care professionals are discussed.

## SOCIAL ENGAGEMENT AND PROGRESSION FROM MILD TO SEVERE COGNITIVE IMPAIRMENT: THE MYHAT STUDY

T. Hughes, J.D. Flatt, B. Fu, C. Chang, M. Ganguli, *University of Pittsburgh, Pittsburgh, Pennsylvania*

Preventing or delaying the progression of mild cognitive impairment (MCI) to more severely impaired cognitive states is of considerable public health importance. We examined the associations of level of, and change in, engagement in social activities with risk of progression from MCI to severe cognitive impairment, using data from the Monongahela-Youghiogheny Healthy Aging Team (MYHAT) Study - a prospective cohort study of MCI in the community. The study included 816 older adults with cognitively defined MCI (mean age of 78.04 (SD = 7.38), range 65-96 years), among whom 78 progressed to cognitively defined severe cognitive impairment and 738 whose MCI remained stable across up to three annual follow-up waves (mean = 2.17 (SD = 0.84) waves). Discrete time survival analyses were used to estimate the risk of progression with standardized composite measures of the number of, and frequency of engagement in, social activities as the main predictors. After adjusting for age, gender, education, and functional impairment, more frequent engagement in social activities (OR = 0.63, 95% CI: 0.43-0.93, p = 0.02) and a slower rate of decline in the number of activities over time (OR = 0.30, 95% CI: 0.09-0.97, p = 0.05) were associated with lower risk of progression to severe cognitive impairment. These findings confirm that social activities are associated with cognitive health outcomes in late life. Engagement in social activities may be beneficial for preventing or delaying further cognitive decline among older adults with mild cognitive impairment.

## PERCEIVED CONSEQUENCES OF ALZHEIMER'S DISEASE

A.K. Zaleta, B.D. Carpenter, L. Oglander, E.L. Rosen-Wachs, *Washington University, Saint Louis, Missouri*

Introduction. Concern about getting Alzheimer's disease (AD) is well documented, but few studies have evaluated people's perceptions of the specific consequences of having AD. This study extends previous research by allowing participants to provide open-ended responses about the consequences of AD, for both people with the disease and their caregivers. Methods. 33 individuals with varying AD experience (older adults without AD family history, AD relatives, AD caregivers, individuals with very mild AD, and AD health professionals) were asked to identify the three most stressful consequences of having AD. Non-professional participants rated their knowledge of AD on a 10-point Likert-type scale. Qualitative methods were used to sort responses into categories; responses were tallied by rank. Results. Participants identified consequences spanning several functional and interpersonal domains. Across all participants, the most frequently identified consequence was loss of independence (24% of participants). Loss of independence (30%) and awareness of functional changes (21%) were identified as the most stressful consequences for a person with AD. Stress from providing care (24%), managing behavioral problems (15%), and forgetting people (15%) were considered the most stressful consequences for a caregiver to a person with AD. Self-ratings of AD knowledge were variable (range: 2-10); knowledge ratings did not vary significantly across participant type (p > .05). Summary. Individuals vary in their perceptions of the most stressful consequences of AD, suggesting that no single consequence best characterizes concerns about getting AD. These consequences may have significant implications for older adults' efforts to manage the perceived threat of getting AD.

## EFFICACY OF FACIAL EXPRESSION TRAINING FOR NURSE AIDS IN DETECTING PAIN IN RESIDENTS WITH DEMENTIA

L. Lin, *National Yang-Ming University, Institute of Clinical and Community Health Nursing, Taipei, Taiwan*

**OBJECTIVE.** The aims of this study was to compare the effects of pain assessment and facial expression of pain, and a combination of pain assessment, facial expression of pain, and demonstration and return demonstration on pain detection and management for formal caregivers. **METHODS.** Subjects (372 residents and 162 nurse aids) were recruited from eight nursing homes. The eight institutions were randomly assigned into experimental group I (EI), experimental group II (EII) or the control group (CG). Nurse aids in EI received didactic training in pain assessment and the facial expression of pain, had video and discussion session on facial expression of pain, and demonstration and then return demonstration to record the facial expression of pain. The EII received didactic training in pain assessment and facial expression of pain. The CG received no special training. **RESULTS.** Before training, the Kappa coefficient for consistency of residents' self-reported pain and nurse aids' detected pain in the EI, EII and CG were 0.267, 0.042, and 0.125 respectively, while the Kappa coefficients after training in the EI, EII and control groups were 0.484, 0.440 and 0.188 respectively. Moreover, the resident pain frequency between pre- and post-training among the three groups were significantly different ( $F=3.384$ ,  $p=.035$ ;  $EI>C$ ,  $EII>C$ ). There were also significant differences in muscle relaxant use between pre- and post-training among the three groups were significant ( $F=3.530$ ,  $p=.03$ ;  $EI>EII$ ,  $EI>C$ ). **CONCLUSION.** During the study, staffs were hesitant to use pain relief medications due to concern over possible addiction. Further training about pain management is needed.

## META-ANALYSIS OF NON-PHARMACOLOGICAL INTERVENTIONS FOR APATHY IN DEMENTIA

Y. Jao<sup>1</sup>, J. Specht<sup>1,2</sup>, 1. *College of Nursing, The University of Iowa, Iowa City, Iowa*, 2. *John A. Hartford Center for Geriatric Nursing Excellence, Iowa City, Iowa*

**Background:** Apathy is the most prevalent behavioral and neuropsychiatric problem in dementia but is often not appropriately managed. A growing body of research has investigated the effect of non-pharmacological interventions on apathy yet the findings are conflicting and the results have not been quantitatively synthesized. **Purposes:** This study is to systematically review controlled clinical trials investigating the effects of non-pharmacological interventions for apathy in dementia and to statistically quantify their summary effect. **Methods:** The meta-analysis included published literature, dissertations, and unpublished reports. We searched five electronic databases, relevant reference lists, and conference proceedings. Twenty-three studies were enrolled. Data on characteristics of study design, study quality, participants, interventions, and effect sizes will be coded from each study. **Results:** The summary effect size will be indicated by a pooled standardized mean difference (d) on apathy scores between the intervention and control groups. The d value will be computed through combining individual sample size and effect size. Significance of the effect size will be determined through the z test. The Q statistic (weighted squared deviations), T (between-studies standard deviation), and I<sup>2</sup> (ratio of true variance) will be computed to describe between-studies variance of the summary effect. Preliminary data revealed that the summary effect size is 0.267 ( $P<.05$ ). **Discussion:** The results of summary effect size will help clarify the overall benefit of non-pharmacological interventions for apathy in people with dementia. Further, it may identify important characteristics of study design, interventions, and participants for the effect of interventions to guide future research and practice.

## SESSION 2030 (POSTER)

### DEPRESSION TREATMENT & SCREENING

#### CHARACTERISTICS OF OLDER ADULTS WHO USE SELF-HELP MATERIALS FOR DEPRESSION

A. Shah, F. Scogin, L. Brown, J.L. Shelton, M.P. Morthland, A.H. Presnell, E.A. DiNapoli, *Social Work, University of Alabama, Tuscaloosa, Alabama*

Self-administered treatments for depression are cost-effective, widely available, and potentially valuable as the first step in a stepped care treatment plan. Prior research supports the use of certain self-administered treatments for depression in older adults (Scogin, Welsh, Hanson, Stump, & Coates, 2005). However, no recent studies have evaluated how common self-help use for depression is among older adults. This study evaluates the use of self-help materials for mood in community dwelling older adults and assesses if depression (Patient Health Questionnaire) was related to self-help usage. Two samples were used to evaluate this information. The first sample consists of older adults ( $N = 100$ ;  $M$  age = 73.23) who were recruited from senior nutrition centers and primary care clinics. Those age 55 or above with adequate self-reported reading ability were approached about participating in a 20 minute survey on depression screening. Participants completed counterbalanced self-administered survey packets, which included a depression screen, demographics form, and a yes/no question about their use of self-help materials for mood. Older adults who had endorsed self-help usage for mood evidenced significantly higher scores on the PHQ-9 than those who did not ( $t(82) = -2.23$ ;  $M = 5.9$  vs.  $M = 2.73$ ). The second sample consists of baseline assessments of 51 depressed community dwelling older adults recruited for a depression treatment study evaluating self-administered treatments for depression. The same demographics questionnaire and question about self-administered treatment usage was provided to this sample. Tables will be provided to discuss the demographics characteristics of older adults who use self-administered mood materials.

#### ENHANCING MENTAL HEALTH TREATMENT FOR OLDER ADULTS IN MEDICAL REHABILITATION: A RANDOMIZED CLINICAL TRIAL

P.A. Lichtenberg, T.F. Russo, C. Lysack, C. Leach, D. Paulson, *Institute of Gerontology, Wayne State University, Detroit, Michigan*

Lysack, Lichtenberg and Schneider (2011 AJOT) described a Community based Participatory Research project that developed a 6-DVD training to help Occupational Therapists integrate mental health into their practice with older adults. The current study extended this effort in two ways; (1) Created and evaluated a train the trainer model of disseminating the DVD information and (2) Performing a Randomized Clinical Trial to investigate whether the train the trainer model was effective in changing clinical practice. Eight trainers were randomized into either the intervention or control group. Seventy Occupational Therapists were assigned to be in a group across the 8-trainers. All sites were geographically disparate so that there was no contamination during the intervention. Trainers in the intervention group significantly improved their knowledge following training ( $d=1.93$ ; large effect size). One hundred sixty medical record notes from 3 months before the training and then another 160 medical records 3 months after the trainers trained their staff were obtained from the intervention and control groups. Records were rated across 19 items by two blinded independent experts to determine clinical practices. Kappa value of .84 documented excellent inter-rater agreement. A 2x2 repeated measures ANOVA was performed to test the intervention. Large effect sizes were found ( $d=.82$ ) indicating that compared to the control group the intervention group significantly increased their assessment of and intervention with mental health problems. Most improved were screening rates for depression and cognition followed by interdisciplinary team communication, assessment of balance confidence and use of behavioral activation.

## DEVELOPMENT OF A MOBILE GERIATRIC MENTAL HEALTH SCREENING KIOSK FOR COMMUNITY MENTAL HEALTH SETTINGS

A.M. Napoles<sup>1</sup>, J. Chu<sup>2,1</sup>, C. Spensley<sup>3</sup>, M. Moore<sup>3</sup>, R. Bennett<sup>3</sup>, P.A. Arean<sup>1</sup>,  
1. *University of California San Francisco, San Francisco, California*, 2. *Palo Alto University, Palo Alto, California*, 3. *Family Service Agency of San Francisco, San Francisco, California*

**Background.** Client-centered mental health services result in better recovery outcomes. Systematic, brief diagnostic screeners that are appropriate for geriatric, low-income community mental health clients are needed to promote shared treatment decision making. **Purpose.** To describe the development and pretesting results of a mobile mental health screening tool for use in low-income geriatric populations seen in community mental health settings. **Methods.** Literature and expert reviews were employed to develop the screening tool. Open-ended cognitive interviews with 20 clients and 3 focus groups with clinicians assessed attitudes, barriers and facilitators to use of the screening tool and comprehension of items. **Results.** The majority of items were interpreted as intended by clients, although some items triggered emotional responses. Per clients, the tool addressed the concerns that brought them to the clinic. System-related barriers to implementation included technological and logistical challenges in conducting home visits. Client-related barriers were the frequent need for assistance in completing the screening tool, severity of mental illness, cognitive impairment, instability/case management needs, and trepidation over use of computers. Perceived benefits by clients and clinicians included efficient identification of potential mental health issues, sharing of immediate results, and improved client-clinician communication. Adaptations suggested by clients included simplification of terms and shortening of the tool. Clinicians recommended simplification of hoarding and mania items, integration of the tool with other reporting requirements, shortening, larger font size, and clarification of time frames for items. **Conclusions.** Pretesting of the mobile screening tool supported its usefulness and acceptance by clients and clinicians with some modifications.

## SESSION 2035 (POSTER)

### DISABILITY PREVALENCE AND PREVENTION

#### AN EXPLORATION OF THE RELATIONSHIP BETWEEN PAIN, DISABILITY AND DEPRESSION IN OLDER BLACK AND WHITE ADULTS WITH OSTEOARTHRITIS

N.G. Regier<sup>1</sup>, C. Azuero<sup>1</sup>, A. Shah<sup>2</sup>, P.A. Parmelee<sup>1</sup>, 1. *University of Alabama Center for Mental Health and Aging & Department of Psychology, Tuscaloosa, Alabama*, 2. *University of Alabama School of Social Work, Tuscaloosa, Alabama*

Previous studies have reported mixed results in examining racial and gender differences in the relationships between pain, disability and depression in older adults with osteoarthritis. The present study examined these relationships using data from the 2008 wave of the Health and Retirement Study, filtering for black and white individuals not currently living in a nursing home who also endorsed pain and were diagnosed with arthritis (N=3,894). Ordinary least squares regressions were used to model the relationships among race, gender, pain, disability, and depression (while controlling for covariates) using pain, disability, and depression as three separate outcome variables. Significant effects of race, sex, disability, and depression were detected in the model for pain. There were marginally significant race-by-pain and race-by-gender interactions in the model for disability, as well as main effects for pain and depression. Finally, there were main effects of disability, pain, race, and gender in the model for depression. These findings indicate that race and sex may influence perceptions of pain, depression and disability among older adults in complex ways. Greater understanding of these relationships is necessary to refine individualized clinical treatments.

## ASSOCIATION OF PHYSICAL ACTIVITY AND ARTHRITIS IN ELDERLY MEXICAN AMERICANS: FINDINGS FROM THE HEPESE

E. Grubert<sup>1</sup>, B.A. Shaw<sup>3</sup>, T. Baker<sup>2</sup>, K. Markides<sup>4</sup>, C. Siordia<sup>4</sup>, 1. *Epidemiology and Biostatistics, University at Albany (SUNY), Rensselaer, New York*, 2. *University of South Florida, South Florida, Florida*, 3. *University at Albany, SUNY, School of Public Health and Center for Social and Demographic Analysis, Rensselaer, New York*, 4. *University of Texas Medical Branch, Galveston, New York*

While older adults (> 65 and older) from more marginalized populations (e.g., diverse race and ethnic) experience a disproportionate burden of disease and mortality, they are also at an increased risk for reporting greater disability and functional limitations. Documented changes in functional status across the life span are broadly known among older adults with arthritis, however little is known about physical activity (PA) as a predictor of arthritis among aged Mexican Americans (MA). This study aimed to identify the influence of PA on self-reports of arthritis among older MA. Data were taken from the Hispanic Established Population for the Epidemiologic Study of the Elderly (HEPESE). The primary predictor variable, the Physical Activity Scale for the Elderly (PASE) was used to assess the influence of PA on current and future arthritis diagnoses among MA over 10 years (1995-2005). Our sample was 2166 MA with a mean age of 75±6.1 years, and 59% female. Logistic regression models showed that having an arthritis diagnosis was negatively associated with PASE scores and age. Data further showed that there was a modest association between PA and arthritis for both males (B= -0.002; p=0.17) and females (B= -0.002; p=0.05) at baseline. Baseline PA predicted future incidence of arthritis among females only. The results from this study emphasize the need for further studies examining the relationships between physical functioning, health behaviors, and clinical and psychosocial indicators within defined race and ethnic groups in order to provide meaningful comparisons between different race and ethnic groups.

### WORKING MEMORY AFFECTS RAPID STEPPING TASK PERFORMANCE IN HEALTHY OLDER MEN

K. Ishimatsu<sup>1</sup>, F. Togo<sup>2</sup>, A. Ohnishi<sup>3</sup>, 1. *Graduate School of Health Care Sciences, Jikei Institute, Osaka, Japan*, 2. *Graduate School of Education, The University of Tokyo, Tokyo, Japan*, 3. *National Institute of Occupational Safety and Health, Tokyo, Japan*

Recently, it is known that a decline in higher cognitive function, especially executive function, has been associated with an increased fall risk even in healthy older adults. In some situations, avoiding a fall requires a higher level of cognitive processing to select correct motor and stepping responses. The present study investigated how executive function (i.e., working memory: WM) influences performance of the rapid stepping task during two step conditions. Twenty-eight older males took 2 sessions of 37 trials of volitional front, side, and back steps in random order, and 2 sessions of 36 trials in non-random (clockwise and counterclockwise) orders of directions with at least 80% of maximal step length in response to visual commands on direction of steps. Rate of inaccurate steps were compared as a function of WM score which was measured by using the Digit Span subtest of the Wechsler Intelligence Scale-Third Edition. The error rate in the lowest WM quartile was significantly larger than that of the remaining three quartiles in both sessions. Furthermore, in the lowest WM quartile, error rate in the random session was larger than that of the non-random session where participants knew the sequence of directions of step in advance. These results suggest that the load on and the amount of WM could contribute to increase the accuracy of the rapid stepping task. It is also suggested that WM might be associated with fall risk in older adults.

## DISABILITY PREVALENCE AMONG CHINA'S OLDEST OLD: TESTING THE CUMULATIVE ADVANTAGE HYPOTHESIS

J.A. Burr, M. Nguyen, P. Xu, *Gerontology, Univ Mass Boston, Boston, Massachusetts*

In 2010, China had more than 1.3 billion people of which approximately 18 million (1.4%) were age 80 and older. By 2050, the oldest old population is projected to grow to 98 million. The objective of this study was to evaluate the relationships of childhood and adult SES with the prevalence of disability among the oldest old in China. The study was framed within the cumulative advantage hypothesis. We employed data from the 2005 Chinese Longitudinal Health and Longevity Survey to examine the relationships among ADL and IADL limitations and SES. We found that approximately 30% reported an ADL limitation and more than 80% reported an IADL limitation. Bivariate results showed that the prevalence of disability was higher when subjects grew up in an urban area (ADLs) and lower if they ever attended school. Disability prevalence was higher if they did not receive adequate medical care during childhood (IADLs) and if they routinely went to bed hungry as a child (ADLs). If father worked in agriculture when subject was a child, disability was lower for ADLs and higher for IADLs. For subjects currently residing in urban areas, disability prevalence was higher (ADL) and for those who worked in agriculture as an adult, the prevalence of disability was lower (ADL). After controlling for adult SES and covariates in our regression models, having ever attended school was not related to the likelihood of a disability (ADL). The results showed that the effect of schooling was fully mediated by the adult SES variables.

## TAI CHI MOVING FOR BETTER BALANCE (TCMBB) AS AN INTERVENTION FOR IMPROVING POSTURAL CONTROL

T. Chen<sup>1</sup>, M. Janke<sup>2</sup>, M.F. Avalos<sup>3</sup>, C.K. McHenry<sup>3</sup>, *1. University of South Florida, Tampa, Florida, 2. University of South Florida Polytechnic, Lakeland, Florida, 3. West Central Florida Area Agency on Aging, Inc., Tampa, Florida*

The TCMBB is an 8-form Tai Chi program targeting community-dwelling older adults. This program was successful in improving falls and postural control among older adults in the Pacific Northwest and researchers suggested examining the program in other locations. The purpose of this study was to examine the effectiveness of the TCMBB on postural control among older adults (N = 178) living in West Central Florida. The participants in this study had a mean age of 77 years (SD = 8.15) and were predominantly female (89%). The outcome variable was the time it took participants to complete the Chair Stand Test (CST). The data were analyzed using descriptive statistics and repeated measures ANCOVA. We examined the effect of age, gender, location, number of sessions attended, number of chronic conditions, and number of people in living in the household on the CST. The repeated measures ANCOVA showed a significant effect for Time on the CST, (MT1 = 15.69s vs. MT2 = 12.30s;  $F(1, 78) = 4.89, p \leq .05$ ). Improvement in the CST was significantly different among participants at the seven different locations for this study,  $F(6, 78) = 35.00, p \leq .001$ . There was also a significant interaction effect for location by time ( $F(6, 78) = 3.94, p \leq .01$ ). Our findings suggest that the TCMBB can effectively improve postural control among older adults in West Central Florida, and that the program location can potentially influence its ability to affect performance on this measure.

## WALKING AND SELF-EFFICACY IN INDEPENDENT/ASSISTED LIVING FACILITIES

N.A. Gallagher<sup>1</sup>, P. Clarke<sup>2</sup>, E.E. Carr<sup>2</sup>, J. Fenner<sup>2</sup>, A.F. Ciotti<sup>1</sup>, A. Shamus<sup>3</sup>, K. Wiser<sup>3</sup>, *1. Michigan State University, East Lansing, Michigan, 2. University of Michigan, Ann Arbor, Michigan, 3. Eastern Michigan University, Ypsilanti, Michigan*

Sedentary behavior in independent/assisted living facilities increases residents' risk of development/progression of mobility limitations. The purpose of this cross-sectional analysis was to describe characteristics

of sedentary older adults (N=17) residing in independent/assisted living facilities. At baseline the sample's mean age was 76.8 years (SD=7.81). Seventy-five percent of the participants' comfortable gait speed was less than 1m/sec (range=0.7-2.1 m/s; M=1.2m/s, SD=1.65). Walking was the only physical activity (PA) reported by participants. Half walked for one hour or more per week, and 57% walked outside regularly. Sixty-seven percent of participants used an assistive device for walking. Several types of self-efficacy were measured: Self-efficacy for Walking Duration (SEW), Self-efficacy for PA Barriers, Self-efficacy for Neighborhood/facility Barriers, Gait-efficacy Scale, and the Activities-specific Balance Confidence Scale (ABC). In this sample SEW was low (M=32.62, SD=29.98), as was self-efficacy for PA despite personal (M=32.63, SD=18.98) and neighborhood (M=31.49, SD=29.43) barriers. Participants reported slightly higher self-efficacy in their ability to navigate environmental challenges (GES) (M=43.03, SD=30.99). Although 41% of participants had fallen in the last year, ABC was moderately high (M=56.41, SD=30.00). Walking is a commonly chosen and important form of PA for older adults in independent/assisted living facilities, and can easily be incorporated into PA interventions. It is therefore critical to improve our understanding of the influences on this type of PA. This analysis is part of a larger study to examine the feasibility of a 16-week physical activity/walking intervention. Exploratory purposes will include examining trends in mobility disability and in the relationship between individual (self-efficacy) and neighborhood environmental factors and PA.

## EFFECTS OF INCOME AND WEALTH ON DISABILITY: EVIDENCE FROM A LARGE LONGITUDINAL STUDY

S.B. Laditka, J.N. Laditka, *Public Health Sciences, University of North Carolina at Charlotte, Charlotte, North Carolina*

Many Americans recently lost income and wealth. It might be expected that those with more income or wealth would have less disability, but little research has examined that hypothesis. Similarly, we hypothesized that a substantial loss of wealth might affect health and later functional status. We studied risks of disability onset using 11 survey waves of the nationally representative Panel Study of Income Dynamics (PSID) (1992-2009), following a cohort age 55 and over in 1992 (2,165). The PSID includes detailed longitudinal measures of income, wealth, and disability, and about comorbidities and their time of diagnosis. Disability was defined by activities of daily living. Income was measured as the ratio of the previous year's household income to the poverty threshold. Discrete-time hazard models estimated the likelihood of becoming disabled associated with income and wealth, controlling for functional impairment before baseline, baseline functional status, self-reported health, ten comorbidities, sex, ethnicity, education, marital status and kin, unemployment in the previous year, and retirement. Most measures were updated at each survey wave. Adjusted results suggested a gradient of income risk; those in the three lower income quartiles were more likely to become disabled than those in the fourth, with odds ratios (ORs) and 95% confidence intervals (CIs) for quartiles respectively: 1.64, 1.29-2.10; 1.54, 1.25-1.89; 1.42, 1.20-1.69, p-trend <0.0001. Less wealth was also associated with higher adjusted odds of becoming disabled, as was a loss of wealth >25% (OR 1.19, CI 1.02-1.36). Findings suggest that the recent recession may increase the future prevalence of disability.

## SESSION 2040 (POSTER)

### ENVIRONMENTAL CONTEXT

#### CULTURE CHANGE IN NURSING HOMES: STAFF UTILIZATION OF A NURSES' STATION

E.J. Carlson, *Architectural Studies, University of Missouri, Columbia, Missouri*

Nurses' stations were originally designed to oversee and supervise nursing home residents and staff. However with current trends in change

from a medical model of care to a more resident-oriented model of care, nursing home staff members do not provide care from a fixed location at a nurses' station. Therefore, this paper addresses the following research question: In what ways is a nurses' station utilized by nursing home staff? A qualitative grounded theory research study was designed using direct observation and unstructured interviews. In this pilot study, observations and interviews revealed five central themes of how staff members utilize a nurses' station: communication, wayfinding, privacy, confidentiality, and territoriality. The results indicate there is a complex relationship between the organizational, social, and physical environments to create successful culture change. By first understanding these relationships, further research can take place to make these orchestrated changes to increase quality of life for residents and a better work environment for nursing home staff. While this study explored a deeper understanding of how a nurses' station is utilized by staff and residents in a case study, other themes began to emerge about how culture change initiatives can be implemented to improve staff efficiency through the use of the physical environment and how that can translate to higher quality of care for residents. Pragmatic design recommendations can be created based on outcomes of the data collected for this facility.

### **THE NEIGHBORHOOD EFFECT ON DEPRESSIVE SYMPTOMS AMONG OLDER KOREAN ADULTS IN SEOUL**

J. Ko<sup>1</sup>, S. Lee<sup>2</sup>, 1. *University of South Florida, Tampa, Florida*, 2. *Chung-Ang University, Seoul, Republic of Korea*

**Purpose:** This study examined the relationship between neighborhood characteristics and depressive symptoms among older adults in Seoul, Korea. **Methods:** The survey data of individuals aged 65 and above were drawn from the 2010 Seoul Welfare Panel Data (N=1,413), and they were combined with various administrative statistics collected by districts (N=25). These data then were analyzed via Hierarchical Generalized Linear Model (HGLM). **Results:** This study found that the neighborhood characteristics explained 20% of the log odds of having severe depressive symptoms. Among neighborhood level variables, district welfare budget for older adults and perceived level of neighborhood satisfaction were positively associated with the log odds of having severe symptoms of depression. District crime rate had a significant negative impact on the likelihood of having severe symptoms. Individual characteristics (i.e., age, poverty, disease, regular exercise) were more likely to increase the odds of having severe depressive while regular exercise was more likely to decrease the odds. **Conclusions:** The findings above illustrate the importance of neighborhood environment, which is in line with the "Age-Friendly City" that encompasses the concept of sustainability. The authors finally suggested a need to consider neighborhood context in any effort to facilitate prevention and early intervention of geriatric depression, and made recommendations in the areas of district welfare budget, crime prevention, and resident satisfaction on the neighborhood.

### **GREENING PRACTICES IN ASSISTED LIVING FACILITIES**

E.E. MaloneBeach, Q. Zuo, B. Wood-Nartker, *Human Development and Family Studies, Central Michigan University, Mount Pleasant, Michigan*

The relationship between the physical environment and the health and well-being of older adults has gained interest, yet research on sustainable practices in elder care facilities is lacking. The purpose of this study was to conduct a national survey of assisted living facilities (ALFs) in relation to environmental sustainability efforts. The development of an online survey was guided by the standards put forth by major organizations devoted to green building. Accordingly, questions were grouped into four areas: facility information, sustainable practices, motivations to go green, and views of sustainable certification, and addressed location and linkages, site development, water and energy efficiency, green materials, indoor environmental quality, and sustainability education. The survey was deployed to 400 randomly selected ALFs from nine

states with the highest population of persons 65+. The results indicated an overall movement towards environmental sustainability. The primary interests of the ALFs were in sustainable strategies that provide connection to the larger community, promote interaction with nature, and improve the quality of life for residents. Concerns and obstacles to integrating green products in the ALF industry were also identified. This study depicts the scope of AFL administrators' interest in sustainable practices, efforts made and planned, as well as the challenges they face in greening.

### **GROWING OLD IN PLACE: THE EXPERIENCES OF RURAL ELDERLY**

J. Strommen, G. Sanders, *College of Human Development and Education, North Dakota State University, Fargo, North Dakota*

The study examined older adults' experiences and perceptions of living in rural communities in North Dakota. In order to gain insights into the experience of aging in a rural community, the researcher utilized the basic interpretive model of qualitative research described by Merriam (2002). Personal interviews were conducted with 12 individuals age 65 years and older who had resided in their community for a minimum of 15 years. Analysis to date indicates the diversity of individual characteristics and community characteristics impacts the lived experience of people growing old in rural areas. Preliminary themes indicate that rural elders have a strong attachment to place in spite of deteriorating physical and social conditions. Fewer residents and services in the community cause rural elders to feel isolated and vulnerable. The ability to drive is critical to accessing services and engaging in social and leisure activities outside of the community. These findings suggest that the experience of aging in rural communities varies with the specific community context and context should be carefully considered in efforts to meet the needs of rural elders.

### **THE ROUTINE AND THE REMARK-ABLE: THE TEMPORAL DIMENSION OF EVERYDAY LIFE AMONG ADULTS AGE 80 YEARS AND OLDER**

B.R. Williams, P. Sawyer, R.M. Allman, *Medicine, University of Alabama at Birmingham, Birmingham, Alabama*

**PURPOSE:** Contextual data portraying the rhythm of daily life for adults age 80+ are sparse. We explore individual descriptions of everyday life to characterize contours of day-to-day living in this population. **METHODS:** Semi-structured interviews with older residents of single-family dwellings and senior-living communities were analyzed. We used content analysis of respondents' descriptions of a typical day, the places they went, and activities in which they engaged. **RESULTS:** Participants (n=26) had a mean age of 85.5 years (range 80-92), were predominantly white 69.2% (n=18), female 73.1% (N=19), and residents of single family dwellings 61.5% (n=16). Respondents' lives were structured by a sequence of activities beginning with morning rituals of hygiene, prayer /devotions, breakfast, tidying up, reading newspapers, catching TV news/weather, making telephone calls, and paying bills. Respondents' midmornings were spent in physical, cognitive, or socially stimulating activities, including shopping, church, healthcare, and visiting. The early afternoon was more loosely defined, occasionally punctuated with "remark-able" events generating enthusiastic descriptive accounts of excursions, celebrations, or entertainment. Late afternoon was a time for napping, reading, sorting mail, writing letters, doing puzzles, or watching TV. The evening meal marked the beginning of day's end, with post-meal activities such as favorite TV shows or relaxing projects preceding bedtime rituals. **CONCLUSIONS:** While out-of-the-ordinary events were high points, ordinary tasks had particular salience for the structure and substance of daily life. Attempts to alter daily routines should accommodate the ebb and flow of the typical day, targeting the early afternoon when the "remark-able" is a welcome diversion.

## AGE DIFFERENCES IN MENTAL HEALTH AND CRIMINAL HISTORY AMONG HOMELESS ADULTS

A.N. Harris, K.J. Kimbler, *Florida Gulf Coast University, Fort Myers, Florida*

Previous research has found correlations between age and mental health of homeless populations. This research suggests that age is a potentially important factor when examining the type and extent of mental illness homeless individuals are likely to experience (DeMallie, North, & Smith, 1997; Pluck, Lee, David, Spence, & Parks, 2011). Duration of homelessness, which can be higher in old age, seems to predict decline in cognitive function and more problems related to mental health (e.g., Pluck et al. 2011; Caton et al., 2005). The literature has also established late adulthood in the homeless population to be younger than in the normal population (most commonly age 50 older; Caton et al., 2005; Cohen, 1999). The current study investigated the mental health characteristics of young (ages 18 to 29;  $n = 135$ ), middle-aged (ages 30 to 49;  $n = 402$ ), and older (50-years-old and older;  $n = 210$ ) homeless individuals. Data was collected with a self-report questionnaire when participants first arrived at the shelter. Information related to current and previous mental health diagnoses and treatment was obtained. Age groups did not significantly differ based on whether individuals had a previous or on-going mental health diagnosis. There were also no age differences in whether past treatment had been administered ( $p > .05$ ). When examining current treatment, however, older adults (14.21%) were less likely to be receiving ongoing mental health treatment compared to middle-aged adults (21.39%;  $p < .05$ ). Specific diagnoses, medication usage, and arrest history will also be discussed.

## SOCIAL FACTORS AFFECTING THE PERCEPTION OF AGE-FRIENDLY FEATURES IN AN URBAN MINORITY COMMUNITY

A.W. Costley, *York College-CUNY, Queens, New York*

Background: This exploratory study in New York City assessed the perceptions that older, ethnic minority adults have of the age-friendly features (WHO 2007) of their community and the variables that can impact the perception and experience of these features. Methods: Survey data was collected from a convenience sample of 59 clients at three senior centers in study area in Queens, NY. With an age range of 60-90 (mean/SD = 74 +7.7), 53% were African-America, 32% Caribbean, and 10% Hispanic. Items included demographic data, functional ability, living situation, and awareness of "age-friendly" features. Chi-square analyses explored variables having significant impact ( $p < .05$ ) on the perception of these features. Results: Overall, while 72% said that shopping areas lacked adequate seating, this was reported more by African-American clients ( $p = .032$ ). While 69% did not feel safe going out at night, this was reported more by longer-term residents (11+) years ( $p = .011$ ). While 65% felt that public parks were not well-maintained, this was felt more by those with difficulty in 2-plus IADLs ( $p = .002$ ). While 55% felt that traffic was not well-managed, women felt this more than men ( $p = .024$ ). Finally, those with annual incomes below \$15,000, were less likely to feel active in civic life ( $p = .044$ ). Conclusions: The data suggest that when assessing the age-friendly status of a community, social factors do make a difference in perception and experience. Efforts to assess and develop age-friendly features should consider the demographics of a community and the extent to which different sub-groups experience these features.

## STORIES CONSTRUCT DESIGNS: AN INTERGENERATIONAL AND MULTIDISCIPLINARY APPROACH TO HELPING OLDER ADULTS AGE IN PLACE

T.A. Abramson, M. Siegel, *New York Institute of Technology, Old Westbury, New York*

Juxtaposed to the impact of demographic shifts, biases against working with older adults, and the resultant work force shortages, is the desire by the majority (86%) of older adults to remain in their homes for as

long as possible. Older adults often advocate for 'Aging-in-Place,' but this is not always feasible. Many homes are not designed to adequately meet the needs of people as they age in place and often require renovations and redesigns to accommodate physical disabilities. All of these factors make it crucial for emerging professionals to be able to incorporate a greater understanding and sensitivity to the needs of this population in creating interior spaces that meet the needs of the older adults. This project used a person-centered approach to develop an evidence-based interior design solution to transform the environments of a sample of older adults. By being more responsive to the human condition and simultaneously being spiritually enriching through the incorporation of a multidisciplinary, intergenerational approach these designs concentrated on an area rarely addressed. By having older adults serve as educators, sharing their experiences, desires, and needs for aging in place through narrative life storytelling, students from multiple disciplines gained an appreciation for the positive aspects of aging, and the importance for older adults to remain in aesthetically pleasing, functional, safe, and spiritually fulfilling environments. Sharing one's life history and participating in focus groups about the design of one's home, fostered empowerment and was found to be an uplifting, enriching process for older adult participants.

## SEASONS IN THE SUN: THE RHYTHMIC NATURE OF THE IMPACT OF THE BUILT ENVIRONMENT ON OLDER ADULTS

T. Perry, *University of Michigan, Ann Arbor, Michigan*

Older adults experience isolation due to various reasons such as decline of physical and cognitive ability, lack of transportation and lack of opportunities for social interaction. However, there may be other reasons why isolation occurs. This paper underscores the seasonality of isolation due to the impact of the built environment on the social experiences of older adults. Isolation can occur because of the difficulty of weather on social interactions and mobility, as well as the seasonal nature of older adult's desire to make housing transitions. This study of older adults, their family members and supportive professionals highlights the experiences of older adults and their network as they embark on relocation from their homes. To complete this project in the mid-western United States, I conducted interviews, participant observation of the moving process (packing, garage sales, moving day, adjustment) and document review with 35 older adults, their kin and supportive professionals in three stages: pre-move planning, move in-process, and post-move adjustment.

## IS THERE A HIDDEN "BLUE ZONE" IN UTAH?

T. Draper, *Brigham Young University, Provo, Utah*

"Blue zones" are geographic and cultural areas where people are likely to live to an extreme old age. In each area lifestyle is argued to be an important part of longevity. For example, one blue zone, Loma Linda, California, has a high portion of Seventh Day Adventists who follow strict religion-based dietary practices. Latter-day Saints (most prevalent in Utah) are also known for some of the same religious health practices as Adventists. Perhaps they would show similar longevity. 2011 census estimates show there is one centenarian per 8825 Utahans. This is similar to the one per 10,000 estimate for the USA. However, Utah also has the lowest median age in the USA. When the number of children in Utah is statistically corrected to the USA average the centenarian estimate drops to one in 6110. When the estimate is further refined to reflect only those Utahans who represent themselves as being Mormons, the ratio becomes one in 5,315. This is still not enough to qualify as a "Blue Zone". However, due to heavy smog, elderly individuals living in the main population centers in Utah are at above average risk for respiratory diseases. When those over 100 who live in and out of the Utah pollution zones are compared, those living in the pollution free areas live about one year longer ( $p < .05$ ). Therefore, the pos-

sibility exists that the parts of Utah without the ozone may contain a hidden “blue zone”.

## **A VISUAL EXAMINATION OF SENIOR LIVING FACILITIES IN THREE COUNTRIES**

B. Young, *Kwansei Gakuin University, Nishinomiya, Hyogo, Japan*

The ecological theory of aging states that we feel most comfortable in environments where we fit. Overall comfort in a living situation involves how well we fit in with other people, our ability to move and work in a space, our feelings about a place, and our identity within the space. This suggests that environments for the aged are not innately good or bad; they must be evaluated based on congruence with individual elders’ needs. With this in mind, this research seeks to bring an individualized perspective to the aging environment and elders’ interactions with it. This study investigated environmental conditions of senior living facilities in Turkey, France, and the United States through photographic documentation. The photography documents a variety of shared and private living spaces in these three countries and sheds light on individual interactions with the physical environment, adding specificity to environmental theories of aging such as Lawton’s competence-press model. The study was conducted over the course of one year, through one time visits and later, a ten day stay in a facility in Turkey. Results indicate similarities between approaches to design and physical environment for facilities in the United States and France. Differences between physical environment were more evident across socioeconomic boundaries than between countries.

## **ENVIRONMENTAL INFLUENCES ON ACTIVE AGEING**

S. Keeling, M. Annear, T.J. Wilkinson, *Medicine, University of Otago, Christchurch, Christchurch, New Zealand*

Research Question: Does Place Matter for Health and Activity Beyond 65? Methods: Participatory action research, using mixed methods, was conducted in conjunction with older adults across four research phases: a) systematic investigation of twelve urban areas; b) a postal survey completed by 355 community residents aged 65 years in those areas; c) activity diaries completed by 66 of the survey respondents, along with photovoice diaries contributed by 25 participants; and d) a series of community workshops with participants, for processing of findings and informing stakeholders. Results: During the course of the study, the city of Christchurch experienced earthquake disruptions of significant scale, in September 2010 and February 2011, creating an “unexpected environmental influence”. Results from the study as designed thus include additional evidence of both resilience and vulnerability from participants: over one third reported “psychological disturbance” including anxiety, depression, grief, and difficulty coping with the demands of everyday life. Activity patterns, while disrupted by the earthquakes, centre on a socio-spatial core, of home, local environment, and networks. Participation is also spread across two tiers of activities, with physical, social and cultural domains predominating over those classified as civic, spiritual and economic. Conclusions: Environmental effects are complex and interact within and across domains in an urban environment. These patterns are evident (and pronounced) even in the immediate aftermath of a major earthquake. Next steps include “growing up and growing old” as a society, drawing on principles of universal and age friendly design.

## **SESSION 2045 (POSTER)**

### **GERONTOLOGY, STUDY OF**

#### **CHARTING THE PATH FOR GERONTOLOGISTS THROUGH PROFESSIONAL IDENTITY DEVELOPMENT**

T. Gendron, E. Welleford, *Virginia Commonwealth University, Richmond, Virginia*

There has been much discussion over the legitimacy of gerontology as a discipline, a specialization, or a profession (Ferraro, 2006). In recent

decades, gerontology’s identity as a field of study has progressed developmentally, paralleling growth in both the body of research and the growth of the elder population. Gerontology is typically viewed as a multidisciplinary field of study (Bass & Ferraro, 2000), and this view of multidisciplinary within the field can create an atmosphere of confusion around the professional identity of gerontologists. Graduate education in gerontology has an essential role in providing the foundational knowledge required to work with a diverse aging population. Development of best-practice methods for educating gerontologists to promote professional identity is one method that can be explored to address how graduate level gerontology graduates will create their own professional paths. The primary goal of this study was to determine what factors predict the professional identity and career path of gerontologists. In addition, the study explored how experiential learning influenced professional identity for newcomers to the field and for those experienced in an aging-related field (“professional incumbents”). Graduates (N = 146) of AGHE-affiliated graduate programs participated. Professional identity as a gerontologist was predicted by length of time in the field, age, and satisfaction with coworkers. Experiential learning contributed to professional identity in important but different ways for newcomers to the field and for professional incumbents.

#### **PUSHING THE BOUNDRIES OF KNOWLEDGE: DISSERTATION TOPICS OF GERONTOLOGY DOCTORAL STUDENTS**

H. Ewen<sup>1</sup>, E.J. Bergman<sup>2</sup>, D.C. Carr<sup>3</sup>, *1. Miami University, Oxford, Ohio, 2. Ithaca College, Ithaca, New York, 3. University of North Carolina, Chapel Hill, North Carolina*

Since the inception of the first gerontology doctoral program in 1989, 220 individuals have obtained a PhD in Gerontology in the US. Despite nearly two decades of producing these scholars, we have little understanding of their contributions to the field of gerontology. The Gerontology Education Longitudinal Study (GELS), established in 2006, collects information about gerontology doctoral students, gerontology doctoral programs, and graduates from and faculty members in these programs. In this presentation, we use GELS data to examine the relationship between the dissertation topics of 84% (n=184) of the population of graduates of gerontology doctoral programs and the broader gerontological knowledge base as represented by research published in three flagship gerontology journals. Specifically, we analyzed the keywords for all research articles published in the flagship journals during a four-year period (2008-2011), identifying seven primary research topics: caregiving, long-term care, functional ability, global aging, policy, Alzheimer’s disease, and women. Dissertation topics were coded with three primary keywords. Cluster analyses of the dissertation keywords yielded ten distinct groupings of dissertation topics classified as: aging women, health, Alzheimer’s disease, caregiving, rural aging, home and community based services, social networks, long-term care, social policy, and disability. These findings indicate that the topics in flagship gerontology journals and the dissertation topics of gerontology doctoral students are congruent. This suggests that gerontology doctoral students are contributing to a base of knowledge that is valued by the broader discipline.

#### **AN INTERVENTION TO ASSIST OLDER PERSONS ADJUST TO HEARING AIDS**

K. Lane, *Nursing, Univ of Iowa, De Witt, Iowa*

Hearing loss affects millions of Americans each year, especially targeting older Americans. As many as 38% of elders aged 65-75 years are affected and these numbers rise rapidly with more than 42% affected by 80 years of age. The rise in the numbers of older persons in the United States makes hearing loss the third most common chronic illness in the US today. Of these persons, approximately 30% choose to purchase hearing aids, but an astounding 47.2% of these individuals are unable to adjust to the hearing aids in order to wear them daily. Ambient sounds

and physical discomfort from the presence of the device in the ear cause individuals to never wear the devices or stop wearing them after a short time. A one group pre/posttest design was implemented on individuals between the ages of 75-85 years of age who had previously failed to adjust to hearing aids. The Glasgow Hearing Aid Benefit Profile (GHABP) and hours of hearing aid use time were the primary outcome variables. This intervention study occurred over a four week period of time, with weekly face-to-face meetings with participants. Findings demonstrated that the intervention was feasible to administer in a group of community dwelling older persons (aged 75-85 years). All 15 participants completed the entire intervention, meeting each of 4 times with the researcher over a four week period. Forty percent of volunteers later declined to participate and 48% were turned away due to the small size of this pilot study. An overall increase of hearing aid use time was between 1-9 hours per day. A Wilcoxon signed rank test was performed ( $p < 0.0001$ ). Fifty three percent of participants ( $n=8$ ) increased their hearing aid use time  $>4$  hours while 46.7% increased their hearing aid use time  $<4$  hours. Hearing aid satisfaction, as measured by the GHABP, improved from 1-5 (0.0039). These results deem the intervention not only feasible, but statistically significant in improving both hearing aid use time and hearing aid satisfaction. Future studies should be aimed at advanced statistical analysis, randomized clinical trial with larger numbers to improve power, and expanding the age criteria for study inclusion. Implications for future research are significant, and focus on improving communication and quality of life in older persons.

## SESSION 2050 (POSTER)

### HOUSING

#### AT LAST 'BOOMERS' MOVE IN: INTRA-GENERATIONAL CHANGE ARRIVES IN ONE RETIREMENT COMMUNITY

S.A. Eisenhandler, *Sociology, Waterbury, Connecticut*

With their arrival long awaited and social change anticipated wherever they go, members of the baby boom generation are now establishing a visible presence in retirement communities. Indeed, housing coordinators have been showing units to young-old boomers for a few years and already understand how residential communities meet or do not meet boomer expectations—insufficient electrical outlets, thin walls, and lack of garage space are among the most glaring deficiencies noted by prospective 'boomer' residents. This research details experiences in a small retirement community that has recently welcomed boomer pioneers as residents. Their arrival coincides with the final year of a six year qualitative study. Residents from older, non-boomer cohorts now have younger neighbors with life course and historical backgrounds that differ in important ways from the social experiences of non-boomers and from the culture they established in the community. This micro-demographic shift is only beginning and constitutes a new frontier for the study of intra-generational relationships. Cohort succession within the entire generation has potential for creating cooperative relationships (especially around technology) as well as tension around some values and behaviors. The depiction and discussion of emerging relationships between boomer and non-boomer older residents is drawn from participant observation, interviews, and photographs of people and the retirement community.

#### CHARACTERISTICS OF OLDER PERSONS WAIT-LISTED FOR RENTAL ASSISTANCE IN PORTLAND, OREGON

P. Carder, G. Luhr, J. Weinstein, J. Kohon, *Institute on Aging, Portland State University, Portland, Oregon*

The characteristics of older persons who receive rental assistance, including rental apartments and Housing Choice Vouchers (HCV, or Section 8), have been described. However, almost no data are available for persons who have applied for and are on a waiting list for assistance. This poster reports findings from a 2011 survey of 1,128 applicants

age 55 and older wait-listed for rental assistance through the largest housing agency in Oregon. Of the 358 persons who completed a mailed survey (response rate 31.7%), 214 applied for an apartment in public housing, 117 for a HCV, and seven for both programs. Question domains included housing status, health status and service use, instrumental activities of daily living, food security, and demographics. Participants ranged in age from 55-96 (mean age 63), most were female, and 80% reported annual personal incomes of \$14,999 or less. Some reported being currently homeless (7.5%) and 20% were homeless in the prior 12 months. Over one-fourth (26.6%) wanted to move in the next month. The majority of respondents (56.6%) described their health as fair or poor, nearly half (48.1%) reported a major medical illness, and 47.6% visited the emergency room (ER) in the prior 12 months. Having enough food in the prior 30 days was a concern for 41.5%. Statistically significant differences between public housing and HCV applicants were found, with the public housing applicants scoring worse on several domains. These results indicate that significant numbers of older persons wait-listed for rental assistance have both housing and health-related needs.

#### SATISFACTION TO STIGMA: LIVING AND AGING IN A CCRC

H. Ewen<sup>1</sup>, K.B. Dassel<sup>2</sup>, J.K. Chahal<sup>1</sup>, *1. Miami University, Oxford, Ohio, 2. Bellarmine University, Louisville, Kentucky*

Continuing care retirement communities afford residents peace of mind in that they provide care for the duration of life in a safe campus environment. Older adults are able to transition to higher levels of care as their health or physical abilities decline. In a 9-year longitudinal study of residents in a new CCRC, participants were asked questions regarding their social environments, social stigma, and satisfaction with their housing and community. Social cliques were well established by the ninth year in residence and were reported to be most pronounced at evening meals and social events sponsored by the CCRC, with cliques not conforming to written rules of the facility, such as reserving tables. Nine years post-move into the CCRC, all residents surveyed said they were satisfied with their decision and would make the same choice if they had it to do over again. Residents socialize informally with one another, on average, twice per week and report contact with other residents daily. Satisfaction with aspects of the housing and the greater community was very high. Desired changes included reduced staff turnover and patronizing speech from younger staff members. Transitions among housing units was not largely related to health status (except for recent hospitalizations), but more related to family issues such as death of family and friends, financial difficulties, a family member needing assistance, troubles with neighbors, and conflict with children.

#### PERSON-ENVIRONMENT FIT AND RELOCATION: IMPROVING HOUSING ACCESSIBILITY

K. Stoeckel, *Hebrew University, Jerusalem, Israel*

The interconnectedness between functionality and housing environment is well documented in the environmental gerontology literature. However, few analyses examine what characterizes homes older adults move into to ascertain if accessibility improvement is prioritized. This analysis examined the characteristics of the non-institutional homes older adults move into in comparison to prior home environments. Characteristics of persons who elected to make housing accessibility improvements when relocating were also explored. The non-institutionalized sample was selected from the 1998-2006 waves of the Health and Retirement Study. The model controlled for demographics, worsening health and functionality, home accessibility and the person-environment fit of individuals and their spouse. Results suggest that the experience of environmental misfit increased the relative risk of moving into a home with more accessibility features than previous homes by 60 percent. Similar findings were found when spouses had poor person-environment fit, increasing the relative risk of such a move by 71 percent. However, worsening health or functionality did not predict moves into more acces-



sible homes. The findings suggest that negative encounters with unresponsive environments in previous homes, either personally or via their spouse's needs, increased awareness of the importance of accessibility while poor health or functionality did not.

## SESSION 2055 (POSTER)

### KIN CAREGIVING

#### COREGULATION OF NEUROENDOCRINE ACTIVITY IN PERSONS WITH MODERATE STAGE ALZHEIMER'S DISEASE AND THEIR PRIMARY FAMILY CAREGIVERS

N.A. Hodgson, L. Marineau, K. Crouse, *School of Nursing, Johns Hopkins University, Baltimore, Maryland*

Spousal caregivers (CGs) play a critical role in helping persons with dementia (PWD) remain at home by managing day to day needs, but often at tremendous burden. Evidence suggests a reciprocal relationship between CGs and PWD such that the wellbeing of one affects the wellbeing of the other. Yet the biosocial mechanisms underlying the reciprocal relationship involved in caregiving remains poorly understood. This study examines the extent to which neuroendocrine processes underlying CG's stress/burden have implications for the PWD by examining the physiological symmetry of the HPA and SNS stress response in dyad by assessing daily profiles in salivary cortisol (cort) and alpha amylase (sAA). In keeping with a negative reciprocity model we predicted that greater degrees of coregulation would be associated with negative clinical outcomes such that stronger within-dyad associations in cort/sAA would be associated with higher levels of neuropsychiatric symptoms and caregiver burden. Saliva samples were obtained from 20 community based dyads four times daily across 4 days. Neuropsychiatric symptoms were assessed using the NPI. CG burden was assessed using the Zarit Burden Form. To assess cross-dyad coregulation effects on CG burden and NPI scores the correlation between dyad's cort/sAA levels (intercepts) was tested in HLM models using the tau statistic. An inverse relationship was found between intensity of coregulation and NPI and CG burden. The results allow for better characterization of which CG dyads are at risk and support further research to investigate the nature of these relationships.

#### THE VALUE OF VIDEOPHONE SUPPORT GROUPS AMONG ETHNICALLY DIVERSE CAREGIVERS OF PERSON WITH DEMENTIA

D.M. Perdomo<sup>1</sup>, S. Czaja<sup>1</sup>, R. Schulz<sup>2</sup>, S.N. Nair<sup>1</sup>, *1. Psychiatry, University of Miami, Miami, Florida, 2. University of Pittsburgh, Pittsburgh, Pennsylvania*

Providing care to a person with Alzheimer's Disease or a Related Dementia (ADRD) is challenging and time consuming and often associated with adverse outcomes for caregivers. Many caregivers report difficulties obtaining needed social support and knowledge about resources and caregiving because of time constraints and logistical problems. The Videocare study examined the feasibility and benefits of technology-based psychosocial intervention, delivered via videophone, among an ethnically diverse sample of family caregivers of Dementia patients. Caregivers were randomly assigned to the technology-based intervention condition, an attention control condition, or an information only control condition. A key component of the intervention was providing caregivers with the opportunity to participate in five videophone support group sessions. The sessions were intended to enhance social support and knowledge about caregiving. The intervention sample included 14 African Americans, 16 Hispanics, and 5 Haitian caregivers. The groups were conducted in English, Spanish and Creole and followed a structured education/supportive format. In this paper we report on the perceived benefits and value of the support groups. In addition, we examine

difference in group attendance as a function of caregiver characteristics. Overall the results revealed that the majority (78%) of caregivers found the groups to be of great value, and most caregivers felt the groups increased their knowledge and caregiving skills. Group attendance was higher among the Hispanics and Hispanics and African Americans reported greater values than Haitian caregivers. Overall, the findings demonstrate that video technology is a viable and valuable option for conducting support groups with ethnically diverse caregivers.

#### LONG TERM PLANNING AND PARENTAL CAREGIVERS OF INDIVIDUALS WITH INTELLECTUAL DISABILITIES

T.A. Nicoll, S. Qualls, H. Layton, *Psychology, UCCS, Colorado Springs, Colorado*

Due to the increased lifespan of adults with intellectual disabilities (ID), many are now outliving their parents yet families report low rates of planning for the future when parents can no longer provide support or care. Little is known about factors that facilitate or impede planning. The present study examined the role of social support and education as facilitative factors. A survey was completed by 97 family caregivers of adults (aged 18 or older) diagnosed with intellectual disabilities living with the family, including the Preparation for Care Needs Scale (Sorensen & Pinquart, 2001), and the Modified Family Support Scale (Dunst et al., 1984). Multiple regression analyses showed that exposure to long term planning information and social support of caregivers of adult with ID were significant predictors of caregivers completing long term plans for their loved ones with ID, accounting for 36% of the variance in planning. Long term planning information needs to be widely disseminated among parental caregivers, and interventions need to include social support as a facilitative factor in planning. Keywords: intellectual disabilities, long term planning, interventions, social support

#### REFLEXOLOGY FOR TREATMENT OF BEHAVIORAL SYMPTOMS IN COMMUNITY RESIDING PERSONS WITH DEMENTIA : PROTOCOL DEVELOPMENT FOR AN EXPLORATORY CONTROLLED TRIAL

N.A. Hodgson, B. Morris, *School of Nursing, Johns Hopkins University, Baltimore, Maryland*

Nonpharmacologic sensory-based therapies that reduce stress and promote relaxation are one group of benign intervention techniques that ease behavioral symptoms in individuals with dementia (PWD). Evaluations of complementary tactile-based therapies have shown promise in reducing agitated behaviors in persons with Alzheimer's disease (PWD). However standardized methods for administering and evaluating the treatments have been lacking. The current study reports on the development and manualization of a standard reflexology protocol administration by family caregivers of PWD. Currently a trial is being conducted to evaluate the effect of a reflexology protocol as administered by trained family caregivers. We report on the development, pilot-testing and open trail of a reflexology protocol for primary family caregivers of PWD. The step-by-step manual and accompanying video were revised based on input from patients, caregivers, therapists, and Standards of Practice and Expert Guidelines of the American Massage Therapy Association (AMTA) and National Certification Board for Therapeutic Massage and Bodywork Standards of Practice. Outcomes from 10 open trial patients will be presented. Preliminary outcomes suggest a reduction in measures of stress (salivary cortisol, salivary alpha amylase) and neuropsychiatric symptoms (NPI) in PWD over the course of the intervention. Secondary outcomes include caregiver well being, caregiver confidence using intervention and caregiver satisfaction. Results will be discussed with implications for a subsequent RTC.

## DO CLOSER RELATIONSHIPS BETWEEN CAREGIVERS AND PERSONS WITH ALZHEIMER'S DEMENTIA AFFECT THE PROGRESSION OF NEUROPSYCHIATRIC SYMPTOMS IN THE CARE RECIPIENT?

E.B. Fauth<sup>1</sup>, S. Schwartz<sup>1</sup>, M.C. Norton<sup>1</sup>, K.W. Piercy<sup>1</sup>, C. Lyketsos<sup>2</sup>, J. Tschanz<sup>1</sup>, 1. *Family, Consumer, and Human Development, Utah State University, Logan, Utah*, 2. *Johns Hopkins University, Baltimore, Maryland*

Prior studies suggest that closer relationships in care dyads predict better outcomes for persons with Alzheimer's dementia (PWD), including slower cognitive and functional declines. The current study assessed whether a closer care dyad relationship predicts level and rate of change in neuropsychiatric symptoms (NPS) in PWD. Data analyzed involved 180 care dyads from the Cache County Dementia Progression Study, a population-based study of persons with incident dementia and their caregivers assessed semi-annually for up to 8.6 years (average time in study = 2.2 years; SD=2.0). Caregivers included spouses (n=70; 39%) and adult-offspring (n=110; 61%). The PWD had a mean dementia onset age of 83.2 years (SD = 6.1), 13.1 years (SD=3.0) of education, and 57.8% were female. Mixed models examined associations between baseline relationship closeness reported by each caregiver with the PWD and NPS over time (total score on the Neuropsychiatric Inventory, NPI). Covariates included caregiver depression, and spouse vs. adult-offspring caregivers, as well as characteristics of the PWD (gender, education, ApoE status, age of dementia onset). Among adult-offspring dyads, higher closeness ratings predicted on average 6.8 points lower NPI scores at dementia onset ( $p < 0.05$ ). In spousal care dyads, closeness predicted 1.2 points less of annual increase in NPI for every one point increase in mean closeness ( $p < 0.05$ ). We conclude that closer care dyad relationships may be protective against NPS, especially in spousal dyads. Future studies should examine mechanisms behind these associations (e.g. the use of more person-centered care in closer relationships).

## MULTIPLE DIMENSIONS OF POSITIVE ASPECTS OF CAREGIVING: FINDINGS FROM THE REACH PROJECT

J. Cho<sup>1,2</sup>, M.G. Ory<sup>2</sup>, A. Hochhalter<sup>1</sup>, A.B. Stevens<sup>1</sup>, 1. *Scott & White Healthcare, Temple, Texas*, 2. *School of Rural Public Health, Texas A&M Health Science Center, College Station, Texas*

**Objective.** Utilizing a socio-ecological perspective, this study examined the relationship of intrapersonal, interpersonal and formal care indicators to positive aspects of caregiving (PAC) for 642 dementia caregivers by ethnic group (Hispanic=212; African American=211; White=219) from the baseline data of the multi-site REACH II project. **Methods.** Six intrapersonal indicators (caregivers' age, sex, caregiving hours per day, living with recipients, relationships, basic economic status), five interpersonal indicators (overall satisfaction of social support, frequency, number of networks, negative interaction of social support, ethnic group), and nine indicators of formal cares (homemakers, home health aide, meal delivery, transportation, visiting nurses, attending daycare/senior health programs, ER visits, hospital stays, unaffordability for basic needs) were used. Preliminary analysis showed ethnic group was a significant factor for PAC. Blocked-multiple regression analyses by three ethnic groups were computed to examine significant factors related to PAC, after controlling for memory and behavioral problems among care-recipients. **Results.** Data showed significantly different indicators of PAC by ethnic group. Attending daycare/senior health programs ( $\beta = -.17, p < .05$ ) was a significant predictor for PAC among Hispanic caregivers; caregiving hours ( $\beta = .17, p < .05$ ), frequency of social support ( $\beta = .27, p < .01$ ), and formal help for basic needs ( $\beta = -.14, p < .05$ ) were significant for PAC among African American caregivers; and basic economic status ( $\beta = .16, p < .05$ ), frequency of social support ( $\beta = .17, p < .05$ ), and home health aide service ( $\beta = -.17, p < .05$ ) were signifi-

cant among White caregivers. **Conclusion.** The findings suggest that family caregivers of different culture groups may value unique benefit from multi-levels of indicators to optimally foster positive feeling about dementia caregiving.

## WHO ARE HELPING CHINESE FAMILY CAREGIVERS OF ALZHEIMER'S DISEASE IN HONG KONG?

S. Cheng, *Psychological Studies, Hong Kong Institute of Education, Tai Po, Hong Kong*

**Objective:** To investigate structural and functional characteristics of the "helping network" of family caregivers of Alzheimer's disease (AD). **Methods:** Adapted from the social convoy questionnaire, 142 primary caregivers were asked to list up to 10 persons in total who "currently help you in taking care of the family member with AD." Those who are "most helpful, and you probably couldn't get along without their help" were placed in the inner circle. Those "who don't help you quite as much but are still important sources of help" were placed in the middle circle. Finally, those who "help a little bit" were placed in the outer circle. Caregivers were asked to list up to 5 more persons who might be helping but not listed as a network member so as to ensure a complete picture of who were helping them. Caregiver rated the emotional support, instrumental support, and socializing provided by each network member, and indicated the extent to which they were satisfied with the social support they received. **Results:** Caregivers had a small helping network, averaging about 5 network members. Spouse caregivers received help primarily from adult children, whereas adult children were quite isolated and relied primarily on spouses and some siblings. Not surprisingly, few friends were named as helpers. Some were assisted by foreign domestic helpers. Satisfaction with social support was strongly predicted by helping network size, as well as by the degree of social support received. **Conclusions:** Caregivers are isolated, even in the context of familism in Hong Kong.

## FACTORS ASSOCIATED WITH MEDICATION USE IN FAMILY CAREGIVERS AND THEIR RELATIVES WITH DEMENTIA

P.E. Carlton, A.M. Reamy, S.H. Zarit, *The Pennsylvania State University, University Park, Pennsylvania*

The overuse of medications, particularly by older individuals, is a long-standing problem that affects health and functioning. Yet, little is known about the factors associated with such use, particularly in the case of family caregivers and their relatives with dementia. Informed by Andersen's Behavioral Model of Health Services Use, we sought to explore the predisposing characteristics, need-based factors, and health service use associated with the number of medications taken for treatment of behavior problems of the person with dementia and medical illnesses of the caregiver. The sample was 157 family caregivers providing regular care and assistance to individuals with dementia. Data were obtained in an in-person interview during which caregivers presented bottles of prescription medications for both themselves and their relative. Using multiple linear regression, we find that the number of medications taken by caregivers is significantly related to greater age, lower subjective health, and higher use of medical services, but were unrelated to stress associated with behavior problems of their relative. The number of medications taken by the individuals with dementia was not related to predisposing characteristics but rather was significantly associated with higher reports by caregivers of stress related to behavior problems. These findings indicate that while some medication use is related to predisposing factors and need, interventions that improve feelings of subjective health or caregivers' stress may decrease medication use for caregivers and/or their relatives with dementia.

## CAREGIVERS' APPRAISALS OF THE EFFECTIVENESS OF COMMUNICATION STRATEGIES DIFFER BY STAGE OF ALZHEIMER'S DISEASE

M.Y. Savundranayagam<sup>1</sup>, J.B. Orange<sup>2</sup>, 1. School of Health Studies, Western University, London, Ontario, Canada, 2. School of Communication Sciences and Disorders - Western University, London, Ontario, Canada

Communication between persons with Alzheimer's disease (AD) and family caregivers is complex and interactive. Earlier research identified AD-related communication problems as contributors to misunderstandings within AD dyads. However, communication breakdowns also can result from caregivers' use of ineffective strategies which are perceived as helpful. Using a sample (N=15) of AD family caregiver dyads, we examined whether caregivers' ratings of strategy effectiveness matched both effective and ineffective strategies found in their video-recorded mealtime conversations and those described in the literature. Conversations were analyzed using the trouble-source repair paradigm which identifies and rates the effectiveness of caregiver communication strategies to resolve breakdowns. Matched and mismatched appraisals of communication strategies varied across stages of AD. Caregivers of persons with early stage AD correctly appraised 68% of the 22 communication strategies, whereas caregivers of persons with middle and late stage AD correctly appraised 45% and 55% of the strategies, respectively. Similarly, caregivers of persons with early stage AD incorrectly appraised 32% of the 22 communication strategies, whereas caregivers of persons with middle and late stage AD incorrectly appraised 55% and 45% of the strategies, respectively. Moreover, most mismatched appraisals were for effective strategies that were appraised as ineffective. This is true especially for caregivers of persons with middle and late stage AD. Mismatches illustrate the need for communication education and training, particularly to establish empirically derived evidence-based communication strategies over the clinical course of AD.

## IS BETTER SURVIVAL IN CAREGIVERS REAL, OR A HEALTHY WORKER EFFECT BIAS? RESULTS FROM CAREGIVER-SOF

L. Fredman<sup>1</sup>, J. Lyons<sup>1</sup>, J.A. Cauley<sup>2</sup>, K. Ensrud<sup>3</sup>, T.A. Hillier<sup>4</sup>, M. Hochberg<sup>5</sup>, 1. Epidemiology Department, Boston University School of Public Health, Boston, Massachusetts, 2. University of Pittsburgh, Pittsburgh, Pennsylvania, 3. University of Minnesota, Minneapolis, Minnesota, 4. Kaiser Permanente Center for Health Research, Portland, Oregon, 5. University of Maryland Baltimore, Baltimore, Maryland

Caregiving is often conceptualized as a "career" because its conditions and obligations mimic those of employment. Furthermore, findings of lower mortality rates in caregivers than non-caregivers parallel the Healthy Worker Effect: i.e., mortality rates are lower in workers than in the general population because better health is associated with being hired, remaining employed and increased length of employment. We investigated whether these reasons explained lower mortality rates found in caregivers in the Caregiver-Study of Osteoporotic Fractures. The baseline sample included 1069 women; mean age 81 years; 375 were caregivers, of whom 139 were caregivers for > 5 years. Over the first three annual study interviews, 46% of baseline caregivers stopped caregiving while 7% of non-caregivers began caregiving. Previous analyses found that fewer baseline caregivers (20%) than non-caregivers (27%) died over 8 years: adjusted hazards ratio (aHR) = 0.74 (95% CI = 0.56-0.89). New results did not find greater protection associated with longer time caregiving prior to baseline: aHRs ranged from 0.72-0.78 for <2 to >5 years caregiving before baseline. However, compared to non-caregivers, mortality rates were lower among women who were caregivers at all three interviews and non-caregivers who started caregiving (aHR=0.62 (0.42-0.90) and 0.63 (0.30-1.33), respectively) and were non-significantly higher among women who ceased caregiving (aHR = 1.34 (0.84-2.11)). Additional analyses are exploring whether

this "Healthy Caregiver Effect" is reduced by operationalizing caregiving as a time-varying exposure, and incorporating caregiving intensity and reason why caregiving ceased. Results suggest a health advantage in older women who become, and continue as, caregivers.

## ETHNIC AND CAREGIVER TYPE INFLUENCES ON CAREGIVER STYLE IN ADULTHOOD

M. Rodriguez, B. Hayslip, *Psychology, University of North Texas, Denton, Texas*

In order to explore how ethnicity and caregiver type relate to caregiving style, each of 389 participants, 152 of which were Alzheimer's caregivers (132 Caucasians, 20 African Americans) and 163 of which were grandparents caring for grandchildren (89 Caucasians, 74 African Americans) participated. Each caregiver completed the Caregiving Style Scale (CSS; King & Hayslip, 2005) assessing the particular interactional style employed in providing full-time care for either a spouse or parent with Alzheimer's disease or a grandchild. MANOVAs findings indicated ethnic differences in caregiving style to exist ( $p < .05$ ), wherein African American caregivers were more likely to endorse physical/emotional control and authoritarian-structured caregiving styles and White caregivers were more likely to endorse authoritative/warmth-reasoning and anger caregiving styles. MANOVAs indicated caregiver group membership to predict caregiver style ( $p < .05$ ), wherein caregivers of adults with Alzheimer's disease were more likely to endorse supportive/obligatory style than were grandparents caring for their grandchildren. MANOVAs also suggested ( $p < .05$ ) that caregiver styles were a function of the interaction of caregiver group membership and ethnicity. Among grandparents caring for grandchildren, African Americans were more likely to endorse physical/emotional control than White caregivers. Among Alzheimer's disease caregivers, no such differences were observed. These findings suggest that in the context of having adapted a particular interpersonal orientation to providing care, either ethnic-specific styles of interacting with the care receiver exist or the particular demands of the caregiving context influence caregiver style. In addition, the interaction of these two factors jointly influences one's interactional style.

## COPING WITH BEHAVIORAL PROBLEMS OF PATIENTS WITH ALZHEIMER'S DISEASES: THE EXPERIENCE OF CHINESE AMERICAN FAMILY CAREGIVERS

F. Sun, X. Gao, *School of Social Work, ASU, Phoenix, Arizona*

Purposes: This study aims to understand the stress and coping experience of Chinese American family caregivers of a relative of dementia living in areas where there are no established Chinese communities. Methods: This study used the baseline interview data of a 12-month longitudinal qualitative study on a sample of 21 Chinese American family caregivers recruited in metropolitan Phoenix area. Caregiver ages range from 43 to 81; thirteen are providing care for an elder parent or a parent-in-law; and eight for their spouses. Semi-structured interviews were used to collect information regarding perceived stressful behavioral problems of care recipients (CR), strategies or tactics used to deal with stress, and cultural explanations of their appraisal of caregiving situations and behaviors. Results: Thematic analysis revealed three major themes: 1) behavioral problems are most stressful when posing risks to the safety or health of CR; 2) family is a source of strength to overcome caregiving stress but also a place to trigger family conflict that exacerbates stress; and 3) caregivers draw on education, spirituality, cultural beliefs (i.e., fatalism, filial piety, and family cohesion), technology, and informal networks as coping strategies. Discussion: Chinese American dementia family caregivers living in non-aggregated Chinese communities may lack access to formal resources. Formal service agencies need to help increase caregiver awareness and acceptance of formal support through activities such as promoting outreach via

informal networks and culturally-sensitive educational programs. Caregiver intervention programs need to cultivate coping strategies that can bring individual peace and family harmony in this cultural group.

#### **GRANDPARENT CAREGIVING AND THE DEVELOPMENT OF PROSOCIAL ATTITUDES AMONG ADOLESCENTS**

S. Hamill, A. Shapiro, *CSU San Marcos, San Marcos, California*

At present, 1.4 million young people under the age of 18 serve as caregivers, primarily to grandparents (NAC & UHF, 2005). Research demonstrates that adolescents are particularly sensitive to socialization for prosocial attitudes and behaviors (Chase-Lansdale, et al., 1995). Caregiving may provide a unique opportunity for adolescents to develop these characteristics through the transmission of positive values via their parents' caregiving and through the direct provision of care, particularly when supported by other family members. The present study tested two hypotheses: (1) Adolescent females, ethnic minorities, and those who provided direct care to grandparents were expected to exhibit higher levels of collectivism and empathy; (2) For those adolescents who provided direct care, females, ethnic minorities, those with greater caregiving responsibilities and social support would display greater collectivism and empathy. Freshmen ( $n = 446$ ) from a multi-ethnic high school completed surveys assessing family responsibilities and a variety of attitudinal measures. Over half came from caregiving families; over two-thirds personally assisted with caregiving for grandparents. Results from multiple regression analyses indicated that females and those who provided direct care exhibited higher levels of collectivism and empathy. For those adolescents who provided direct care, greater social support for caregiving efforts predicted higher collectivism scores; females and those with greater social support reported greater empathy. The need to provide social support to young caregivers in order to promote the development of prosocial attitudes is emphasized.

#### **INFLUENCE OF OPTIMISM ON CAREGIVING AND PERCEIVED STRESS AMONG OLDER COMMUNITY-DWELLING ADULTS**

S.O. Stuver<sup>1</sup>, J. Beckmann<sup>1</sup>, L. Fredman<sup>1</sup>, T. Heeren<sup>2</sup>, J. Lyons<sup>1</sup>, *1. Epidemiology, Boston University School of Public Health, Boston, Massachusetts, 2. Biostatistics, Boston University School of Public Health, Boston, Massachusetts*

Caregiving, especially high intensity caregiving, is associated with higher levels of stress. However, personality traits, such as optimism, may influence individuals' reactions to stressful experiences. In a study of older community-dwelling adults (mean age=73.8 years), we examined whether optimism modified perceived stress among 92 caregivers of persons with Alzheimer's or Parkinson's Disease, and 137 non-caregivers. Caregiving intensity was based on the median number of Instrumental and basic ADL tasks caregivers helped the care recipient with (high intensity:  $\geq 6$  IADLs or  $\geq 3$  ADLs). High and low optimism level was determined by the median score of the Life Orientation Test-Revised. In multivariate linear regression models adjusted for sociodemographics, comorbidities, IADL limitations, and 20m walking speed, mean Perceived Stress Scale (PSS) scores were considerably higher among high intensity caregivers (5.80 points,  $p < 0.001$ ) and slightly higher among low intensity caregivers (2.93 points,  $p = 0.06$ ) compared to non-caregivers. In stratified analyses, high intensity caregivers reported significantly more stress than non-caregivers within both the high and low optimism groups: mean PSS scores were 6.93 and 4.53 points higher, respectively ( $p < 0.01$ ). Although participants with high optimism reported lower perceived stress in non-caregivers and each group of caregivers, high optimism did not erase the association between greater caregiving intensity and stress. Rather, high-intensity caregivers with high optimism reported the same stress as non-caregivers with low optimism (mean PSS score=18). High intensity caregivers with low optimism had the most stress (mean PSS score=22.64 $\pm$ 1.39). These results

suggest that optimism may influence the impact of stress among older caregivers and non-caregivers.

### **SESSION 2060 (POSTER)**

#### **MINORITY AGING RESEARCH**

#### **PREDICTING MORTALITY AND INCIDENT DISABILITY IN MEXICAN AMERICANS AGED 75 AND OVER: REVISITING PERFORMANCE MEASURES IN THE HISPANIC EPESE**

L. Panas<sup>1</sup>, K. Markides<sup>1</sup>, K. Eschbach<sup>1</sup>, R. Angel<sup>2</sup>, C. Siordia<sup>1</sup>, *1. University of Texas Medical Branch, Galveston, Texas, 2. University of Texas, Austin, Texas*

To test the longitudinal association between Short Physical Performance Battery (SPPB) and a short walk (SW) test with mortality and incident disability in a sample of older Mexican Americans (MAs), aged 75+. Data from Wave 5 and 6 of the Hispanic Established Population for the Epidemiological Study of the Elderly (EPESE) is used to test SPPB and SW measures for predicting mortality and incident disability among older MAs. A sample of 1,448 is used in the mortality analysis and reduced the sample in the disability analysis ( $n = 905$ ), which excludes disabled at Wave 5. After controlling relevant factors, we find that, except for those unable to perform the tests, neither the SPPB nor the SW predict mortality risk in oldest MAs. Both the SPPB and the SW are significant predictors of incident disability. Those unable to perform the SPPB have 3.2 times higher odds of disability onset compared to the best scorers (OR 3.2; 95% CI 1.3-7.6). Respondents scoring poorly (1-3) on the SPPB had 2.8 times higher risk for developing ADL limitations (OR 2.8; 1.5-7.6), while those scoring 4-6 or 7-8 points were also significantly more likely to develop ADL limitations over the 2½ year study period. Our findings suggest that neither SPPB nor SW are strong predictors of mortality in this very aged MA population. Both measures predict onset of disability, with the SPPB showing a somewhat stronger association than SW. These findings encourage further exploration into how SPPB and SW influence health outcomes among the very old.

#### **RACIAL AND ETHNIC DISPARITIES IN HEALTHCARE USE, DELAYED CARE, AND MANAGEMENT FOR DIABETES AMONG OLDER ADULTS IN CALIFORNIA**

K. Ford<sup>1</sup>, G. Kim<sup>1</sup>, D.A. Chiriboga<sup>2</sup>, D. Sorkin<sup>3</sup>, *1. University of Alabama, Tuscaloosa, Alabama, 2. University of South Florida, Tampa, Florida, 3. University of California, Irvine, Irvine, California*

This study examined racial and ethnic differences in healthcare use, delayed care, and management among diabetic elders in California. Data were drawn from the 2009 California Health Interview Survey (CHIS). Selected samples included 3,003 adults aged 60 and older with diabetes from five racial/ethnic groups: Whites ( $n = 2,153$ ), African Americans/Blacks ( $n = 213$ ), Latinos/Hispanics ( $n = 336$ ), Asians ( $n = 306$ ), and American Indians/Alaska Natives (AI/AN) ( $n = 59$ ). Descriptive statistics and logistic regression analyses were conducted using weighted data. Results from adjusted logistic regressions show that compared to Whites, African Americans were significantly less likely to see a doctor (AOR=0.45) and have a usual source of care (AOR=0.36), and more likely to visit an ER for diabetes (AOR=3.91) and have a foot exam (AOR=1.75). Latinos were significantly less likely to take medicine to lower cholesterol (AOR=0.50) but more likely to test blood glucose regularly (AOR=3.69). Asians were significantly less likely than Whites to test blood glucose regularly (AOR=0.35) and have a foot exam (AOR=0.38). Compared to Whites, AI/ANs were significantly less likely to see a doctor (AOR=0.28), visit an ER (AOR=0.02), and take medicine to reduce heart attack risk (AOR=0.27), but more likely to use insulin or pills, or both (AOR=3.41). The findings suggest areas that can be developed for racial/ethnic-specific interventions for managing

diabetes, which may eventually help reduce existing racial/ethnic disparities in geriatric populations.

#### **RACIAL/ETHNIC DIFFERENCES IN THE ASSOCIATION BETWEEN SYMPTOMS OF DEPRESSION AND SELF-RATED MENTAL HEALTH AMONG OLDER ADULTS**

Y. Jang<sup>1</sup>, N. Park<sup>1</sup>, S. Kang<sup>2</sup>, N.G. Choi<sup>3</sup>, D.A. Chiriboga<sup>1</sup>, *1. University of South Florida, Tampa, Florida, 2. Binghamton University State University of New York, Binghamton, New York, 3. University of Texas at Austin, Austin, Texas*

The study examined racial/ethnic differences in the association between symptoms of depression and self-rated mental health among older adults. Data came from the first wave of the National Social Life, Health, and Aging Project (NSHAP), a population-based study of non-institutionalized older adults aged 57 to 85. The sample consisted of non-Hispanic Whites (n = 2,110), Blacks (n = 509), and Hispanics (n = 304). The association between symptoms of depression and self-rated mental health was weaker among minority groups than that among non-Hispanic Whites. Tests of interaction effects showed that the predictability of depressive symptoms to self-rated mental health was substantially weakened among Blacks of advanced ages and Hispanics with multiple chronic conditions. The study explored potential sources of racial/ethnic differences in subjective reports of mental health and called attention to older minorities with advanced ages and comorbid conditions in mental health services and interventions.

#### **LATINO/A SURVEY: ATTITUDES TOWARD ELDERLY CARE AND FAMILIARITY WITH AVAILABLE SERVICES**

G.Q. Zhan, M. Chung, *psychology, Kennesaw State University, Kennesaw, Georgia*

Research suggests Latino/as tend to underutilize elderly care services compared to Whites or African Americans (Wallace & Lew-Ting, 1992). This poster presents a research project examining elderly care within Latino community in the suburbs of Atlanta. One hundred thirty-five participants filled out a questionnaire (English and Spanish versions available) on attitudes toward elderly care, preference for types of care, and their knowledge of services available. Results indicate that a majority of the respondents (63%) preferred family care to institutional care, and only 18% would consider any outside home care facilities. The main two reasons cited for family care preference were cultural and traditional factors such as filial piety and perceived high cost. About 50% of the respondents were not knowledgeable at all with available care services such as nursing homes, assisted living facilities or hospices, and only 11% were familiar with these facilities. Results also suggest that while educational level is positively related to better knowledge of care services available, it is however not related to care preferences. Further, the length of residency in the US or English proficiency is not correlated with their familiarity with the care services available or their care preferences. After reading the poster, the participants will have a better understanding of Latino community's preferences and needs. The findings may have implications for government and NGOs in designing elderly care programs that better serve the Latino population by incorporating their cultural tradition into the care plan; offering more financial help; and improving their knowledge of what's available.

#### **CULTURALLY COMPETENT SCHOLARSHIP: METHODOLOGICAL ISSUES IN FIELD RESEARCH OF MINORITY ELDERS**

N. Chu, *Texas Christian University, Fort Worth, Texas*

With an increase in the diversity of aging population in the 21st century and increase in inequity of access to health care, there is an urgency to develop culturally competent care. One approach to achieve a deeper and insightful understanding of the diversity in aging is not limit knowledge of aging and health care to treating culture as a label

or most often as a proxy for populations, rituals, race and/or color. To ensure rigor and credibility in culturally competent scholarship, Meleis (1996) proposed these eight criteria: contextuality, relevance, communication styles, awareness of identity and power differentials, disclosure, reciprocation, empowerment, and time. A secondary analysis was conducted on interview data from a previous ethnographic study of 2008. The purposive sample N=57 (27 elders, 6 providers, 13 community leaders and 11 adults) was recruited from a Vietnamese community. The data were analyzed using NVivo 8 software and Meleis' eight criteria as a framework. The data revealed three criteria as methodological issues that are challenging to the field researcher: disclosure, empowerment and time. The findings suggest Meleis' criteria may be a useful tool to measure the quality of culturally competent research; it can enhance a deeper understanding of the diversity in aging and capture the elder's experience. Implications for future research in aging include the application of Meleis' criteria across various care settings and cultures in care interventions to ultimately improve care delivery and services.

#### **PREDICTING SURVIVAL IN OLDER MEXICAN AMERICANS OVER 17 YEARS**

K. Markides, *University of Texas Medical Branch, Galveston, Texas*

We employ data from the on-going Hispanic Established Population for the epidemiological Study of the Elderly (Hispanic EPESE) in order to identify predictors of survival over 17 years in Mexican Americans aged 65 to 80 at the study's baseline in 1993-1994. Of the 2,184 subjects with complete information at baseline 633 were determined to still be living 17 years later during 2010-2011 when they were aged 82 and over while 1,551 were determined to have been deceased. A number of demographic, psychosocial and health-related predictors at baseline were examined using Survival Analysis. The analysis excluded subjects who were determined to have died within two years of the baseline. As expected age and female gender were strong predictors. Other strong predictors included low depressive symptoms, not self-reporting diabetes, reporting no problems with IADL's, scoring high on a lower body function performance test, and having a Body Mass Index of 30 to 35. While overweight and moderate obesity have been associated with lower mortality in older people in general our data on older Mexican Americans suggest that obesity appears to me more protective than in other populations over a long period and it is protective when compared to a BMI of 22 to 25 which is often considered ideal weight. Further research examining the influence of other measures of weight on mortality in older Mexican Americans is needed.

#### **ISSES IN MIXING QUALITATIVE AND QUANTITATIVE APPROACHES TO RESEARCH WITH RACIAL/ETHNIC ELDERS**

C. Browne, K.L. Braun, N. Mokuau, L.S. Kaopua, *University of Hawaii School of Social Work, Honolulu, Hawaii*

Mixed method design often involves some combination of qualitative and quantitative approaches to research. Mixed method designs can be especially useful with racial/ethnic elder populations as we strive to better identify and understand the serious social and health disparities some groups continue to face. Researchers use mixed methods to enrich the understanding of an experience or issue through the confirmation of conclusions, the extension of knowledge, or by initiating new ways of thinking about the subject. This poster will present a research model developed by Ha Kupuna, National Resource Center for Native Hawaiian Elders at the University of Hawaii, that used a mixed method design to identify and understand the health and long-term care needs of a racial/ethnic elder population—Native Hawaiians. The rationale for this study design is presented, along with a number of definitional, paradigmatic and methodological issues. The research model is then described along with the advantages and disadvantages of study approaches—systematic literature review, key informant, focus group,

and census data analysis. Methods used for the integration of data, along with key results, are presented.

## SESSION 2065 (POSTER)

### NEUROSCIENCE & NEURODEGENERATIVE CONDITIONS

#### PRELIMINARY EVIDENCE FOR MALADAPTIVE CORTISOL STRESS RESPONSE PATTERNS IN POSTMENOPAUSAL WOMEN

N. Rohleder, X. Chen, D. Gianferante, L. Hanlin, A. Fiksdal, M.V. Thoma, *Psychology, Brandeis University, Waltham, Massachusetts*

**Objective:** Aging is associated with physiological alterations, and related with increased morbidity. The aging process is becoming better understood at the molecular and cellular level, but less is known about the causes of interindividual differences. Differences in how individuals respond physiologically to stressful events in their lives might explain some of the variation. Maladaptive acute stress response patterns might predispose to physiological damage and contribute to disease, but evidence on stress response patterns in older adults is still scarce. **Methods:** A sample of  $n=26$  young (mean age 22.0 yrs.;  $SD=4.5$ ), and  $n=23$  older adults (57.4 yrs.;  $SD=5.8$ ) of both genders were exposed to repeated acute stress (Trier Social Stress Test). HPA axis activation and habituation was assessed by measuring cortisol in repeated saliva samples taken both days. **Results:** As expected, female participants of both age groups showed significantly lower HPA axis responses to acute stress than males ( $F=3.23$ ;  $p=0.042$ ). While the overall group showed only a trend towards lower cortisol responses to the second TSST ( $F=2.26$ ;  $p=0.095$ ), habituation was strong in the younger group ( $F=3.70$ ;  $p=0.02$ ), but absent in the older group ( $F=0.99$ ;  $p=0.39$ ). Furthermore, in the older group, a marginally significant interaction of gender with repeated stress exposure ( $F=3.49$ ;  $p=0.066$ ) was found: Older men showed habituation, while in postmenopausal women, HPA axis responses, although smaller than those of older men, showed signs of sensitization. **Conclusions:** Although preliminary, the current data allow the cautious conclusion that older age is associated with changes in acute stress response patterns. Particularly in older, postmenopausal women, sensitization of HPA axis responses to repeated stress might be a sign of development of a maladaptive pattern. Data on peripheral inflammation will be presented at the conference and will allow conclusions about the potential health effect of the observed HPA axis response pattern.

#### DIFFERENCES IN OERP ACTIVITY DURING RETRIEVAL USING ODORS VERSUS RETRIEVAL USING ODOR LABELS AS CUES IN AN ODOR MEMORY TASK

L. Graves<sup>1</sup>, M. Cervantez<sup>1</sup>, A. Green<sup>2</sup>, C. Morgan<sup>1</sup>, C. Murphy<sup>1,2</sup>, *1. San Diego State University, San Diego, California, 2. University of California, San Diego, La Jolla, California*

Alzheimer's disease is a debilitating neurodegenerative disease associated with cognitive decline that is more severe than that of normal aging. Evidence suggests that individuals who are positive for the ApoE  $\epsilon 4$  allele are at higher risk for developing the disease. Studies have also shown that ApoE  $\epsilon 4$  is linked to olfactory decline. Olfactory event-related potentials (OERP) have been used to analyze performance in tasks of odor memory. Their high temporal resolution makes them a valuable resource for understanding the neural correlates of olfactory processing and functioning. This study investigated the effects of age, ApoE  $\epsilon 4$  status, electrode site, and response type on OERP latency and amplitude during retrieval in an odor memory task. Participants were divided into three equal age groups: younger, middle, and older. Each age group was matched on gender and ApoE  $\epsilon 4$  status. The study design was composed of separate parallel visual and olfactory components. The visual component was used as a comparison modality. Pictures were presented on a computer monitor and

odors were presented with a computer-controlled olfactometer. Participants were informed during encoding that this was a task of odor memory. Results indicated differences in OERP activity between the two retrieval sessions, suggesting that different processes occur in the retrieval of information about odors, depending on the nature of the cue.

#### CLASSIFICATION OF MORNING CORTISOL RESPONDERS AND NON-RESPONDERS: DO PREDICTORS VARY WITH AGE?

E. Bower<sup>1</sup>, C. Murphy<sup>1,2</sup>, *1. Psychology, San Diego State University, San Diego, California, 2. University of California San Diego, La Jolla, California*

The Cortisol Awakening Response (CAR) is a sharp increase in cortisol occurring within 30-45 minutes after awakening in many, but not all individuals. It is not known why some people do not have a CAR, although factors such as depression and chronic pain may blunt the size of the response. However these factors do not necessarily correlate with CAR non-response, and healthy adults can be non-responders. There is also discrepancy in the literature as to whether time of awakening and sleep duration affect the CAR. Given that sleep patterns change with age, it is possible that factors affecting CAR may also change with age. The current study analyzed CAR response patterns (i.e. responder vs. non-responder) in older (60-85 years) and younger (18-26 years) adults using discriminant analyses to determine if age, time of awakening, and sleep duration could predict CAR responders. Non-responders were defined as those who had less than a .09  $\mu\text{g}/\text{dL}$  change in cortisol between awakening and 30 minutes post-awakening. Time of awakening and sleep duration were significant predictors of CAR responders in older, but not younger adults. Responders slept fewer hours and woke up earlier than older adults who did not have a CAR response. Age was not a significant predictor within the young or the older adult groups. These findings suggest that the effect of sleep duration and time of awakening on the morning cortisol response may be age-dependent. Longitudinal studies are needed to determine if CAR response changes with age. Supported by AG04085-25 from NIA.

#### WORK COMPLEXITY, WORK-RELATED PHYSICAL DEMANDS, AND RISK OF PARKINSON'S DISEASE

E. Valdes<sup>1</sup>, R. Andel<sup>1</sup>, J.D. Edwards<sup>1</sup>, A.L. Feldman<sup>2</sup>, K. Wirdefeldt<sup>2</sup>, *1. University of South Florida, Tampa, Florida, 2. Karolinska Institutet, Stockholm, Sweden*

**Objective:** The etiology of Parkinson's disease (PD) remains unclear. Environmental factors such as occupation are of interest. This study investigated two aspects of occupation—complexity (with data, people, and things) and physical demands—in relation to risk of PD. **Methods:** The study population included individuals from the Swedish Twin Registry born between 1886 and 1958. PD diagnoses were derived from a combination of clinical work-ups and health register data. Occupational complexity scores were based on self-reported occupation. As previous studies have shown smoking to be inversely correlated with risk of PD, it was also included in the analyses and we accounted for confounding by age, gender, and smoking. **Results:** Results show that high complexity of work with people was associated with increased risk of PD compared to low complexity of work with people ( $p<.05$ ). Occupational complexity with data and things, and work-related physical demands were not significantly related to risk of PD ( $p's>.05$ ). In stratified analyses, complexity with people conferred an increased risk of PD in non-smokers ( $p<.001$ ) but not in smokers ( $p>.05$ ). **Conclusions:** High complexity of work with people may increase risk of PD, particularly in non-smokers. The underlying mechanisms of this finding are unclear, but familial traits such as those contributing to occupational selection or stress are potential candidates.

## **GROWING HEALTH DISPARITIES FOR PERSONS WHO ARE AGING WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES: THE SOCIAL WORK LINCHPIN**

J. Dauenhauer<sup>1</sup>, L. Robinson<sup>2</sup>, K. Bishop<sup>2</sup>, J. Baxter<sup>3</sup>, *1. College at Brockport, Brockport, New York, 2. University of Rochester Medical Center, Rochester, New York, 3. Easter Seals, Rochester, New York*

Over 640,000 adults with intellectual and developmental disabilities (IDD) over the age of 60 were identified in the United States in 2000; this number is expected to double by 2030. The increase in life expectancy can be attributed to improved medical knowledge, access to health care, deinstitutionalization, and better living conditions. Increased longevity has presented challenges for service providers who work with people with IDD and their families. Health care practitioners and community services providers often do not have sufficient knowledge and skills to provide appropriate interventions for this unique aging population due to lack of awareness, research, and formal education within health professions training programs. Social workers play an important role in meeting the needs of those who are aging with IDD. Specifically, social workers provide assessment, intervention, and advocacy for people with IDD and their families. Although these basic skills are taught within both undergraduate and graduate social work programs, formal education specifically targeting the unique needs of people who are aging with IDD is limited. Therefore, finding social workers adept, or even familiar, in aging and IDD is rare. Thus, the purpose of this presentation is to bring attention to the limited presence of social workers in the IDD field, the lack of educational opportunities to support the current and future social workers in this field, and the impact of these trends on health disparities experienced by people who are aging with IDD.

## **SESSION 2070 (POSTER)**

### **PALLIATIVE CARE**

#### **RACIAL DISPARITIES IN END-OF-LIFE PLANNING AND SERVICES FOR DECEASED NURSING HOME RESIDENTS**

K.A. Frahm, L.M. Brown, K. Hyer, *Aging and Mental Health Disparities, University of South Florida, Tampa, Florida*

Using the 2007 Minimum Data Set of long-stay resident assessment data (N=183,841), this study examined the relationship between race and advance directives, hospice services, and hospitalization at the end of life. Linear regression models were fitted to each dependent variable with the main predictor of race. Across different types of advance directives, Black, Hispanic, and Asian nursing home residents were significantly less likely to have recorded documentation of these compared with White residents ( $p<.0001$ ). Asian residents were also significantly less likely to receive hospice ( $p<.0001$ ), while Hispanic residents were more likely to receive services ( $p<.0001$ ). All racial groups were more likely to experience hospitalization within 90 days prior to death, regardless of documentation of a do not hospitalize order ( $p<.0001$ ). As nursing home residents become more diverse, recognizing differences in end-of-life planning and treatment preferences, as well as implementing programs tailored for specific groups, will continue to increase in importance.

#### **DELIRIUM: ASSESSMENT AND MANAGEMENT FOR OPTIMAL END OF LIFE IN AN IN-PATIENT HOSPICE SETTING**

C. Luz, M. Ensberg, S. Zhou, *Family Medicine, Michigan State University, East Lansing, Michigan*

Evidence exists that symptoms of delirium are not well understood in nursing homes and hospice settings. It is frequently misdiagnosed and inappropriately treated. Symptoms are seldom differentiated from dementia or depression. Rather, they may all be grouped under headings such as "terminal restlessness". Pharmacotherapy is the most common response to a range of symptoms including agitation, anxiety, sleep

disruption, emotional lability, and hyperactivity. This represents a critical gap in best practices since delirium and depression are distinctly different from dementia in that they are potentially reversible. Appropriate assessment and management is essential as delirium disrupts quality of life and can be stressful for staff. In 2011, the Geriatric Education Center of Michigan developed a training program for health teams working with older adults at end of life who are exhibiting symptoms of delirium, depression and dementia. It was presented to all staff of a mid-Michigan in-patient hospice unit and consisted of a 2 hour didactic in-service, and weekly team meetings for applied learning using actual case reviews. Content focused on understanding delirium; use of an evidence-based screening tool; differentiating delirium from dementia; non-pharmaceutical interventions, the family role; and effective interdisciplinary care planning. 45 staff members representing 6 disciplines participated with immediate positive outcomes. Pre-posttests indicated significant knowledge gain; team meeting notes and care plans indicated translation of knowledge into clinical practice; staff expressed improved satisfaction; and organizational changes were made including determining family goals upon admission. Plans are underway for additional evaluation and expanding the program to other settings.

#### **SAFE PASSAGE: DISCHARGE PLANNING FOR HOSPITALIZED PALLIATIVE CARE PATIENTS**

B. Powers, S.A. Norton, L. Hogan, M. Buckley, M. Schmitt, M. Metzger, E. Fairbanks, T. Quill, *Rochester, New York*

Customizing discharge planning for palliative care patients and their families is one function of hospital-based palliative care teams (PCTs) that specialize in pain and symptom management, providing emotional support, clarifying goals of care, assisting with difficult medical decisions, and coordinating care for patients and their primary caregivers. In an NIH funded 5-year ethnographic study of the integration of PCT services within the culture of a large academic medical center, data from months of participant-observation provided contextual background for 28 multifaceted cases. On analysis, 64% (18/28) of the cases illustrated complexities involved in planning for the safe hospital discharge of medically fragile, mostly older, adults in different stages of advanced disease progression. Investigation of each case included multiple in-depth interviews with patients, families, and members of both PCT and referring medical teams. Findings: Medical caregiving capacities of patients' potential discharge destinations (home, rehabilitation facility, skilled nursing home, or hospice) were not the only factors considered in efforts to ensure their safe passage between care settings. Patients' and families' discharge decisions also involved practical, psychosocial, spiritual, and existential components associated with their values and beliefs about qualities of living and dying. Conclusion: Thematic analysis revealed that the unique contribution of PCT involvement in the discharge planning process was in creating opportunities for patients and families to make informed, active choices about how and where they preferred to live in the time remaining to them as well as how and where they wished to die.

#### **PAIN AMONG HOSPICE ADMISSIONS AND RECRUITMENT INTO A GROUP RANDOMIZED TRIAL**

J.G. Cagle<sup>1,2</sup>, S. Zimmerman<sup>2</sup>, L.W. Cohen<sup>2</sup>, D.A. Reed<sup>2</sup>, *1. University of California, San Francisco, San Francisco, California, 2. University of North Carolina, Chapel Hill, North Carolina*

A major challenge to conducting hospice research is the recruitment of family to participate given how overwhelmed families feel at the time of hospice enrollment. As a component of an AHRQ randomized trial to reduce barriers to pain management, family caregivers were recruited from four North Carolina hospice agencies to participate in telephone interviews. Families were screened by hospice staff during admission for the following eligibility criteria: patient 18 years of age or older; patient has pain or is taking pain medications; patient resides

in a private residence; presence of a family caregiver; and fluent in English. Recruitment began Fall of 2011. As of Spring 2012, 375 families were screened for eligibility. Among those, 226 (60%) were identified as eligible, 135 (60%) of whom signed a HIPPA waiver with the agency to share the family's contact information with the project team. Among the 149 identified as ineligible, 126 (85%) did not have pain and were not taking pain medicines, 3 (2%) did not have a family caregiver, and 1 (1%) was not fluent in English. Among the families who agreed to be contacted by the project team, 100% participated in the project. Contrary to existing estimates, a large proportion of hospice patients do not have pain and do not take pain medicines. In terms of recruitment into research, the modest rate of signed waivers may be evidence of gate-keeping by hospice staff or suggest that alternate enrollment strategies should be considered.

### **WOODWORK EFFECT: WILL HOSPICE INPATIENT FACILITIES ENTICE PATIENTS OUT OF THEIR OWN HOMES?**

K. Chung, S.C. Burke, *Health Sciences, California State University, Northridge, Northridge, California*

A rising number of hospice agencies directly provide inpatient care within their own hospice facilities (HFs). Policy makers confronted with a huge increase in hospice expenses have expressed concerns about the "Woodwork effect" – will individuals who would have received hospice services in their private homes be able to elect placement in HFs because the option is available only through newly constructed HFs? Using data from the 2007 National Home and Hospice Care Survey, we assessed whether the "Woodwork effect" exists. First, we divided individuals who had been in hospitals prior to hospice care enrollment into two groups: 1) those who stayed in hospitals for hospice care until hospice care was terminated; 2) those who received hospice care at HFs. There were no statistically significant differences between the two groups with regard to diseases, length of stay, age, marital status, mobility, payment source, and whether they had a primary caregiver or not. In separate analyses, we divided individuals who began hospice care at home into four groups: 1) those who continued to stay at home until hospice care was terminated; 2) those transferred to HFs; 3) those transferred to hospitals; 4) those transferred to nursing homes. Compared with Home and Hospital groups, HF group was significantly more likely to be unmarried ( $p < 0.05$ ), have no primary caregiver ( $p < 0.01$ ), and be alone ( $p < 0.01$ ). Our findings suggest that HFs have more of a positive effect than the "Woodwork effect" by meeting the needs of people who cannot reside at home.

### **DOES OPERATING A HOSPICE FACILITY HELP THE HOSPICE AGENCY FINANCIALLY? IF SO, IN WHAT WAY?**

K. Chung, S. Petrosyan, *Health Sciences, California State University, Northridge, Northridge, California*

Hospice agencies are eager to increase the number of hospice facility (HF) beds and/or build HFs that cost hundreds of millions of dollars to construct. They push states by claiming that more HFs and/or more HF beds are the next best solution for terminally ill individuals who cannot reside at home, raising an increasingly important policy question to be addressed by policy makers who have been confronted with a huge rise in Medicare and Medicaid Hospice expenses in recent years. Using hospice data available from the California Office of Statewide Health Planning and Development, we aimed to explain the notable popularity of HFs among hospice agencies. Compared to agencies without HFs, those with HFs reported higher mean revenues per patient and per patient-day (\$24,256 vs \$12,566 per patient; \$360 vs \$206 per patient-day). By comparison, there was little difference in operating costs between the two (\$12,324 vs \$11,582 per patient; \$196 vs \$193 per patient-day). Consequently, agencies with HFs showed greater financial performance (\$11,932 vs \$955 per person; \$164 vs \$13 per patient-day). This was largely due to disproportionately higher rates of higher

revenue-generating levels of care delivered by agencies with HFs; that is, routine home care, the lowest reimbursement level, accounted for 94.5 percent of total patient days among agencies with HFs, compared to 98.4 percent reported by agencies without HFs. Further research is needed to determine whether such a disproportionately higher rate of more expensive levels of care observed among agencies with HFs is justifiable.

## **SESSION 2075 (POSTER)**

### **PHYSICAL ACTIVITY & HEALTH PROMOTION**

#### **KEY INDICATORS OF HEALTH AND WELL-BEING FOR OLDER ADULTS: THE STATE OF AGING AND HEALTH IN AMERICA REPORT**

L. Anderson, *Centers for Disease Control and Prevention, Atlanta, Georgia*

In public health the saying "what gets measured gets done" is frequently used to remind us that data is the foundation which guides our work. In the last 5 years there has been a shift in the leading causes of morbidity and mortality among adults age 65 and older. To ensure that essential health data are available about older adults in an easily-accessible format, CDC and its partners publish The State of Aging and Health in America report series and interactive Website ([www.cdc.gov/aging](http://www.cdc.gov/aging)). This presentation will describe the 15 key indicators of older adult health and well-being included in the newly released 2012 report, which focus on four areas: health status (physically unhealthy days, frequent mental distress, disability and oral health), health risk behaviors (physical inactivity, eating fruits and vegetables, obesity, and smoking), preventive care and screening (influenza and pneumococcal vaccination, colorectal cancer screening, mammography, taking medication for high blood pressure, and up-to-date on selected screenings), and injury (falls with injuries). Data are available at the national, state, regional, and MMSA levels to support grant writing, strategic priority setting, program planning, and tracking against Healthy People 2020 targets. The presentation will also highlight the report's Calls to Action, which provide evidence-based strategies, tools, and information about older adult health, identify gaps in knowledge, and recommend individual, local, state, or national level actions. The Calls to Action can often serve as catalysts for identifying future research projects and new opportunities for public health response.

#### **FACTORS RELATED TO YOUNG AND OLDER WOMEN'S PHYSICAL AND MENTAL HEALTH**

V. Cicirelli, *Psychological Sciences, Purdue University, West Lafayette, Indiana*

Increased demands on individuals in late adolescence and old age have possible negative effects on health. Bowlby's attachment theory holds that distress related to illness activates individuals' attachment system. Employing Bartholomew's attachment dimensions, those with lower anxiety (more positive view of self) and lower avoidance (more positive view of others) are hypothesized to have better health. Environmental factors (social support, stress) and factors of well being are also hypothesized to be related to health, with a stronger relationship among the old than the young. Participants: 100 older women (age = 75.0) in independent living facilities and 251 college women (age 18.9) enrolled in an introductory course. Measures: physical and mental health, attachment anxiety and avoidance, stress, social support, self esteem, and depression. Using multiple regression, attachment dimensions were entered in model one, environmental variables in model two, well being measures in model three. Hypothesized predictors explained 8.6% of physical health variance among the young, and 20.8% among the old ( $p < .01$ ). Significant predictors for the young: anxiety, social support, and self esteem; for the old: anxiety and depression. The predictors explained



39.9% of mental health variance among the young, and 47.4% among the old ( $p < .01$ ) Significant predictors for the young: anxiety, stress, social support, self esteem, and depression; for the old: anxiety, social support, self esteem, and depression. Notably, only the attachment anxiety dimension predicted health. Also, stress predicted mental health only among the young. Implications for theory and practice are discussed.

#### **COMPARATIVE EFFECTIVENESS OF CUSTOMARY FIT AND STRONG! VS. FIT AND STRONG! PLUS**

S.L. Hughes, M. Fitzgibbon, P. Desai, R. Smith-Ray, *Center for Research on Health and Aging, Univ Illinois, Chicago, Illinois*

Osteoarthritis (OA), particularly in the lower extremity (LE) joints, is a major cause of disability among older adults (Dunlop et al., 1998). Fit and Strong! is an evidence-based program that targets older adults with LE OA and has demonstrated multiple significant benefits on participants out to 18 months (Hughes et al., 2010). However, the program does not address diet/ weight management issues. This is an important omission because obesity is strongly associated with both the incidence and exacerbation of knee OA (Felson et al., 1992; Messier, 1994). To address this issue we have developed Fit and Strong! Plus—an enhanced version of Fit and Strong! that targets overweight/obese persons with OA and addresses physical activity (PA) and diet/ weight management. We have been funded by NIA to compare the effectiveness of customary Fit and Strong! to Fit and Strong! Plus over 24 months using an RCT with 400 participants at three community sites. Both groups will receive tapered telephone reinforcement to support behavior change maintenance. We will also examine health care use before and after the interventions. We hypothesize that Fit and Strong! Plus participants will show differential, significant improvements in diet behaviors at 2 months, followed by weight loss  $\geq 5\%$  at 6 months that will be maintained at 24 months. Fit and Strong! Plus participants will also show differential statistically significant improvements in PA maintenance, LE pain, stiffness, and function, and depression and anxiety at all posttests. This presentation will review study design, pilot findings and implementation issues.

#### **SELF-REPORTED HEALTH BIAS WITHIN AN EVERYDAY CONTEXT: CONSIDERING AFFECTIVE VALENCE AND AROUSAL**

B. Whitehead, C. Bergeman, *University of Notre Dame, Notre Dame, Indiana*

Objective. The present study addresses current gaps in the affect-related health bias literature by a) investigating health bias while considering both valence and arousal components of positive and negative affect (PA/NA); b) establishing the presence of and variability in affective health bias on the daily level; and c) exploring daily health bias in a non-clinical, community sample of adults. Methods. Participants were 585 midlife and older adults (aged 33-92 years;  $M=63.4$ ) who participated in the 56-day daily diary burst in Year 3 of the Notre Dame Study of Health and Well-Being. Measures included a daily health events checklist, a daily rating of health satisfaction, and a 4 daily affect scales (low-arousal NA, high-arousal NA, low-arousal PA, high-arousal PA). Health bias was conceptualized as present when the effect of a given day's health events on that day's health satisfaction was significantly moderated by that day's affect. Multilevel modeling was used to investigate fixed and random within-day effects. Results. Significant interaction effects indicated the presence of a general health bias on the daily level: positively-valenced affect buffered the negative impact of health events on health satisfaction, whereas negatively-valenced affect exacerbated this association. Both valence and arousal components of affect demonstrated unique effects, and all effects had significant intraindividual variability across days. Conclusions. The results indi-

cate that both valence and arousal components of affect are important to consider when investigating health bias, and that these health bias effects operate to some degree within an everyday, non-clinical context for the general population of adults.

#### **PROMOTING HEALTHY AGING THROUGH GOOD NUTRITION: AN EDUCATIONAL EVALUATION OF NUTRITION WORKSHOP AMONG U.S. CHINESE OLDER ADULTS**

Y. Li<sup>1</sup>, M.A. Simon<sup>3</sup>, E. Wong<sup>2</sup>, B. Wong<sup>2</sup>, E. Chang<sup>1</sup>, F. Huang<sup>1</sup>, X. Dong<sup>1</sup>, *1. Rush Institute for Healthy Aging, Chicago, Illinois, 2. Chinese American Service League, Chicago, Illinois, 3. Northwestern University, Chicago, Illinois*

Background: Promoting active healthy aging through good nutrition is critical, yet little is known on the knowledge base of nutrition among U.S. Chinese older adults, whose needs are often under-addressed due to significant cultural and linguistic barriers. Our study aims to create a culturally-appropriate educational workshop on nutrition and evaluate its effectiveness. Methods: Community-based participatory research approach was utilized to partner with Chicago Chinese community. Participants received a one-hour didactic workshop on nutrition, diet, and food guide pyramids for older adults. The workshop was conducted in English, Cantonese, and Mandarin. We performed a 15-question pre- and post- workshop test, and follow-up test in 3 weeks' time. SPSS analysis was performed. Results: The test scores are based on the accuracy of each question from all participants. Among 87 participants, 65% were female. Their knowledge increased from 28% in pre-test, to 34% of post-test, to 36% in follow-up test. "The best source of Vitamin E" had the lowest accuracy score in pre-test (2%) whereas "Older adult tend to lose muscle mass" had the highest (84%). "Medications can reduce appetite" received the highest accuracy rate, from 44% in pre-test to 66% in post test, indicating a 22% increase after the session. With respect to gender, no significant differences in score was found between genders ( $p=0.593$ ). Conclusion: Our study call for culturally and linguistically appropriate educational workshops in the minority aging community. Implications for devising future health educational programs on nutrition and health will be discussed based on these findings.

#### **VISION COACH: NORMATIVE DATA FOR HEALTHY YOUNGER AND OLDER ADULTS**

J.O. Brooks<sup>1,2</sup>, N. Drouin<sup>3</sup>, M. Mossey<sup>1</sup>, M. Collins<sup>1</sup>, M.N. Youssef<sup>3</sup>, J. Mckee<sup>3</sup>, *1. Clemson University, Greenville, South Carolina, 2. Greenville Hospital System University Medical Center, Greenville, South Carolina, 3. Roger C. Peace Rehabilitation Hospital, Greenville, South Carolina*

The VISION COACH is an interactive light board that offers no "cues" as to where the lights will appear and is being utilized as a therapeutic training tool. The board attaches to a wall-mounted slider that is counter balanced for ease of positioning height (floor to ceiling). Over 250 younger adults (18 to 29 years) and older adults (50+ years) completed a task where 120 lights are presented in random patterns across the 50" by 34" surface. The volunteer reacts to the lights as they appear in different patterns by depressing the light(s) as quickly as it appears. Participants completed the task a total of six times to identify peak performance and possible fatigue effects, thus allowing therapists to determine the number of trials needed for a variety of clinical applications. Age and gender norms will be reported, allowing clinicians to evaluate patients and develop treatment plans. The current study sought to collect reaction time data from healthy individuals, permitting future studies to compare these data with clinical populations. Reports for therapists and patients have also been developed and will be discussed.

## GENETIC AND ENVIRONMENTAL INFLUENCES ON TRAJECTORIES OF CHANGE IN MOTOR FUNCTIONING IN LATE ADULTHOOD

D. Finkel<sup>1</sup>, M. Ernsth-Bravell<sup>2</sup>, 1. *School of Social Sciences, Indiana University Southeast, New Albany, Indiana*, 2. *Institute of Gerontology, Jonkoping, Sweden*

Maintenance of basic motor functioning is both an indicator of general physical functioning and contributes to quality of life. It is important, therefore, to determine the extent to which genetic and environmental factors contribute to individual differences in motor functioning in order to support more effective interventions. Twenty different assessments of motor functioning have been collected as part of the longitudinal Swedish Adoption/Twin Study of Aging. Data were available from 859 twins ranging in age from 50 to 88 years at the first measurement wave. Participants completed up to six assessments covering a 19-year period. Given the skew evident in motor functioning (most individuals perform well into their mid60s), performance on the 20 motor functioning tasks was assessed as without difficulty, with difficulty, or impossible. Factor analysis was used to create 3 motor factors: balance, flexibility, and fine motor skills. Latent growth curve analysis demonstrates an accelerating increase in difficulty in mean functioning in these 3 domains beginning at age 60; individual differences (variability) also increase exponentially after age 60. Quantitative genetic analyses demonstrated that genetic variance in motor functioning remains constant across the adult lifespan; increases in variance are attributed entirely to increasing environmental variance. It is important to note that although idiosyncratic environmental influences account for most of this increase, correlated and shared rearing environmental effects also play a role. Thus, both micro-environmental (individual) and macro-environmental (family and cultural) effects play a role in maintaining motor functioning in late adulthood.

## ASSESSING BEHAVIORAL CHANGES AMONG OLDER PARTICIPANTS IN THE GROUP-BASED WALKING PROGRAM

C. Ura, F. Miyamae, M. Sugiyama, N. Kojima, R. Hirayama, S. Awata, R. Takahashi, *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

We reported on the effect of our group-based walking program on the mental, and performance status of older adults. At the same time, it also is important to assess whether our program is effective in helping older adults build a walking habit. DESIGN: Participants were 127 community dwellers aged 65-79 years and aware of cognitive decline but not diagnosed with dementia. Our program was designed to encourage participants to build a walking habit through group activities; participants took a walk together weekly over the course of 12 weeks. To examine the effect of our program on participants' behavior, we focused on (a) participants' average numbers of daily steps and (b) their attitudes associated with behavioral changes such as outcome expectancy, self-efficacy, and collective efficacy. RESULTS: The participation rate throughout program was 86.9%. A significant increase was found in participants' average numbers of daily steps before and after their participation. In addition, the majority of participants gave a higher score to almost all items regarding outcome expectancy, self-efficacy, and collective efficacy. Furthermore, there was a difference by gender and cognitive functions in how much participants believe they can continue to record the number of their daily steps (i.e., self-efficacy in keeping recording); in average score on this aspect of self-efficacy, men were higher than women, and those with a lower score on MMSE were higher than their higher-score counterparts. CONCLUSION: Analyses suggest that our group-based walking program is effective in helping older adults build a walking habit in community settings.

## SOCIAL ECOLOGICAL MODEL OF PHYSICAL ACTIVITY AMONG MIDDLE- AND OLDER-AGE ADULTS IN INDIA

S. Ghosh<sup>1</sup>, B.D. Capistrant<sup>2</sup>, 1. *Brandeis University, Waltham, Massachusetts*, 2. *Harvard University, Cambridge, Massachusetts*

Background: India's population is aging rapidly and simultaneously undergoing an epidemiologic transition partially due to an increase in sedentary behaviors. Yet little is known about what factors influence physical activity among Indian adults. We use Bronfenbrenner's social ecological model to explore how factors at multiple levels of influence are associated with physical activity among Indian middle and older aged adults. Methods: We use cross-sectional data from the Longitudinal Aging Study in India, the first nationally representative sample of 1683 mid-life and older Indian adults, collected in 2010. We use forward selection logistic regression models to determine significant predictors of any self-reported vigorous (e.g. jogging, swimming) and moderate physical activity (e.g., stretching, simple household tasks). Predictors include individual-level factors (demographics and health); family level factors; social factors; and neighborhood factors. Models adjust for complex sampling. Results: Approximately 55% of the total study population did not report regularly engaging in any form of exercise. Factors at multiple levels significantly predicted engaging in physical activity. Not having a work-inhibiting health limitation, not being socially isolated, living in rural areas, living in walkable neighborhoods and where public spaces are well maintained were associated with increased odds of both moderate and vigorous physical activities. Specifically, being a male increased the odds of vigorous physical activity by 59%. Conclusions: The majority of Indian adults in middle and older age are not physically active. Public health interventions to encourage physical activity in this population should consider operating at multiple levels of influence.

## GOOD LIFE FITNESS: SUCCESSFUL AGING AND OPTIMAL PHYSICAL AND MENTAL HEALTH IMPLICATIONS

W.B. Disch<sup>1</sup>, C. Andreoletti<sup>1</sup>, J. Norko<sup>2</sup>, E. Copes<sup>2</sup>, A. Longo<sup>1</sup>, 1. *Psychology, Central Connecticut State University, New Britain, Connecticut*, 2. *Central Connecticut Senior Health Services, Southington, Connecticut*

Healthy aging and increases in quality of life in older adults is highly related to the level of consistent physical activity. Our Good Life Fitness program includes community and residential older adults and consists of an initial physical assessment, participation in a variety of age-appropriate physical activities, as well as periodic physical assessment updates. Two primary areas of concern for this study are healthy weight and fall reduction/balance. Results from preliminary analyses of 117 older adults from 66 to 102 years in age show that participants in the normal Body Mass Index range (18.5 to 25) compared with overweight (26-30) and obese (31 and higher), had significantly lower diastolic blood pressure and significantly higher balance/flexibility. They also had the lowest systolic blood pressure and the highest reach (flexibility). Additional results from a program quality and needs assessment showed that participants feel that information and activities for arthritis and nutrition were most important. Results are discussed related to successful aging and optimizing the Good Life Fitness program for both mental and physical health implications.

## PROGRAM DEVELOPMENT FOR HEALTHY AGING

J. Lee<sup>1</sup>, E. Lee<sup>2</sup>, 1. *Boston College, Chestnut Hill, Massachusetts*, 2. *University of North Carolina Charlotte, Charlotte, North Carolina*

Helping the rapidly growing number of older adults in South Korea maintain good health is a major challenge. This community-based, health promotion intervention for older adults provided a comprehensive review of the effects of body-mind-spirit (BMS) interventions on health behaviors. The 12-week curriculum offered sessions on exercise, nutrition, sexuality, leisure, stress management, cognitive behavioral therapy, for-

giveness, and happiness. We developed facilitators' manual, which included didactic presentations, group discussion questions, in-class activities, and case examples. Seventy community-dwelling older adults were recruited at two senior centers and assigned to experimental and control groups. A mixed method quasi-experimental research design used pre-and-post-tests groups to examine the outcomes for experimental (n=32) and control groups (n=38). Using the grounded theory approach, qualitative feedback from older participants and facilitator' field notes were analyzed. Quantitative data indicated that participation in the BMS program contributed to better outcomes in the physical and spiritual dimensions of health. Overall, the content of the BMS intervention was favorably received by the participants, group facilitators, and the staff. Examination of field notes revealed that continued attendance allowed even less extroverted members to become involved more and develop a sense of belonging. Facilitators observed that female participants, who were quiet in the beginning, appeared to gain their voice and actively engage in discussions. Group cohesiveness and strong motivation brought by the older participants enriched the curriculum and active learning processes. Gerontologists should continue developing lifestyle intervention models to help older adults maintain a strong motivation and thirst for active learning.

## **SESSION 2080 (POSTER)**

### **PRODUCTIVE AGING**

#### **CHANGING VOLUNTEERING RATES AMONG AMERICANS 65+: AGE GROUP AND GENDER EFFECTS**

N. Danigelis<sup>2</sup>, B. McIntosh<sup>1</sup>, 1. *School of Business Administration, University of Vermont, Burlington, Vermont*, 2. *University of Vermont-Sociology Department, Burlington, Vermont*

Conventional wisdom posits and some previous research findings suggest that volunteering rates tend to decrease with age (Independent Sector, 2000; Prisuta, 2003; Zedlewski and Schaner, 2005; Morrow-Howell, 2010). Recent evidence, however, indicates that the opposite may be true among those 65+ (McIntosh and Danigelis, 2011). We compare data from the 2006-7 and 2010 Bureau of Labor Statistics' American Time Use Surveys (ATUS), which employ a day-after diary format to measure time use. In 2006-7, Ns = 1,826 for ages 65 – 74 and 1,654 for ages 75+. In 2010, the respective Ns are 1,123 and 927. Employing difference of proportions tests and logistic regressions, we compare the effect of age group and gender on overall volunteering, religious volunteering, and non-religious volunteering for each of the two time periods, controlling for race, self-described health, education, labor force status, household income, and presence or absence of a household partner. Results show an increase between 2006-7 and 2010 in the percent who volunteer – regardless of type of volunteering. When background is controlled, we find (1) significantly greater percentages volunteering in the 75+ age group for all volunteering and for religious volunteering in general and among women in both 2006-7 and 2010, and (2) for men no age group differences in 2006-7 but a significantly greater likelihood of the older age group volunteering in 2010. Results are discussed in terms of social cognition (Fiske and Taylor, 1991), well-being (Van Willigen, 2000) and types of leisure (Kelly, 1983; Henderson et al., 1989).

#### **FACTORS AFFECTING SHIFT TO AN INTERGENERATIONAL VOLUNTEER ACTIVITIES FROM HEALTH ENHANCEMENT PROGRAM**

H. Jung<sup>2,1</sup>, H. Suzuki<sup>1</sup>, T. Naganuma<sup>1</sup>, K. Nonaka<sup>1</sup>, H. Ohba<sup>1</sup>, M. Kuraoka<sup>1</sup>, Y. Kanbayashi<sup>2</sup>, Y. Fujiwara<sup>1</sup>, 1. *Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*, 2. *Chou university, Hachioji-shi, Tokyo, Japan*

It has been acknowledged that the development of social activities for the elderly in communities would solve various issues in modern

society. However, actual community involvement and activities for senior citizens are scarce. Although elderly people have a social participation activity intention, the intention is not satisfied and activity intention and an activity situation are not necessarily in agreement. This requires a strategy to promote more participation of seniors in community activities. The authors conducted a dementia prevention program, which was expected to be the health enhancement effect to seniors. In the program the seniors were trained to master the method of reading picture books. After the program, 26 participants wish intergenerational activities. The research examined various factors about participants in the volunteer group activity. The results suggested that those who do not have social obligations and are psychologically independent would continue to participate in the program group.

#### **WHO PARTICIPATES AND WHO BENEFITS? DETERMINANTS OF SOCIAL PARTICIPATION AND CHANGES IN HEALTH**

M. Voorpostel, *FORS, Lausanne, Switzerland*

There is strong evidence that social participation, such as volunteering, has beneficial effects on health of aging adults (e.g. Lum & Lightfoot, 2005) as well as on their social connectedness (Cornwell, Laumann & Schumm, 2008). Older adults' civic participation and social involvement are driven by needs and resources (Kohli, Hank & Künemund, 2009), which suggests that the differences in beneficial effects may result at least partly from selection bias (volunteer elite bias). Using longitudinal data from Switzerland (1999-2010), we examine (1) the extent to which volunteering, organizational membership and contacts in the community among adults aged 55+ are explained by the level of resources (e.g. education, work history, presence of a partner, initial health status), as well as (2) to what extent changes in these resources are associated with changes in participation over time (e.g. loss of a partner, retirement) and (3) how this relates to changes in health status. Results will give insight into which groups are most likely to have high levels of participation and to whom it is most beneficial. Preliminary cross-sectional results using only the 2004 data, confirm the importance of resources such as education, time availability (retirement), and the presence of a partner for being active as a volunteer, holding a membership to an organization and for the frequency of contact with friends and neighbors. It also shows a strong positive association between participation and health. Multilevel models for change will be estimated to assess the determinants of changes in these forms of social participation as well as to assess the relation to changes in health.

#### **EFFECT OF INTERGENERATIONAL PROGRAMS BETWEEN PRIMARY SCHOOL CHILDREN AND SENIOR VOLUNTEERS ON THE SOCIAL SUPPORT**

M. Yasunaga, Y. Murayama, R. Takeuchi, H. Ohba, K. Nonaka, M. Nishi, S. Shinkai, Y. Fujiwara, *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

Objective: This study examined effects of intergenerational programs between 6th grade primary school students and senior volunteers on social support, in Japan. The intergenerational program: The intergenerational programs by 31 senior volunteers (age= 68.7±5.9) were provided for 163 students of a primary school in Kawasaki City for 7 periods in 2011. In the programs, the senior volunteers instructed the students how to read picture books for other students. At the final period of the programs, the students actually read picture books for 1st grade students. The Method of the program evaluation: Baseline survey was conducted for 163 students who took the programs. The students were asked if they can expect support from parents, teachers, friends, and the senior volunteers, using the Scale of Expectancy of Social Support (SESS). We also asked Social Desirability Scale (SDSC) and gender. After the completion of 7 periods of the programs, we conducted a follow-up survey to ask same questions. We used analysis of covariance (repeated-measures design), and covariates were SDSC scores, class, and sex. Results:

The comparison of SES scores between the baseline and the follow-up surveys revealed that SES score from the senior volunteers was significantly improved ( $F(1,104) = 4.59, p=0.04$ ). However, there were no significant interactions between SES score and parents, teachers and friends. Conclusion: The intergenerational program can be effective for students by providing them with alternative support from parents, teachers, and friends.

#### DOING IT MY WAY

L. Skemp<sup>1,2</sup>, M. Maas<sup>2</sup>, M. Umbarger-Mackey<sup>2</sup>, 1. *School of Nursing, Our Lady of the Lake College, Baton Rouge*, 2. *University of Iowa, Iowa City, Iowa*

Society's ability to provide care for older persons is an increasing social and health care issue. Hotels, motels and single room occupancy residences have historically provided room, board and support services to elders and those with limited resources. There is limited research on elders who have sufficient resources choosing to live in a motel. This ethnographic community study research conducted over three years describes how a group of middle-income elders in one rural community in the Midwestern United States acquired the things they needed to live and experiences they desired to have in the community. Purpose: The purpose of this presentation is description of seven of the rural elders who were living in a motel setting as a strategy to acquire the "things" they needed to live. Design and Methods: Using a modified community study ethnographic design and the strategies of formal and informal interviews, participant observation and inductive comparative case study analysis, a description of why the middle-income elders decided to call the motel "home" and how this has facilitated their living in the community is discussed. Results: Four themes of "saving my energy for living", safety, connections and privacy, and the freedom to come and go capture the reasons for living at the motel in this rural setting. Implications: This work informs elder care theory and highlights mechanisms for the development of community capacity for healthy aging in one typical Midwestern rural setting.

#### THE EFFECTS OF VISITING THE LOCAL MORNING MARKET ON THE MENTAL HEALTH OF SENIOR CITIZENS IN JAPAN

K. Abe<sup>1</sup>, A. Ohashi<sup>2</sup>, C. Ohi<sup>2</sup>, K. Mizuno<sup>2</sup>, Y. Arai<sup>2</sup>, 1. *Department of Human Sciences, Kansai University of International Studies, Miki-shi, Hyogo, Japan*, 2. *Chubu Gakuin University, Seki, Gifu, Japan*

Objectives: Local morning markets in Gifu prefecture are famous and popular all over Japan. Most visitors are senior citizens but the number of younger visitors is increasing. In the morning markets, visitors enjoy communicating in a particular dialect and purchase fresh vegetables. Therefore, visiting the morning markets may have a positive effect on the health of senior citizens. There is, however, little evidence of this. In this study, we aim to examine the relationship between visiting the local morning markets and the mental health of senior citizens. Method: In this study, we used data from the 2010 Healthy Life Survey of Senior Citizens of Gujo city, Gifu prefecture. Gujo city is in the mountainous region of Tokai area (it is positioned roughly in the center of Japan). Out of the 3,483 people aged 65 years or above who reside in Gujo city, 3,424 were surveyed. The collection rate was 95.3% and the valid response rate was 95.1%. In this study, responses that had a large number of missing values were excluded from the analysis. The data of the remaining 1,995 people was used for the analysis. Results: The rate of visiting the morning markets was 38.3%. The rate of people who ship their crops to sellers at the morning market was 10.4%. In the data, 187 people resided alone and their visitation and shipping rates were 32.2% and 7.5%. Correlation and multiple regression analysis revealed a significant relationship between visiting the morning markets and mental health (Geriatric Depression Scale) of senior citizens. Discussion: The results of this study showed the relationship between visiting the morning markets and the mental health of senior citizens.

#### INTERGENERATIONAL SERVICE PROGRAM : CONSTRUCTION OF COMMUNITY SOCIAL SUPPORT NETWORK FOR THE ELDERLY

L. Liu, Y. Lin, *Tunghai University, Taichung City, Taiwan*

In modern society extended families are no longer the norm. It is not uncommon that older adults do not live together with their young family members in communities. The significantly increased older population living alone and lack of social support networks in communities have raised some fundamental issues, such as family relationships, generation stereotypes, and negative with low self-esteem of the elderly. Intergenerational programs served by community organizations give us the opportunity to bring old and young generations back together. In addition, it allows us to create a strong sense of community as a whole and to empower residents engaging in community revitalization. Using experimental design, this study presents how a nonprofit organization in mid-Taiwan collaborated with district schools as well as faculty members of a university to develop an intergenerational service program with serious activities, including: (1) health and mental activation activities; (2) life experiences learning; (3) community network construction; and (4) Humanities Tea Ceremony. The paper shows how the intergenerational program has improved connections between generations and changed the stereotypes of young generations toward old population in communities. In addition, it made community residents began to care about senior citizens and developed the social support network for the elderly in their neighborhoods. It has also enhanced the self-esteem and self-respect of the elderly.

#### MAKING A "SOUL CHOICE:" VOLUNTEERING AND RELIGIOSITY IN ELDER NATIVE MEXICAN POPULATION

M. Rivera-Hernandez, *Gerontology, Oxford, Ohio*

The connection between religiosity, church attendance and membership and volunteering has received a lot of attention in the past decades. Volunteering encompasses various forms of unpaid help and/or services offered for the benefit of the community. Despite the importance of religion for older Mexicans, there is limited information and empirical evidence about the role of religion and volunteering in Mexico. Using data from the Mexican Health and Aging Study (MHAS/ENASEM) collected in 2003, the current study explored the effect of the importance of religion in one's life and volunteering. Approximately 15.33% of older Mexicans volunteer (and 61.46% are women). Among those who did volunteer, 94.40% go to church, and 90.31% agreed that religion is very important in their lives, respectively. One of the most important observations from this study is that religiosity's influence on volunteering goes beyond church attendance. Church does not foster volunteer participation. However, there are other dimensions of religiosity – such as participation in religious events or activities, and the salience of religion – that predict volunteering. According to the results, people that attend religious events at least once a week and once in a while have 3.2 and 1.5 times higher odds, respectively, of volunteering in later life than people that never attended. Similarly, people who considered religion very important are 2.5 times more likely to volunteer than those who reported that it was only somewhat important or not important at all. This difference persists despite controls for sociodemographic and chronic conditions.

#### SESSION 2085 (POSTER)

##### SOCIAL CONNECTIONS IN LATER LIFE

##### NEIGHBORHOOD COHESION IN OLD AGE: DOES COMPETENCY IN SOCIAL SKILLS MAKE A DIFFERENCE?

P. Lu, *Graduate Institute of Social Work, National Chengchi University, Taipei, Taiwan*

Objectives: -To examine the factors which are related to neighborhood cohesion. -To explore the effect of competency in social skills on

neighborhood cohesion. Furthermore, to examine whether the effect of social skills varied with the urbanization of residence township. Background: The factors related to neighborhood cohesion have been documented in the existent literature, such as neighborhood environment, and neighbors' support. However, individual's competency in social skills is a crucial factor in developing and maintaining social relationships. This study investigated whether neighborhood cohesion for older adults differs by their social skills. Methods: This study collected data from interview survey. We interviewed 400 older adults living in ten townships. Hierarchical regression analysis was applied to capture the effect of social skills on neighborhood cohesion. Findings: 1. Poor neighborhood environment is negatively related to neighborhood cohesion, while the higher satisfaction with housing and neighborhood environment is positively related to neighborhood cohesion. 2. The more support the respondents gained from their neighbors, the stronger the cohesion. 3. After controlling for the effects of neighborhood environments and neighbor's support, competency in social skills was related to stronger cohesion. The effect of social skills is greater in rural areas than in urban areas. Conclusions and implications: The results support the importance of social skills on neighborhood cohesion. Community organization workers should cultivate social skills of the elderly when designing the elder friendly community programs to increase neighborhood cohesion.

### **SEX SEGREGATION IN MIDDLE-AGED AND OLDER ADULT'S FRIENDSHIPS**

C. Mehta<sup>1,2,3</sup>, S. Hamilton<sup>1</sup>, B.J. Ayotte<sup>4</sup>, 1. Emmanuel College, Boston, Massachusetts, 2. Children's Hospital Boston, Boston, Massachusetts, 3. Harvard Medical School, Boston, Massachusetts, 4. University of Massachusetts at Dartmouth, Dartmouth, Massachusetts

Sex segregation, the tendency to separate by sex in friendships (Thorne & Luria, 1976), is well documented in childhood and adolescence. Less is known about sex segregation in adulthood (Mehta & Strough, 2009). We conducted in-depth interviews with 10 married adults aged between 55-82 years to investigate sex segregation in friendships among middle-aged and older adults. Participants were asked about the sex of their friends, changes in friendships over time, activities shared with friends, and whether they perceived sex segregation in their friendships. Two overall themes related to sex segregation were identified using interpretive phenomenological analysis. These themes were (a) Barriers to cross-sex friendships, which included marriage (e.g., "wives and husbands may feel uncomfortable with it"), sexual attraction (e.g., "there was always like 'a little something'"), cultural acceptance (e.g., "it's just not part of the American way"); and comfort with same-sex friends (e.g., "girls are easier to talk to"); and (b) facilitators of cross-sex friendships, which included couple friendships (e.g., "I spend time with them when my husband is around"), and interaction style of other-sex friends (e.g., "they wouldn't be so critical of you, they would joke more and be more lighthearted"). Results suggest that sex segregation exists in the friendships of the middle-aged and older adults who were interviewed. Because friendships play an important role in mental and physical well-being across the lifespan, it is important to understand the factors that are related to the formation and maintenance of friendships at all stages of development.

### **LIVING ARRANGEMENTS, SOCIAL SUPPORT AND SELF-RATED HEALTH OF OLDER WOMEN WITH CHRONIC ILLNESS**

C. Warner, K.B. Adams, A.R. Roberts, J. Lee, FPB School of Nursing, Case Western Reserve University, Cleveland, Ohio

The importance of living arrangements, family and social resources for older women with chronic conditions warrants more attention in community-based research. Living alone can be a risk factor for loneliness and social isolation among older adults. According to A Profile

of Older Americans, 72% of non-institutionalized older adults living alone in 2010 were women; the likelihood of living alone increases with age. A sample of 130 community-dwelling women, 65 years and older with one or more medically-diagnosed chronic conditions participated in this 2-wave study, six months apart. Mailed questionnaires included measures of self-rated health, social support provided by family and friends, and living arrangements. Sixty-six percent of the sample, lived alone (n=91) and 34% lived with a spouse/partner or other family member (n=47). Both groups of women reported an average of four chronic illnesses and had mean ages of approximately 72 years. Results from Repeated-measures ANOVA revealed a statistically significant between-subjects (living alone versus living with others) difference for self-rated health. Women who lived with others rated their general health higher (M=3.26, SD=.85) than women who lived alone (M=2.75, SD=.84). There were no statistically significant results for within-subjects (time) or interaction of time by group. The instrumental and subjective social support variables did not differ by group or by time. The findings highlight the importance of living arrangements and the vulnerability of older women with chronic illness who live alone. The importance of self-assessed health in the lives of chronically-ill women and the practice implications will be discussed.

### **SOCIAL CAPITAL AND SOCIAL ENGAGEMENT AMONG SENIOR CITIZENS IN HONG KONG**

S. Liu, A.M. Chong, Applied Social Studies, City University of Hong Kong, Hong Kong, Hong Kong

Aim: The study examines three types of social capital — structural social capital (social network closeness and types of social support), cognitive social capital (trust), bonding social capital (social cohesion and inclusion) – and how they affect older adults' social engagement in terms of volunteerism, group participation and social organizational involvement in Hong Kong. Methods: Face-to-face interviews were conducted by trained interviewers with 251 Chinese respondents aged 60 or above in a randomized household survey in 2009. Results: Family members were perceived as the most important among different social ties, followed by friends. In terms of cognitive social capital, classmates and co-workers were regarded as the most trustworthy. Over half (54.6%) of the respondents were satisfied with the cohesiveness and inclusiveness in the community they were living in. However, 34.3% of the respondents were not involved in any social activities. Hierarchical regression analysis showed that cognitive and structural social capital significantly explained 11% variances of social engagement after age, gender and educational level were controlled ( $p < .001$ ). Conclusion: The study is one of the very few that examine older Chinese' social capital. Having more close social ties (especially among families and friends) as well as higher social trust were found to facilitate older people's social engagement. However, older Hong Kong Chinese tended to have a low level of involvement in social activities; the participation rate was lower than those of the western counterparts (Liu & Besser, 2003). Studies are recommended to find out the reasons behind.

### **THE STABILITY OF SOCIAL NETWORKS IN HOME CARE - CHALLENGES AND OPPORTUNITIES**

M. Roes, Institute for Quality and Case Management (IQC), University of Applied Sciences Bremen, Bremen, Germany

Network analysis focuses on the relations among actors and see individual people nested within networks of face-to-face relations with other persons. Often these networks of interpersonal relations become "social facts" and take on a life of their own. In Home Care, nurses not only work with the patient but with the family members, their friends or the neighborhood as well. To stay at home the social network - which represents close relations among a set of people - is very often the 'private homecare agency'. Method: 17 nurse case managers (working for a private insurance company) were asked to draw a picture of the social network for one case, which represented their view on the network. The

network (social entities) included the role of the different people, their way to interact with each other and how strong the connection seemed to be. Analysis: Measured were the ties or relations to be for the selected nodes (each person in the network). The networks were analyzed with an additional Program Excel Template NodeXL, starting with a selection of a focal node (in this case the patient) and to identify the nodes (other people) to which they are connected and how strong the connection is (Ego-centric networks). Findings: Analysis of 17 social network cases in homecare settings who are part of a case management service program. In six out of 17 cases the out-patient did not have a social network to support the care at home. In seven out of 17 cases the out-patient did have a social network, but a weak one; thus the ability to stay at home relied on the support from a direct family caregiver and the case manager (who does not provide home care services). The analysis of the strength of the ties in their network produced the information that - if the family caregiver can't provide any care at home - there is no other private person, who could provide care. Only in 3 out of 17 cases a stable social network could be identified. Conclusion: Homecare services have to add the analysis of the stability of the social network in their assessment. To conclude, that just because there are family members, doesn't mean that they are able to take over. If we ignore the stability and density of the triangle between the (in/out)patient - the social network - the professional system, we ignore the potential and risks that lie within these social networks and probably ignore the existence of a 'structural whole in their network'. Therefore, the ability to stay at home as long as possible can't work if there isn't a social-emotional and instrumental-material care structure close by.

#### **SOCIAL CAPITAL AND SELF-RATED HEALTH AMONG OLDER KOREAN IMMIGRANTS**

B. Kim<sup>1</sup>, L.B. Maradik Harris<sup>2</sup>, 1. *School of Social Work, University of Hawaii at Manoa, Honolulu, Hawaii*, 2. *UCLA, LA, California*

**BACKGROUND:** This study aimed to investigate the determinants of self-rated health and describe their association with social capital and socioeconomic characteristics among older Korean immigrants. **METHODS:** A cross-sectional study of 205 older Korean immigrants (aged 60 years and older) was conducted in Los Angeles County. Independent variables included age, gender, marital status, income, and social capital (social norms, trust, partnership with the community, information sharing and political participation). Self-rated health was the dependent variable. **RESULTS:** Descriptive analyses were done to show group differences in self-rated health and logistic regression analyses to identify determinants of self-rated health. Gender (male), high income, and high levels of information sharing were significant determinants of high self-rated health status among older Korean immigrants. **IMPLICATIONS:** This population-based study provides empirical evidence that gender, income and information sharing are directly associated with the self-rated health status of older Korean immigrants.

#### **A RANDOMIZED CONTROLLED TRIAL STUDY ON GAINS ON CREATIVITY AND SOCIAL CAPITAL OF HEALTHY OLDER ADULTS AFTER PARTICIPATION IN A COMMUNITY COLLABORATIVE ARTS PROGRAM**

A.N. Hui<sup>1</sup>, D. Yeung<sup>1</sup>, S. Cheng<sup>3</sup>, K. Chan<sup>2</sup>, C. Sue-Chan<sup>1</sup>, D. Hui<sup>4</sup>, 1. *Applied Social Studies, City University of Hong Kong, Hong Kong, Hong Kong*, 2. *Hong Kong Baptist University, Kowloon Tong, Hong Kong*, 3. *Hong Kong Institute of Education, Tai Po, Hong Kong*, 4. *Chinese University of Hong Kong, Tai Po, Hong Kong*

The present study investigates if taking part in collaborative creative arts program can enhance creativity and social capital in older adults. Participants included 36 healthy older adults aged between 60 and 87 participating in a community collaborative arts program. The participants were randomly assigned to two groups (18 persons in the Experimental Group and 18 persons in the Control Group). In the pretest, no significant differences were found in the cognitive abilities as meas-

ured by Raven's Progressive Matrices (RPM), and Mini-Mental State Examination (MMSE), as well as their verbal creativity as measured by the Wallach-Kogan Creativity Tests (WKCT, Wallach & Kogan, 1965), figural creativity assessed by the Test for Creative Thinking - Drawing Production (TCT-DP, Urban & Jellen, 1996), and problem solving ability measured by the Everyday Problem Solving Inventory (EPSI, Cornelius & Caspi, 1987), except in the fluency scores of WKCT. The Experimental Group took part in a 10-session collaborative and integrated arts programs consisting of drama and visual arts. After controlling for the cognitive abilities, significant differences were found in the verbal and figural creativity. Implications on enhancing creative abilities and engaging older adults in community and collaborative creative arts activities will also be discussed.

## **SESSION 2090 (POSTER)**

### **SUCCESSFUL AGING**

#### **MEANING, WELL-BEING AND AGEING**

P. Derckx, *University for Humanistics, Utrecht, Netherlands*

The meaning of life does not exist in the sense that people have different views on this and in the sense that even for one person there are many aspects to a meaningful life, not just one. In this paper the concept of a meaningful life and its different dimensions will be explicated. After that a first empirical exploration of meaning in ageing will be given. This will be done through a meta-analysis of (a) the relatively scarce empirical research on meaning in life and (b) the larger body of work on well-being in ageing. The concept of well-being is not the same as meaning in life but they show considerable overlap. The two strands of well-being research on ageing that will be considered are the "subjective well-being" approach of Ed Diener (University of Illinois at Urbana-Champaign) and colleagues and the "psychological well-being" approach of Carol D. Ryff (University of Wisconsin at Madison) and colleagues.

#### **AN EXPLORATION OF SERIOUS LEISURE TYPES AND FLOW EXPERIENCES AMONG OLDER ADULTS**

C. Lee, L.L. Payne, *Recreation, Sport and Tourism, University of Illinois at Urbana-Champaign, Champaign, Illinois*

Serious leisure is one activity type that may benefit the quality of life for older adults (Heo & Lee, 2010). Also, it is considered an ideal environment for one to experience flow, which is believed to be an optimal experience (Stebbins, 1992; Kelly & Freysinger, 2000). This is because flow is mostly experienced when people are intensely involved in an activity. This study explores the relationship between different types of serious leisure activities and experiencing flow (frequency and quality of flow). A purposive sample of 141 older adults completed a survey in several community sites (e.g., rec centers, congregate meal sites). The seriousness of leisure activity, the frequency of flow and the quality of flow were measured by 18-item Serious Leisure Inventory Measurement (Chronbach's alpha = .865), 1-item Flow Questionnaire and 5-item Quality of Flow Experience Scale (Chronbach's alpha = .693). Cluster analysis was used to classify how socially, cognitively and physically stimulating serious leisure activities were into 5 groups: 1) physical and social centered stimulating, 2) cognitive centered stimulating, 3) diversely low stimulating, 4) diversely high stimulating, and 5) cognitive and socially stimulating. Results indicated the cognitively-centered stimulating, the diversely high stimulating, and the cognitively and socially-centered stimulating activity groups had significantly higher scores for frequency of flow than the diversely low stimulating activity group. However, there were no significant differences between groups in terms of quality of flow. This indicates cognitive factors in leisure activity could be the most influential factor to experience flow.

### THIRD AGE VERSUS FOURTH AGE STUDIES

C.J. Gilleard, P. Higgs, *University College London, London, United Kingdom*

This paper proposes the separation of ‘aging studies’ into two distinct fields of inquiry, a third and a fourth age studies. Later life we argue can no longer be deemed a coherent entity. The concerns, circumstances and experiences of those who are no longer young should be explored within a framework that is not dominated by health and social care policy. In a similar fashion, those whose personal identity risks being dominated by their status within the institutions of health and social care should be the focus of a fourth age perspective. Lifestyle is the central theme of the third age; while dependency is the core of the fourth age. While there may be some opposition to this binary distinction, we argue that the benefits of this heuristic division outweigh objections to it. The advantages of adopting such a dualistic strategy are that the concerns, circumstances and experiences of later life can be examined separately from the categorisation of old age and the institutional responses to it. How later life is lived, how and to what extent it is or is not oriented toward ‘age’ and ‘agedness’ should be the central themes of third age studies. In contrast, the representation of old age as the last stage of life, limited by the body and constrained by the institutions surrounding it should be the proper subject of fourth age studies. We propose this as a resolution of the contemporary conflicts over ageing and its place within society.

### THE IMPORTANCE OF INTERNAL AND EXTERNAL RESOURCES AND SELECTION, OPTIMIZATION AND COMPENSATION ADAPTIVE STRATEGIES IN THE DEPRESSIVE SYMPTOMS OF OLDER WOMEN WITH CHRONIC ILLNESS

J. Lee, C. Warner, K.B. Adams, *Case Western Reserve University, Cleveland, Ohio*

For older women with chronic illness, strategies of selection, optimization, and compensation (SOC) assist in managing their limited resources. Adequate use of SOC along with sufficient internal and external resources, such as self-efficacy, social support, and income adequacy, may prevent depressive symptoms, but little research has examined the possible role of SOC. We investigated whether health, SOC, and internal and external resources predicted depressive symptoms in older women with chronic illness. We also tested the mediator effects of SOC and the resources on the relationship between poor health and depressive symptoms. A total of 127 community dwelling older women with chronic illness completed questionnaires at two time points six months apart. Measures included CES-D (depressive symptoms) number of illnesses (health), Lorig’s self-efficacy subscale, subjective social support, and income adequacy (resources), and a twelve-item adapted measure of SOC strategies with three subscales. A hierarchical regression model, including age, health, SOC strategies, and internal and external resources at T1, accounted for 49% of depressive symptoms at T2. Health, self-efficacy, and social supports were significant predictors of depressive symptoms. SOC total score was non-significant; however, greater use of compensation, a SOC sub-strategy, predicted fewer depressive symptoms, but the relationship disappeared after controlling for resources, suggesting a limited role for SOC. The significance of the relationship between health and depressive symptoms after six months decreased when self-efficacy and social supports were controlled, thus internal (self-efficacy) and external (social supports) partially mediated the relationship between health and depressive symptoms.

### FACTORS ASSOCIATED WITH SUCCESSFUL AGING IN BRAZIL

F.D. Andrade<sup>1</sup>, A. Schwingel<sup>1</sup>, M.L. Lebrão<sup>2</sup>, Y. Duarte<sup>2</sup>, *1. Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Champaign, Illinois, 2. Universidade de São Paulo, São Paulo, Brazil*

Objective: Population aging process is accelerated in developing countries. Although previous studies have explored the role of relevant

measures related to successful aging, most studies were based on cross-sectional data. We use longitudinal data to evaluate how relevant measures help predict health transitions, particularly those related to maintaining a successful aging. Method: Two waves (2000, 2006) of the longitudinal SABE conducted in São Paulo city, Brazil was used in the analyses (n = 2,143). Successful aging was defined in multidimensional manner, including comorbidity, disability, depression, cognitive impairment, self-rated health and financial security measures. We explored the role of relevant predictors of successful aging (demographic, socioeconomic, lifestyle, health related). Multivariate logistic and multinomial regressions were used in the analyses. Results: Only 4.6% of the population had all indicators of successful aging. The main factors restricting successful aging among older Brazilians were presence of physical limitations, comorbid conditions, self-reported poor health and financial insecurity at baseline. Higher education was positively associated with remaining free of disability among men and women. Among women, literacy was positively associated with maintaining good self-rated health and cognitive skills. Physical activity was positively associated with remaining free of disability among women; and free of depression among men. Higher levels of grip strength were positively associated with better self-reported health. Discussion: Physical activity, grip strength and education were important protective factors associated with successful aging. Interventions aimed at improving levels of physical activities and policies aimed at increasing educational levels can contribute to promote successful aging in Brazil.

### PERSONALITY CORRELATES OF EXCEPTIONAL HEALTH IN OLDER PARTICIPANTS IN THE BALTIMORE LONGITUDINAL STUDY OF AGING (BLSA)

M. Tolea<sup>1</sup>, E.M. Simonsick<sup>2</sup>, *1. University of Missouri St Louis, St Louis, Missouri, 2. National Institute on Aging, Baltimore, Maryland*

Personality traits as measured by the Five Factor Model have been consistently associated with health and functionality in later life. However, most research has focused on identifying ‘risky’ traits although ‘advantageous’ traits may help explain why some individuals age better than others. This study sought to examine whether individuals aged 70 years and older in excellent health exhibit distinct personality features relative to individuals not in excellent health. Excellent health was determined using a hierarchic algorithm ruling out physical and cognitive limitations and major chronic diseases and disease-related symptoms and conditions based on self-report and laboratory parameters. Data on BLSA participants who were administered the NEO Personality Inventory (NEO-PI-R) and had their health status evaluated using this algorithm were used (N=502 observations, age=79.7mean ± 6.1SD, 42.4% female). Conscientiousness and its components of order and achievement striving were associated with higher odds of being in excellent health (OR=1.42, 95%CI:1.03-1.96; OR=1.44, 95%CI:1.09-1.91; and OR=1.64, 95%CI: 1.18-2.28 respectively). The activity subcomponent of extraversion was also a positive correlate (OR=1.95, 95%CI: 1.42-2.68). These associations were independent of age, sex, education, and other personality traits, were partially explained by physical activity level, and appeared to operate mostly in the younger old, diminishing with increasing age. Findings suggest that personal organization, a sense of direction and a need for personal achievement, as well as a fast living pace may be important personality markers of optimal health, potentially through promoting health protective behaviors.

### EXPLORING THE ROLE OF TRANSCENDENCE IN AGING

V.L. McCarthy, A. Bockweg, *University of Louisville, Louisville, Kentucky*

Interest in transcendence as a dimension of aging has grown, but empirically testable ways of looking at transcendence are limited. Using concept analysis, transcendence was examined to describe the concept and identify commonalities among existing theories and definitions.

Multiple databases yielded 123 citations for articles, books and webpages; 78 met criteria for inclusion in the analysis, including literature from philosophy, theology, psychology, sociology, psychiatry, and nursing. The analysis suggested antecedents of transcendence included altruism, generativity, creativity, positive solitude, existential questioning, and mindfulness of a dimension beyond the self. Essential attributes of transcendence were a change in perspective or worldview; connectedness to self, others and a higher power; a sense of being an integral part of the universe; decreased concern for social roles and expectations; and increased focus on personally valued relationships and activities. Based on integrating the literature with existing theory, a definition of transcendence was synthesized: Transcendence is a shift in perspective from a rational, materialistic view to a wider world view characterized by broadened personal boundaries within interpersonal, intrapersonal, transpersonal and temporal dimensions. Potential outcomes of transcendence were a sense of meaning in life, increased self-acceptance, ego integrity, and decreased fear of death. A conceptual model was also developed to aid in understanding relationships among these factors, grouped within five domains: relationships, creativity, introspection, contemplation, and spirituality. Transcendence may be an important variable within the spiritual or existential domain that provides a theoretical basis for planning cost-effective, efficacious interventions to improve the aging experience.

## SESSION 2095 (POSTER)

### TECHNOLOGICAL APPLICATIONS

#### COMMUNICATION TECHNOLOGY, INTERNATIONAL MIGRATION AND IMPACT ON THE CAREGIVING: CASE STUDY BANGLADESH

I. Amin, *University of North Texas at Dallas, Dallas, Texas*

This study explores how the use of telecommunication technologies such as mobile phones and Internet based telecommunications such as Skype, Facebook and others are influencing the Bangladeshi emigrants' long-distance caregiving pattern for their elderly parents and relatives. Bangladesh has millions of migrant workers working and living in Middle east, far eastern countries, Europe and North America. While overseas wage earners have significant economic impact on the country's economy, this emigration trend has mixed impact on the elders as traditionally almost all the eldercare is done by the family which is already experiencing declining caregiver availability accompanied by shrinkage of family size, and women's increasing labor force participation. The sample included 28 purposively selected elderly persons having at least one family member living abroad. Data were collected through semi-structured interviews. Computer software Nvivo 9 was used to code and analyze the transcribed interviews. Findings indicate that most of the emigrants use mobile phones and Internet to provide long distance caregiving to their elderly relatives. They actively participate in the decision making for the care of elderly parents and family members. Increased use of telecommunication technologies by the emigrants and elders has resulted in increased psychological wellbeing for both the emigrant and the elderly persons. Although money received from children abroad contributes to financial well-being of the elder parents and family members, lack of formal services and other socio-cultural factors pose challenges for elders to utilize that money for their optimum well-being.

#### THE ROLE OF TECHNOLOGY GENERATIONS AND GENDER IN EVALUATING DIFFERENT TYPES OF MODERN TECHNOLOGY

K. Classen<sup>1</sup>, F. Oswald<sup>2</sup>, H. Wahl<sup>1</sup>, *1. Heidelberg University, Institute of Psychology, Dept. of Psychological Ageing Research, Heidelberg, Germany, 2. Goethe University Frankfurt, Faculty of Educational Sciences, Interdisciplinary Ageing Research, Frankfurt am Main, Germany*

The project aims at identifying differences in technology acceptance between two technology generations. In particular, the so-called "mechanical generation" (born before 1939) and the "household appliance generation" (born 1939-1951) are compared in terms of technology attitudes and evaluation, i.e. intention, perceived usefulness, perceived ease of use and output quality. The internationally renowned Technology Acceptance Model (TAM; version 3) in a modified version was applied as theoretical background. Study participants were 357 German persons aged 60 to 99, representing the two technology generations (mechanical generation N=165; household appliance generation N=192). Three technological devices, representing the areas of care and prevention (sensor mat), household management (robotic vacuum cleaner), and leisure time use (video game console) were selected. In a MANOVA data-analytic approach, no technology generation differences appeared in terms of the intention to use the three technological devices. Technology generations did also not differ in perceived usefulness across all three devices. However, the younger household appliance generation rated the three devices higher in their ease of use. Device specific uni-variate ANOVA showed that particularly the robotic vacuum cleaner and even more the video game console, but not the sensor mat were evaluated differently in ease of use by the two technology generations. Furthermore gender interaction effects were found in that the female participants were responsible for the generation differences in output quality of the robotic vacuum cleaner. Findings underscore that technology generation is an important construct to understand technology acceptance, while gender continues to play a role across technology generations.

#### VIDEO GAMES AND AGING: WHAT WE KNOW AND WHERE WE NEED TO GO

E.A. Fenster, *Miami University, Oxford, Ohio*

Gaming accommodates different lifestyles, resources, and preferences. This flexibility is appealing to many adults; one study noted 29% of players were over 50 (ESA, 2011). However, research on video games in relation to aging has concentrated on health or integration into long-term care (e.g., Clark and Kraemer, 2009; Hwang, Hong, Hao, and Jong, 2011), and less on social or life course aspects. The goal of this discussion is to examine why other research directions can benefit both gaming and gerontological literature. Gaming is important because it has potential to influence different parts of one's life. One's gaming experience is shaped by factors such as games played, level of commitment to play, and sociability of environment; these elements help develop unique and variable contexts and communities, emphasizing the notion that gaming can be considered a type of leisure, support, or element of identity. Furthermore, there is increased accessibility to games through diverse platform options, leading to more individuals identifying as casual gamers (Juul, 2010). Although broad information is available, theoretical application is needed. The life course perspective could supplement this knowledge by providing a lens to explore how ideas about gaming are shaped by life experiences, as well as how changing societal attitudes towards gaming impact who plays. By thinking more broadly about gaming in relation to aging, we can understand how gaming habits evolve throughout the life course, why some begin gaming later in life, and in what ways it can be a helpful resource to older users.



## **DEVELOPMENT OF AN INTERNET-BASED INTERVENTION TO IMPROVE SELF-MANAGEMENT SKILLS AND WELL-BEING IN OLDER ADULTS**

I.F. van Asch<sup>1</sup>, H.H. de Koning-Fikse<sup>1</sup>, A. Pot<sup>1,2</sup>, *1. Program on Aging, The Netherlands Institute of Mental Health and Addiction, Utrecht, Netherlands, 2. VU University, Amsterdam, Netherlands*

**Background:** Improving Self-Management Skills in Older Adults May Improve Well-being and Resilience and Decrease Feelings of Loneliness. For This Reason, an Internet-based Intervention is Developed to Improve Six Self-Management Abilities: Self-efficacy Beliefs, a Positive Frame of Mind, Taking the Initiative, Investment Behavior, Multifunctionality of Resources and Variety in Resources. The Intervention is Focused on Different Aspects of Well-being: Comfort, Stimulation, Affection, Network and Status. **Method:** Literature is Searched, Existing E-mental Health Interventions Are Studied and Focus Groups with Older Adults (N=8) and Professionals (N=7) Were Held to Design the Intervention. At the End of the Development Process Older Adults (N=12) Are Consulted Again to Give Their Advice. Subsequently, a Pilot Study Will Be Carried out to Investigate Whether or Not the Intervention Has an Impact on Personal Competence, Interpersonal Control, Self-esteem, Level of Happiness, Loneliness and Resilience. **A Process Evaluation Will Give Insight into the Conceptual and Technical Experience. Results:** The Intervention Will Be Ready by Autumn 2012. During This Poster Session the Development and Content of the Intervention as Well as the Design of the Pilot Study Will Be Presented. **Discussion:** On the Basis of the Results of the Pilot, the Intervention Will Be Adapted. The Final Version Will Be Implemented at Nationwide Level and is Accessible for All Older Adults.

## **A MOTIVATIONAL TEXT MESSAGING WALKING PROGRAM FOR OLDER AFRICAN AMERICANS: A PILOT STUDY**

B. Kim, K. Glanz, *University of Pennsylvania, Philadelphia, Pennsylvania*

**OBJECTIVES:** To examine if a six week program of motivational text messaging will increase physical activity (step count) among older African Americans in an urban setting. **DESIGN:** Randomized, controlled trial pilot study with allocation to a motivational text messaging group or a control group. **SETTING:** General community. **PARTICIPANTS:** Thirty-six African Americans aged 60 to 85. **INTERVENTION:** Both groups received pedometers and walking manuals to record step counts. The intervention group received motivational text messages three times a day, three days a week, for six weeks. **MEASURES:** Primary outcome measure was step count. Secondary outcome measures were Body Mass Index (BMI) and the Leisure Time Exercise Questionnaire (LTEQ). **RESULTS:** Motivational text messaging three times a week for six weeks led to greater improvements in step count (+879 vs. +398;  $P < .05$ ) and LTEQ ( $P < .05$ ) along with lower BMI ( $P < .05$ ) than the group who did not receive any text messages. **CONCLUSION:** Motivational text messaging three times a week for six weeks was effective in increasing step count and self-reported leisure time exercise behavior, and decreasing BMI among older African Americans. Larger and longer-term studies are needed to examine the impact of text messaging and maintenance of healthier life choices through text messaging in this population.

## **AN EXPLORATION OF THE FACTORS THAT PROMOTE OR INHIBIT THE UPTAKE AND USE OF ASSISTIVE TECHNOLOGY (AT) AMONG OLDER PEOPLE**

K. Brittain, G.W. Pritchard, *Newcastle University, Newcastle upon Tyne, United Kingdom*

The current health and social care systems in the UK are not sustainable due to the rapidly growing demand from an ageing population. Assistive Technology (AT) – which we broadly define as any product or service used to overcome cognitive, physical or communication

difficulties – has been heralded as something of a panacea for the plethora of cost and care related challenges associated with the ageing population. It has also been described as an enabler that allows an often-maligned social group to live independently in their own homes for longer and forgoes the immediacy of institutionalization. However, despite these perceived benefits, evidence suggests that uptake of AT among older people has been low and an emerging area of academic inquiry has speculated on the reasons for this. This paper presents findings of an on-going research project examining older people's (with diverse care and support need) perspectives on AT. The work forms part of a large integrated ('SALT') project, and brings together a strong consortium of academics, businesses, health and social care professionals, third sector organizations and user representatives. Our data derives from a qualitative methodology, which incorporates semi-structured interviews, focus groups and observational fieldwork. Our findings suggest that previous research in this area has failed to fully exploit the meaningful conceptual insights from social theory and we suggest a more sociologically-focused research agenda organized around the three central themes of identity; social inequality and the emerging 'social model of ageing'.

## **EFFECTS OF VIDEOGAMING ON OLDER ADULTS' EMOTIONAL WELL-BEING**

S. Sörensen<sup>1</sup>, J. Swan<sup>1</sup>, A. Baroah<sup>1</sup>, A. Anderson<sup>2</sup>, R. Kludt<sup>2</sup>, D. Bavelier<sup>2</sup>, *1. University of Rochester School of Medicine, Rochester, New York, 2. Brain and Cognitive Sciences, University of Rochester, Rochester, New York*

Videogaming has been suggested as an effective approach to brain-training for older adults, but little is known about its emotional effects. We investigated whether videogaming is related to intra-individual change in four emotional well-being variables after a three month in-home gaming period. Forty-eight adults aged 60-84 (Mean age=67.9) trained to play either "Medal of Honor" (n=14), "Rayman Raving Rabbits" (n=7), or several commercial brain training games (n=15). After pre-test they played 30-60 minutes per day, tracking their progress and receiving weekly phone check-ups or instruction. Post-test occurred after 50 hours of in-home play. Participants were 15% Black/African American, 85% White; 29% were male; 37.5% lived alone; mean years of schooling was 15.7 (sd=2.4). Repeated measures analyses for 2 time points were conducted, with age as a covariate. Positive Affect decreased significantly ( $p=.04$ ) from pretest to posttest, but Negative Affect did not. Participants aged 65+ had lower positive affect at post-test, whereas players aged 60-65 reported slight improvement (time x age,  $p=.028$ ). A similar trend ( $p=.067$ ) was found for Life Satisfaction, but older players experienced an increase, while younger players decreased in life satisfaction. All players reported a drop in Negative Self-Perceptions of Aging ( $p=.029$ ); this was driven by the older players (time x game interaction  $p=.022$ ). These preliminary results suggest that videogaming can have both positive and negative effect on older adults' well-being. The effects vary by subject age, but not the type of game played. Given the small sample and unbalanced design, results should be replicated and gender and other potential covariates controlled.

## **THE EFFECTS OF AGE, COGNITION, AND HEALTH NUMERACY ON USE OF AN ELECTRONIC PATIENT PORTAL**

J. Taha, J. Sharit, S.J. Czaja, *University of Miami, Miami, Florida*

Diverse patient populations are increasingly using patient portals that are tethered to their electronic medical record (EMR). Patients using portals can view their medical history, review laboratory results and medication lists, and follow links to credible health information online. Yet little is known about the actual ability of patients to use the information contained in portals to manage their health. This study evaluated the ability of 107 middle-aged and older adults (aged 40-85 years,

M = 58.87, SD = 11.89) to use a simulated patient portal of an EMR to perform 15 common health management tasks encompassing medication management, review/interpretation of lab/test results, and health maintenance activities. We also examined how individual characteristics, such as health numeracy and cognitive abilities, impact the use of these systems. Results indicated that older adult participants had lower mean scores on the more complex tasks and overall performance than the middle-aged adults. Individual characteristics such as age, cognitive variables, health numeracy (a component of health literacy), and Internet experience had a significant impact on performance for both the middle-aged and older adults. Individuals with lower verbal ability, executive functioning, reasoning skills and health numeracy skills had lower performance. Overall, the findings indicated that demands on these skills should be considered in the design of patient portals. In addition, careful consideration needs to be given to health numeracy demands such as the presentation of numerical information and demands related to interpretation of mathematical information.

### **OLDER ADULTS AND ONLINE HEALTH INFORMATION-SEEKING**

T.M. Luger, J. Suls, *Univ Iowa, Iowa City, Iowa*

Two-thirds of older adults with internet access search for health information online (Pew Internet and American Life Project, 2010). Many studies have focused on adapting features such as text size to accommodate older adults (Czaja & Lee, 2008). However, studying the cognitive processes used during search may help to provide older adults with the most relevant health information. Our study investigates the goals and search strategies of an online health search. Participants aged 50 years or older ( $N=55$ ) were recruited from Johnson County, Iowa ( $M_{age} = 64.94$  years). Participants were randomly assigned to use the Google search engine or WebMD's Symptom Checker while attempting to diagnose the symptoms of either mononucleosis or scarlet fever as depicted in a vignette. Participants engaged in a "think aloud" while searching and completed a semi-structured interview to provide insight into the cognitive processes used to search. A Q sort method (McKeown & Thomas, 1998) was employed for analysis. Results showed that, while searching, older adults attempted to match the vignette symptoms to a particular condition, gather information about a specific symptom, or gather information about the proper health behavior to take when presented with such symptoms (e.g. when to seek care). Older adults seemed to utilize their expectations about disease such as the probability of a particular diagnosis or previous experience with a particular illness to eliminate conditions when diagnosing. Knowing how older adults approach an online health search may help to provide a productive search experience.

### **SESSION 2100 (POSTER)**

#### **TECHNOLOGY: APPLICATIONS AND IMPLICATIONS**

##### **'CARE IN BUSINESS': HOW NEW TECHNOLOGIES HELP IMPROVE THE QUALITY OF LIFE OF OLDER PEOPLE AND CARERS**

J.E. Phillips, S. Hillcoat-Nalletamby, M. Allen, *Centre for Innovative Ageing, Swansea University, Swansea, United Kingdom*

'Care in Business' brings together academia, business, care-organisations, carers and older people to create a vision of care and explore how new assistive living technologies and emerging trends in the ICT sector can be exploited innovatively to meet care needs. Integrated solutions are needed across sectors to maintain older people's independence and quality of life, and in turn support the role of remote carers, particularly carers in the workplace. To date, ICT and carers' sectors have had limited opportunity to work together and learn from each other about evolving trends in their fields. 'Care in Business' facilitated these much

needed cross-disciplinary exchanges through a series of focus groups carried out in 2011 and 2012. A number of product ideas developed through inter-sector and inter-disciplinary collaboration. Project partners developed a greater understanding of the gaps in research knowledge, the market potential for businesses, and the aspiration expressed by carers and older people to be treated as active rather than passive consumers, in both the design and consumption of products and services. The project highlighted the need to bridge the gap between the producer and the consumer and fuel a consumer led rather than institutional led market in the UK. Older people and carers were prepared to spend money on innovative 'off the shelf' solutions but there is a clear need to actively engage them in the design process and ensure products and services reflect both their needs and aspirations.

### **WHAT DO OLDER ADULTS WANT THEIR PERSONAL ROBOTS TO DO?**

W.A. Rogers, T.L. Mitzner, C. Smarr, J.M. Beer, A. Prakash, T.L. Chen, C.C. Kemp, *School of Psychology, Georgia Institute of Technology, Atlanta, Georgia*

Demographics of the world population make clear that people are living longer and society needs to plan for providing care and support for older adults in a range of environments (e.g., independent homes, assisted living facilities). Personal robotics has much potential in this space. For robots to achieve that potential, they must be designed to be appropriate, useful, and accepted by older adults. If robotic technology is to be successful in supporting older adult care recipients and their care providers there are a number of research questions that must first be answered. The purpose of this project was to: a) identify the needs and preferences of older adults with which personal robots might assist; and b) determine the factors that lead to acceptance of such robotic assistance (and potential barriers to acceptance). Participants were 21 independent living seniors (65-93) who completed questionnaires to assess different aspects of acceptance (Robot Familiarity; Robot Opinions; Assistance Preference). They then participated in small-group structured interviews, which provided in-depth information about their needs, preferences, and attitudes regarding the potential for robots to support home-based tasks. Overall, the older adults were open to the idea of having robot support in their home, especially to assist with tasks such as household duties (e.g., cleaning, laundry/ironing) or manual labor (e.g., lawn work, lifting/moving heavy objects). They also reported some concerns about the robots related to performance reliability and physical presence. These results provide an initial framework for design and deployment of personal robots to support older adults.

### **COMPUTER BASED REAL-TIME ACTIVITY REPORTING AMONG OLDER ADULTS: INNOVATIONS AND CHALLENGES**

K. Wild, N.C. Mattek, B.L. Stone, J. Kaye, *Oregon Health & Science University, Portland, Oregon*

A key assumption of remote in-home monitoring is that activities and behaviors of interest are accurately captured by systematically placed sensors. At the same time, retrospective self-reports have been shown to be disconcertingly inaccurate in a variety of settings. Thus, verification of sensor data currently relies on a less than perfect gold standard. We have previously used a daily diary system to gauge the accuracy of in-home sensor based monitoring, and concluded that there may still be limitations as to the fidelity of recalled events and behaviors reported with these day reconstruction methods. In the present study we administered an online activity survey to all current computer users in our ongoing longitudinal study of in-home ubiquitous monitoring. The intent was to reduce the burden of daily diary recording on older adults, while still collecting data suitable for comparison with sensor-detected activity. In this survey, participants were asked to report their activity, location in the home, and time of activity for the two hours immediately preceding completion of the survey. Of 95 participants who completed

the two-hour activity log, nearly one quarter (n=22) did not complete the task adequately, as determined by failure to include at least one activity, location, and time that could potentially be compared with sensor data. Between group comparisons showed significantly lower mental status scores ( $p = 0.04$ ) in those who did not submit usable activity reports than those who did. Validation of real-time activity data poses unique problems for an older adult population, particularly in those with incipient cognitive decline.

### REMOTE MONITORING WITHIN THE HOME'S OF OLDER PEOPLE, CAN THIS BE CONCEPTUALISED AS AN EXTENSION OF BODYWORK?

K. Brittain, M. Lie, S. Lindsay, P. Olivier, *Newcastle University, Newcastle upon Tyne, United Kingdom*

'Bodywork' or 'dirty work' is a neglected area in both formal and informal care (Twigg, 2000). Hughes (1984) phrased the term 'dirty work' as part of the process of caring for someone where the type of 'caring' work transgresses social and personal boundaries within our society. Although Twigg (2000) primarily looks at the formal setting for care work this concept can also be applied to the informal process of caring (Brittain & Shaw 2008). Paid roles and professionals who work with the body are accorded status and higher remuneration by placing a distance between themselves and the body, sometimes through the use of technology (Lawler, 1997; Twigg, 2000). Technology to support 'ageing in place' has increasingly become a government priority with the preferred site of care being the home, reflecting trends in community care policies since the 1950s. One proposed solution is remote monitoring (both in formal and informal caring environments), consisting of sensors and warning systems that alert carers when behaviour patterns change. There is increasingly a move within the computing community to investigate in more detail the use of lifestyle monitoring in being able to detect illness and decline in later life. This paper discusses the concept of 'bodywork' in relation to remote monitoring practices, and explores whether such practices transgress social, personal and ethical boundaries.

### HEALTH INFORMATION TECHNOLOGY USE AMONG ADULTS: ANALYSIS OF THE HEALTH INFORMATION NATIONAL TREND SURVEY

E. Lee<sup>1</sup>, Y. Yeo<sup>2</sup>, S. LevKoff<sup>3</sup>, 1. *Social Work, University of North Carolina Charlotte, Charlotte, North Carolina*, 2. *University of South Carolina, Columbia, South Carolina*, 3. *University of South Carolina, Columbia, South Carolina*

Although older adults are the most frequent and heaviest users of health services, they still lag far behind in their adoption of use of the Internet and health information technology (HIT). This study examined older adults' HIT use for health/cancer information and digital divide among three age cohorts. The data for this study were drawn from the 2007 US Health Information National Trend Survey (HINTS), a nationally representative household survey to collect data on HIT use. Three cohort of older adults is comprised of young boomers (aged 43-52, n=1,482), older boomers (aged 53-61, n=1,674), and silent/G.I. generation (aged 62 and older, n=2464). Logistic regression analysis was conducted to examine factors associated with older adults' search for health/cancer information. Silent/G.I. generation is less likely to use the Internet for health information (OR = 0.365;  $p < 0.001$ ) and for cancer information (OR = 0.382;  $p < 0.001$ ) than boomers. Results: Older searchers of health information were more likely to be female, higher income, college-educated, and comfortable about medical exam: They are less likely to be living alone and foreign-born. They value the importance of getting electronic medical record. While cancer information seekers were more likely to be college-educated, feel comfortable about medical exam, and value

the electronic health records, they were less likely to be silent generation and unhealthy. Implications. Considering the digital divide, intervention should be developed to reach out those who are at risks (e.g., the oldest-old, lower socioeconomic status, living alone, immigrant, etc.).

### COMPUTER BASED COGNITIVE TRAINING FOR OLDER ADULTS – THE SPECIFIC REQUIREMENTS OF OLDER ADULTS WITH MCI

M. Haesner, M. Gövercin, E. Steinhagen-Thiessen, *Geriatrics Research Group, Charité, Berlin, Germany*

As the natural process of ageing humans experience a decline in overall cognitive function. However the cognitive development can be influenced favourably in a stimulating environment (Wilson et al. 2002). Learning is possible up to a well-advanced age and can delay cognitive decline (Zehnder et al. 2009, Lustig et al. 2009, Husemann 2009). The benefit of software-based cognitive training is highly controversial in science (Frank and Konta 2005) and few recent RCT-studies and meta-analytic studies exist (Owen 2010, Ball et al 2002, Zehnder et al. 2009). In clinical setting cognitive training software is used during normal neuropsychological therapy. For self-training there is a lack of evidence-based cognitive training software for the home environment. Therefore in a German public funded project a Web 2.0 platform with cognitive training exercises will be developed. Taking into account the user-centered-design process in a first step requirements of the target group were raised. The purpose of this study was to detect, through qualitative research, requirements of older adults on the design of exercises, forms of communication on the platform, output devices or control devices. The questions of the interview guideline were evaluated in a pre-test and then used in semi-structured interviews. Twelve interviews were conducted. Half of the recruited subjects were diagnosed with a mild cognitive impairment (MCI). Results reveal interesting differences between these two groups, e.g. the cognitive impaired expressed significantly more preferences for therapy-based psychological exercises in contrast to motivating gaming exercises such as Sudoku or crossword puzzles.

### SOCIAL MEDIA USE IN OLD AGE: USER PROFILES, EFFECTS, BEST PRACTICES

A.K. Leist<sup>1,2</sup>, G. Reljic<sup>1</sup>, D. Ferring<sup>1</sup>, 1. *University of Luxembourg, Walferdange, Luxembourg*, 2. *Erasmus Medical Center, Rotterdam, Netherlands*

Internet use of older adults is increasing steadily and is highly desirable in various domains such as training, political and consumer information, and health communication. The use of Informations Communications Technology (ICT) in general, and social media use in particular may fulfill other needs and wishes beyond these general desiderata. One of the additional benefits may be to promote social connectedness and to alleviate loneliness by increasing the social circle and maintaining contact with relatives and friends. However, social media use in old age, in particular the use of online social networks is to date still very low. To develop best practices for engaging older adults in this area and extending a literature review, this contribution will provide a theoretical framework of social media use in old age focusing on user profiles, potential effects, and recommendations for the development of interfaces facilitating social media use in old age. Concerning user profiles, the need for a differential approach to ICT use will be presented with a focus on ICT experience, socioeconomic differences, and physical limitations in older age. Regarding the effects of social media use, potential benefits and caveats will be presented, highlighting benefits of self-efficacy, control, and social connectedness, as well as problems arising with anonymity and valid-

ity of information given in social media. To illustrate recommendations in making social media more accessible for older adults, the user-centered design of a mobile platform developed in the European AAL project V2me aiming at alleviating loneliness in old age will be presented.

#### **USING SOCIAL MEDIA TECHNOLOGIES TO EXTEND SOCIAL INCLUSION IN THE 4TH AGE**

M.L. Johnson, 1. *University of Bristol, Bristol, United Kingdom*, 2. *University of Bath, Bath, United Kingdom*

This paper reports a substantial representative study of the extent to which digital and 'social' media technologies can facilitate greater social inclusion for care home residents. We aim to enhance contact for care home residents in three areas: (i) between residents and people who matter most to them (ii) with visitors and volunteers. (iii) to promote the Homes' growing role as a social hub i.e. to put residents in touch with each other, with other local residents and (potentially) with other organisations (such as social workers, health staff and others who might assist them to regain lost autonomy. Existing studies focus on older people in the 3rd age. To address the wishes of those in the 4th age requires intensive listening to expressed needs rather than seeking to overcome barriers to IT. Using this data we will fashion interfaces with people and technologies designed to achieve their ends.

#### **OLDER ADULTS' INTERNET USAGE FOR HEALTHCARE RELATED INFORMATION**

J.T. Romeo<sup>1</sup>, T.K. Amador<sup>2</sup>, 1. *Memorial Health System, Colorado Springs, Colorado*, 2. *Health Services Administration Dept., Regis University, Denver, Colorado*

Introduction: Older adults are increasingly accessing the internet and are using it to obtain healthcare related information (Crabb, Rafie, & Weingardt, 2012). It is important for providers and others to understand how older adults use the internet for healthcare related information and how this usage may impact their healthcare decisions. Literature Review: The U.S. Census Bureau (2009) reported that 42% of older adults age 65 and over are internet users. This percentage is significant and will continue increasing with the aging of the tech savvy Baby Boomers. More specifically, individuals are accessing the internet for healthcare related information to research medical issues (Romeo, 2011). Methodology: Qualitative methods were utilized in this study of nine adults aged 65 and older. Data collection included tape-recorded, semi-structured interviews with the use of an interview guide. Data analysis included transcribed interviews, a codebook, content analysis, and a second coder. The Cohen's Kappa was 80% which indicates high reliability of findings. Findings: Participants used the internet to research chronic health conditions, new diagnoses, and/or newly prescribed medications. They reported learning in-depth information about these issues online, developing additional questions, and, as a result, going to their primary care physician for further discussion. Conclusions: These participants felt more engaged in their healthcare and empowered to make healthcare related decisions. The results of this research show that older adults may benefit from accessing the internet for health care related information. Further, it appears that patient and physician communication may improve as well. References Crabb, R.M., Rafie, S., & Weingardt, K.R. (2012). Health-related internet use in older primary care patients. *Gerontology*, 58(2), 164-170. Romeo, J. (2011). Older adults' accessing the internet for healthcare. (Unpublished master's thesis). Regis University, Denver, Colorado. U.S. Census Bureau. (2009, October). Internet use in the United States: October 2009. [Table 2. Reported Internet Usage for Individuals 3 Years and Older, by Selected Characteristics: 2009]. Retrieved from <http://www.census.gov/hhes/computer/publications/2009.html>

## **SESSION 2105 (POSTER)**

### **TRANSPORTATION**

#### **PARATRANSIT: A VIABLE OPTION TO SENIOR MOBILITY?**

D.P. McCarthy, 1. *Occupational Therapy Department, Florida International University, Miami, Florida*, 2. *Lehman Center for Transportation Research, Miami, Florida*

The Americans with Disabilities Act requires public transportation providers to offer paratransit services for those who are unable to use the public transportation system due to functional limitations. While reported barriers to paratransit use (e.g., long wait and travel times due to shared rides, need for advanced scheduling) may prohibit some seniors' use, paratransit options typically offer somewhat more flexible travel times than public transportation and offer door to door service. Miami Dade's Special Transportation Service provided over 1.5 million trips in the last fiscal year. The purpose of this study was to learn more about Miami Dade's senior paratransit users. Of the 275 participants who completed the South Florida Senior Travel Survey, 46 people (16.7%), aged between 65 and over 90 years, reported that they currently used paratransit services. When compared to the Miami Dade population, users were disproportionately White (63.0%), female (71.7%), and lived alone (63.0%). Participants who reported having used paratransit in the past week (n=20) averaged 2.9 trips per week and most trips took less than 2 hours (1.2 hours, SD .38). There was a high overall satisfaction rate (94.3%) among users, including safety (97.3%), reliability (91.9%), cost (93.5%), and timeliness (97.3%). Most riders (94.6%) said that STS met their travel needs. Paratransit services enable eligible seniors who cannot use public transportation to remain active, engage in favored activities, and access needed goods and services to remain independent in the community. Paratransit appears to play a key role in maintaining senior mobility.

#### **UNDERSTANDING THE ROLE OF PERSONALITY IN UNSAFE DRIVER BEHAVIOUR ACROSS THE LIFESPAN**

J. Riendeau<sup>1,2,3</sup>, M. Bedard<sup>1,2,3</sup>, 1. *Centre for Research on Safe Driving, Thunder Bay, Ontario, Canada*, 2. *Lakehead University, Thunder Bay, Ontario, Canada*, 3. *St. Joseph's Care Group, Thunder Bay, Ontario, Canada*

Young and older drivers are overrepresented in crash statistics. Personality is consistently linked to dangerous driving among young drivers but little research has examined the role of personality among older drivers. Given the relationship between personality and driver safety among younger populations and the relative stability of personality throughout adulthood, it is important to examine whether personality traits may be related to unsafe driving in older adults. We recruited 114 active drivers ranging in age from 18 to 89 years (M = 42.30 years; SD = 26.50 years). A series of questionnaires measured personality traits and self-reported driving habits. Driving performance was measured during a 30-min simulated drive. Our results did not provide support for the role of personality in the prediction of self-reported unsafe driver behaviour, thus raising considerable doubt about the continued use of self-report inventories as measures of driver behaviour. However, some personality factors (e.g., Extraversion, Neuroticism) emerged as significant predictors of observed driving performance. In addition, the linear ( $p < .01$ ) and quadratic ( $p < .05$ ) components of the age by Conscientiousness interaction were statistically significant, suggesting that personality may not have equal effects on all groups of drivers. To the best of our knowledge, this is the first investigation of the role of personality in the prediction of unsafe driving behaviour among both young and older adults concurrently. Further investigation is needed to provide more conclusive inferences. Prevention programs designed to reduce crash risk may need to be tailored depending on age and personality attributes.

## EVALUATION OF COGNITIVE IMPAIRMENT AND FIT TO DRIVE IN A MEMORY CLINIC IN JAPAN

E. Horikawa, *Saga University, Saga, Japan*

The number of the people who are 65 years or older is increasing rapidly in Japan. Similarly, the number of people with dementia and cognitive impairment is also increasing. In addition, car driving is the best way to keep mobility for the elderly people in Japan. There are deep concern with the relationships between cognitive ability and fit to drive. We evaluated cognitive abilities and driving skills of the people with dementia and Mild cognitive impairment in a memory clinic in Japan. Several medical diagnosis, neuropsychological tests and evaluation of driving ability using driving simulator were administered. Many of the patients indicated the low driving skills and they should stop driving immediately from the results of driving simulator. But the correlation between accidental history and cognitive impairment was not clear. Although the persuasions by medical staffs and patient's family, some of patients denies stop to driving. The reasons of not stop driving included that their feeling on the result s of driving simulator was low and there was no way to keep mobility without driving. We need the further analysis on the relationships between driving skills and cognitive impairment. More easy methods to evaluate the actual driving skill is also needed.

## A QUANTITATIVE ANALYSIS OF A TEXAS CAREGIVER ORGANIZATION FOR OLDER ADULTS

P.C. Dew, *Sociology, Texas State University-San Marcos, Austin, Texas*

The purpose of this research is to identify patterns associated with service use of clients of a Texas-based non-profit organization NCC, which provides free transportation services to anyone over 60. This research is important because it fills gaps in current literature regarding transportation services provided for older adults. This is a quantitative analysis of the 2011 NCC Client Survey. The survey consists of 71 of the 251 current active clients. Several tests were used to determine statistically significant relationships present including t-tests, ANOVA and chi-square tests of independence. A proxy variable, wealth, is used to describe the median home value per zip code. The sample consists of 25% male clients and 75% female clients. The ethnicity of the sample is a majority Caucasian (82.6%) with 8.7% Hispanic, 6.5% African American, and 2.2% Asian. The marital status of the respondents is 48.7% married, 33.3% widowed, and 17.9% divorced/single. Statistically significant relationships exist among the variables age and affordability ( $F = 4.835$  and  $t = 3.09$ ), wealth and affordability ( $t = 3.095$ ), marital status and availability ( $\text{chi-square} = 20.124$ ), and affordability and participation in senior day out ( $\text{chi-square} = 10.463$ ). A significant relationship did not exist between wealth and availability.

## SESSION 2110 (POSTER)

### WEALTH ACCUMULATION

#### WEALTH ACCUMULATION OF OLDER ADULTS IN THE UNITED STATES

G. Bayaz-Ozturk, *Hunter College, CUNY, New York, New York*

This paper presents an analysis of wealth holdings of older people using data from the Health and Retirement Study. Besides financial wealth which is widely studied in the literature, we evaluate economic well-being of those who are nearing retirement by using a comprehensive measure of wealth. Our wealth measure includes regular items such as housing and financial wealth as well as often-neglected wealth measures from Social Security, employer pensions, life annuities and transfer payments such as Supplemental Security Income, Food Stamps and veterans' benefits. To understand the degree of dispersion in asset values or wealth from annuity-like benefits, we calculate wealth inequality using different measures of inequality. Moreover, we make use of decomposition techniques that determine the portion of cross-sectional and inter-temporal inequality attributable to specific components of

wealth. We found that Gini coefficient for total household wealth rose from 0.501 in 1992 to 0.561 in 2004. Our findings indicate that net financial wealth was the most important source of inequality which explained more than half of the wealth inequality and it was followed by pension and social security wealth. Changes in the shares of wealth components were the major factors underlying the overall change in wealth inequality over the whole period. We also observed that components of wealth were less equally distributed over time explaining approximately half of the change in overall inequality.

## EXPLAINING THE USE OF PROFESSIONAL FINANCIAL ADVISORS AMONG THE PRE-RETIRED IN CANADA AND USA

L. Stone<sup>1</sup>, C. Rainville<sup>2</sup>, *1. Demography, University of Montreal, Ottawa, Ontario, Canada, 2. AARP, Washington, District of Columbia*

This paper analyses the use of professional financial advisors in the pre-retired population. The analyses employ microdata files from three 2009 to 2010 surveys: two conducted in Canada and one in USA. Among the predictors of seeking help from professional financial advisors, using Employee Benefit Research Institute data (USA), the statistically strongest are worry about economic dependency in retirement, nearness of the expected date of retirement, and membership in a workplace pension or retirement savings plan. In the Canadian Financial Capacity Survey dataset, among the measured predictors of seeking help from professional financial advisors, occupation, financial self-assurance, immigrant status, and net worth class are the statistically most important contributors to the goodness of fit of the model. Unusually high probabilities of receiving professional financial assistance can be found in population segments that comprise younger Canadian-born persons with education below university degree, who were in the managerial occupations and in the higher net worth ranks. In contrast, a very low probability of receiving financial advice from a professional source is found among well-educated immigrant women in the lower net worth classes and in the sales and service occupations. Among the predictors of trust in professional financial advisors, the priority assigned to retirement planning and confidence about one's future in retirement are statistically the key determinants, according to the EBRI data for the USA. Patterns of association of key factors with three dependent variables are discussed, and policy implications are mentioned.

## SAVE FOR RETIREMENT AND FINANCIAL LITERACY: AN EXPERIMENT IN URBAN AND RURAL COMMUNITIES

L. Cheng, *Social Work, National Taiwan University, Taipei, Taiwan*

Taiwan has witnessed a trend of fast graying population for the past two decades. But, economic safety net limitation and family erosion has placed huge challenges on the sustainability for the old age people of the society. How individuals could cope with the risks of economic insufficiency during their retirement time period? The study has two objectives. First, the study intends to design and revise a financial education handbook regarding saving for retirement appropriate for the near old-aged. Secondly, the study examines the relationship between improving financial literacy and attitudes toward preparing for retirement. The study included two parts. First, a financial education handbook was created based on in-depth interviews the financial regulators and local NGOs and focus group interviews with local residents in two selected communities, one urban and one rural. Secondly, financial education classes were given to the recruited participants between 40 and 60 year old residents from two study sites. Pre- and post measures were used to examine the level of financial literacy to members of experimental and comparison groups. And a follow-up questionnaire was mailed to them six months later. Statistical analyses indicated that financial educational classes in experimental groups, compared to comparison groups, did improve financial knowledge significantly among pre, post, and follow up measures. Further, participants from urban site carried more

financial behaviors significantly than the other participants. Policy implications are included.

### **WHY IS RETIREMENT PLANNING ADVICE OFTEN INCONSISTENT?**

G.A. Mackenzie<sup>1</sup>, J.A. Turner<sup>2</sup>, 1. *AARP, Washington, District of Columbia*, 2. *Pension Policy Center, Washington, District of Columbia*

Sound financial planning for persons approaching retirement is of the utmost importance. Mistakes can condemn retired households to deprivation if not outright penalty. Nonetheless, financial experts often disagree strongly on key principles of retirement finances or give poor or biased advice. To take several examples: There is basic disagreement over how safe investing in the stock market is, and over the value of expert advice in picking stocks. Both theory and evidence imply that the small investor is better off in index funds, but that view is hotly contested. The replacement rate (the ratio of income in retirement to a measure of income late in working life) is a basic tool of retirement planning. However, it suffers not only from important measurement issues, but is criticized for lacking a sound conceptual basis. About one in two older Americans decide to claim Social Security retirement benefits at the earliest opportunity, even though delaying for several years would substantially increase their benefit. Many retiring Americans do not receive adequate advice on when to claim, or on the related question of the merits of annuities. Our paper aims to describe clearly the roots of these contrary views, and to resolve them to the extent possible.

## **SESSION 2115 (POSTER)**

### **WORK AND RETIREMENT**

#### **HEALTH-RELATED PREDICTORS OF DESIRED RETIREMENT AGE: A NATION-WIDE STUDY OF OLDER SWEDISH WORKERS**

B. Caracciolo, M. Hyde, H. Westerlund, *Stockholm Stress Center, Stress Research Institute, Stockholm University, Stockholm, Sweden*

**Aims:** To assess the associations between health-related factors and desired retirement age, taking into account socio-demographic characteristics. **Methods:** The study included 5,537 respondents to the second (2008) or third (2010) wave of the Swedish Longitudinal Occupational Survey of Health (SLOSH), who were aged 50 to 64 years at the time of the survey. The associations between desired retirement age, health-related factors and socio-demographic characteristics were assessed using Multinomial Logistic Regression models. The outcome categories "early desired retirement" and "late desired retirement" described persons wishing to retire before or after the expected retirement age of 65. **Results:** In mutually adjusted models, having at least one disease and having more than one disease (multimorbidity) were both associated with the desire to retire early (OR 1.3, 1.02-1.7; OR 1.4, 1.1-1.8) and with reduced odds of late desired retirement (OR 0.7, 0.5-0.9; 0.7, 0.5-0.9). Depressive symptoms and subjective cognitive impairment were associated with increased odds of early desired retirement (OR 1.4, 1.2-1.7; OR 1.3, 1.01-1.8) but did not predict late desired retirement. Socio-demographic characteristics were an important predictor of both early and late desired retirement. In particular, older age and being a man increased the odds of late desired retirement (OR 1.6, 1.4-1.8; OR 1.5, 1.2-1.8) while younger age and being married were associated to early desired retirement (OR 2.2, 1.8-2.8; 1.4, 1.2-1.7). **Conclusions:** While physical health influences both early and late desired retirement, cognitive and mental health are mostly associated to the wish to retire early.

#### **WORK-RELATED BURNOUT IN AFRICAN-AMERICAN AND RUSSIAN-SPEAKING HOME CARE AIDES: THE FACTOR STRUCTURE AND ITS EQUIVALENCE**

V. Lukyanova, N. Muramatsu, *University of Illinois at Chicago, Chicago, Illinois*

Work-related stress and burnout are significant problems in home care aides (HCAs) who help disabled older Americans with housekeeping and personal assistance in their homes. To understand and compare the stress process leading to burnout among racially and ethnically diverse HCAs, it is critical to develop a valid and comparable measure of work-related burnout that is applicable for multiple ethnic groups. The purpose of this study is to examine the structure of work-related burnout among African-American and Russian-speaking HCAs who constitute major ethnic groups in a large Midwestern city. Data came from a survey of 644 African-American and 159 Russian-speaking HCAs. Burnout (exhaustion in two domains: the organization's work environment and client-related work) was assessed by the Copenhagen Burnout Inventory, which was developed to be used specifically for human service personnel. Confirmatory factor analysis was conducted to test two-factor models that include work and client domains separately and a one-factor model that combines the two domains. The one-factor model provided the best fit to the data compared with the two-factor models. The one-factor model was found to apply equally well to African-American and Russian HCAs. Results suggest that work and client domains are inseparable for HCAs who provide care in their clients' home, unlike other healthcare professionals that work in a well-defined setting (e.g., a hospital). The results will help compare the levels of burnout between African-American and Russian HCAs and help understand their experience with stress in home care.

#### **DO PSYCHOSOCIAL CHARACTERISTICS AFFECT LATER-LIFE TRANSITIONS? AN EXAMINATION OF RACE DIFFERENCES IN JOB CHANGES**

L. Best, *Pan-African Studies & Sociology, University of Louisville, Louisville, Kentucky*

Prior research on retirement and well being is mixed, with literature illustrating negative, positive, or no impact on well being in later life. While research has shown associations between retirement and physical health outcomes, few studies explore whether distinct personality characteristics and other psychosocial factors contribute to how older individuals deal with occupational changes. Using the three waves (2004, 2006, & 2008) of the Health and Retirement Study, I identify individuals over the age of 60 who have undergone a job transition (e.g. retirement, job change, job loss) within this four-year span. From there, I evaluate the differences in the reports of chronic stress as well as disease outcomes among White, African-American, and Hispanics. I also examine the variation in personality characteristics, as measured by the Five Factor Model of Personality, which measures dimensions of Extraversion, Agreeableness, Conscientiousness, Neuroticism, Agreeableness, and Openness to Experience by race and by occupational transition. Finally, I explore whether variations in personality characteristics play a buffer, if any, in significant changes in stress and health outcomes of those individuals who have experienced a job loss, job change, or retirement. Preliminary findings suggest that there are significant race differences in how one handles occupational transitions, particularly job loss. Personality traits vary by race/ethnic group; however, these differences are partly accounted for by socio-demographic characteristics.

#### **AGE AND INEQUALITY IN WORKPLACES**

C. Krekula, *Dept of Social Studies, Karlstad University, Karlstad, Sweden*

The demographic transition entails a greater need for more workers working longer. Therefore there is a need for knowledge on the mechanisms of exclusion that affect older workers in the workplace. Research

has revealed that older workers are discriminated against in recruitment and downsizing processes, among other areas, and that older workers manipulate signs of being of a high age to reduce their vulnerability to ageism. Revealing this age based inequality in the workplace is important, but to achieve equal age relations knowledge of the processes that create age based inequality and exclusion of the elderly is also necessary. This paper takes its part of departure in theoretical claims that argue that inequality is created in everyday practices for interacting and is expressed through categories and the notion that people are different due, for example, to age. Through analyzing focus group interviews and through observations of individuals' interactions and how workplaces are organized, I illustrate how age categories are translated into organizing principles in workplaces. The results reveal how age codings, i.e. practices of distinction that are based on and maintain notions of a phenomenon as appropriate for demarcated ages, are institutionalized and the consequences this has for different age groups. The results also illustrate how age hierarchies vary with context and in line with how responsibilities in the workplace are coded.

### **WHO ARE WE NOW: A STUDY OF IDENTITY IN LATER LIFE**

H. Kempler, D. Barlow, M. Damon, P. King, M. Reeder, S. Tishler, R. Wald, *Harvard Institute of Learning in Retirement, Cambridge, Massachusetts*

This paper is about the changes in identity of retired and aging seniors, all members of a learning in retirement institute. Thirty two randomly selected volunteers, between 60-89, equally divided between men and women, were interviewed by their peers. Our questionnaire focused on family and social connections, future concerns, spirituality, wisdom and on change and/or continuity in self-perception. A majority of participants maintain their identity- their values, attitudes, personal traits- developed pre-retirement. A few identified a change in identity- a woman with a new passion for writing, a man dealing with health challenges. Some women mentioned becoming more independent, assertive and self accepting. While acknowledging the loss of centrality in the lives of their children, the group was pursuing social connections even in their 80's. Retirement did not lead to changes in spirituality. Some people continue affiliation with traditional religious institutions while others prefer individual expression through nature, music and Buddhism. Feelings of freedom and relief from multiple past responsibilities were associated with the discovery of new interests, family involvement and volunteering. Future concerns dealt with the inevitability of death, but also revealed strong feelings about wanting control over pain, suffering and venue at end of life. Besides emphasizing autonomy and choice in the retirement process, the results show the value of engagement with a community in purposeful activities like learning and attention to end of life policies mindful of individual dignity. Future research might focus on resilience and support for positive identity in the face of the challenges of aging.

### **EXPECTATIONS OF SATISFACTION WITH LIFE IN RETIREMENT: AN AGE COMPARATIVE INVESTIGATION**

H.C. Gutierrez, D.A. Hershey, *Psychology, Oklahoma State University, Stillwater, Oklahoma*

To date, most research on retirement satisfaction has focused on the perceptions of retirees. However, understanding pre-retirees expectations of late life is important, because one's perceptions of the future can significantly shape life planning behaviors—such as the extent to which one plans and saves for retirement. In this paper, two statistical models are tested in which the dependent measure is expectations of future satisfaction with retirement. One model was constructed for a group of undergraduate students (M age = 19.55, SD = 2.28), and the other was developed for a group of middle-aged working adults (M age = 49.09, SD = 7.91). In these two theoretically-driven, hierarchically-structured path models, perceptions of one's future satisfaction

with retirement were regressed on indicators of financial knowledge, future time perspective, financial risk tolerance, and parental financial values. Both models were successful in accounting for significant variance in perceptions of future retirement satisfaction (R-squared young = 23%; R-squared old = 15%). One particularly influential predictor of perceived retirement satisfaction among college students was their parents' financial values. Superior predictors for members of the older sample, in contrast, included financial knowledge and financial risk tolerance. The results of this research have implications for retirement counselors and intervention specialists who seek to cultivate positive perceptions of late life among individuals of different ages. Specifically, retirement intervention specialists could benefit by targeting different types of constructs for younger and older adults in an effort to motivate individuals to adaptively plan and save for the future.

### **ANTICIPATING RETIREMENT AND FUTURE CARE NEEDS: INTERVIEWING LESBIANS BETWEEN 50 TO 65 YEARS OLD**

C.R. Bennett, *Doctoral Program in Gerontology, UMBC/UMB, Baltimore, Maryland*

Lesbian older adults are underserved and understudied. Although nearly seven percent of the female population of the US identifies as lesbian, there is limited research on lesbian adults between the ages of fifty and sixty-five. This cohort represents those at a pre-retirement or planning age for older adulthood and although there are reasons to suggest that lesbians plan for retirement and long-term care needs differently than other women, there is a lack of research related to childless lesbians adults compared to their heterosexual counterparts. Reasons that lesbian adults may plan differently for their retirement include issues of life-long discrimination and fear of healthcare and related services, unequal treatment under Social Security and pension plans, as well as durable power of attorney needs and issues of survivorship and inheritance. Similarly, childless older adults plan for their future care needs differently than childed peers; without children to anticipate meeting traditional care and planning roles, childless older adults may seek to foster fictive kin relationships in lieu of traditional child caregivers, for example. This poster examines (1) conscious development of fictive kin relationships; (2) concerns about future caregiving needs; and (3) financial and legal planning. Data for this poster are drawn from an ongoing study of lesbian adults from the upstate New York geographical area. Semi-structured interviews were conducted and tape-recorded, transcribed, coded and analyzed using Atlas.ti software for key themes and meaning related to retirement and long-term care. This poster will inform future policy and program planning for community-dwelling lesbian older adults.

### **THE EFFECTS OF EMPLOYMENT STATUS AND DAILY STRESSORS ON TIME SPENT ON DAILY HOUSEHOLD CHORES IN MIDDLE-AGED AND OLDER ADULTS**

J.D. Wong<sup>1</sup>, D. Almeida<sup>2</sup>, *1. Waisman Center, University of Wisconsin, Madison, Madison, Wisconsin, 2. Pennsylvania State University, University Park, Pennsylvania*

The transition from paid work to retirement may lead to a recalibration of one's time use in daily activities. This study assesses how employment status (worker vs. retiree) and life course influences (age, gender, and marital status) are associated with time spent on daily household chores. Secondly, this study examines whether the associations between daily stressors and time spent on daily household chores differ as a function of employment status and life course influences. Men and women aged 55 to 74 from the National Study of Daily Experiences (N=268; 133 workers and 135 retirees), a part of the National Survey of Midlife in the United States (MIDUS), completed telephone interviews regarding their daily experiences across eight consecutive evenings. Results showed that working women spent more than double

the amount of time on daily household chores than working men. Unmarried retirees spent the most amount of time on daily household chores than their counterparts. There was a trend towards significance for the association between home stressors from the previous day and time spent on daily household chores as a function of employment and marital status. These findings highlight the importance of gender and marital status in the associations between employment status and time spent on daily household chores, and the role that daily stressors, in particular home stressful events, have on daily household chore participation.

## SESSION 2120 (POSTER)

### HOSPITAL AND ACUTE CARE

#### IN-HOSPITAL FUNCTIONAL DECLINE OF OLDER ADULTS AND GREATER SATISFACTION WITH NURSING CARE

A. Zisberg<sup>1</sup>, C. Zlotnick<sup>1</sup>, E. Shadmi<sup>1</sup>, G. Sinoff<sup>2,3</sup>, N. Gur-Yaish<sup>4</sup>, *1. The Cheryl Spencer Department of Nursing, Haifa University, Haifa, Israel, 2. Department of Geriatrics, Carmel Medical Center, Haifa, Israel, 3. Department of Gerontology, Faculty of Social Welfare and Health Sciences, University of Haifa, Haifa, Israel, 4. Center for Research and Study of Aging, Faculty of Social Welfare & Health Sciences, University of Haifa, Haifa, Israel*

Patient satisfaction represents hospitalized patients' perceptions, but these perceptions are molded by their expectations as well as hospital outcomes. Since older adults, compared to younger individuals, have higher rates of hospital admissions and longer hospital stays, it is important to identify patient characteristics and outcomes related to nursing satisfaction of older adults. Objective: Although some studies have examined the impact of change in functional status on satisfaction with medical care among older adults, no studies have assessed this relationship with satisfaction for in-hospital nursing care. Methods: A sample of adults 70 years or older (n=393) admitted to a large hospital in Israel for non-disabling conditions were recruited for this study. Three parameters of satisfaction with nursing care were measured: the art of nursing care (ANC) comprising the most sophisticated aspects of nursing interventions; the tangible aspects of nursing care (TNC) comprising the more basic functions; and a general overall measure of nursing (GNC). Results: Decline in functional status over the course of hospitalization was the most powerful predictor of satisfaction with ANC and TNC. Other characteristics such as depression and having a live-in paid caregiver also exhibited an influence on the satisfaction with nursing care measures. Discussion: This finding suggests that patients who have a greater need for professional nursing care report greater satisfaction with ANC and TNC functions. Older adults who regularly receive one-on-one care from a paid live-in caregiver may have higher expectations of general care, and these expectations may be reflected in scores given on satisfaction surveys.

#### CARE DELIVERY CONSEQUENCES OF POOR QUALITY HOSPITAL-TO-SKILLED NURSING FACILITY TRANSITIONS: A QUALITATIVE STUDY

B.J. King, A. Kind, A.L. Gilmore, R. Roiland, K.E. Pecanac, N. Husain, B. Bowers, *University of Wisconsin-Madison, Madison, Wisconsin*

Background: Poorly executed transitions from the hospital to home can result in care fragmentation and lapses in patient safety. Research has focused on transitions from hospital to home with few studies on the highly vulnerable population: older adults transferring from the hospital to a Skilled Nursing Facility (SNF). Nurses in SNFs design a resident's plan of care based on orders/information received from the hospital physician and nursing staff. The purpose of this study is to explore how nurses in SNFs transition care of residents admitted from hospitals, the barriers they experience and consequences to residents, nursing staff, and facility that occur related to the transition. Methods: This qualitative study utilized Grounded Dimensional Analysis, a variant of

Grounded Theory. Registered nurses (n=27) employed at 5 SNFs in Wisconsin participated in focus groups with in-depth interviews. Data was analyzed using open, axial and selective coding. Results: SNFs nurses indicated that patient information from hospitals was always inaccurate, incomplete and/or missing, requiring nurses to repeat a time-consuming cyclic process of information gathering and reconciliation and compromising construction of the resident plan of care. This resulted in negative consequences such as delays in care delivery, nurses having to work blindly/use caution when providing care to residents, increase in staff stress and a perpetuation of the negative image of SNFs. Conclusions: Nurses in SNFs identify multiple deficiencies in hospital-to-SNF transitions, which impact care delivery to residents. Results of this study can inform interventions to improve hospital-to-SNF care transitions and communication.

#### INFLUENCE OF HEALTH SYSTEM FACTORS ON OUTCOMES OF HOSPITALISATION FOR PEOPLE WITH DEMENTIA

B. Draper<sup>1,2</sup>, N. Chan<sup>3</sup>, R. Karmel<sup>3,4</sup>, A. Peut<sup>3,4</sup>, D. Gibson<sup>4</sup>, C. Hudson<sup>3</sup>, P. Anderson<sup>3,4</sup>, *1. University of New South Wales, Sydney, New South Wales, Australia, 2. Prince of Wales Hospital, Sydney, New South Wales, Australia, 3. Australian Institute of Health and Welfare, Canberra, Australian Capital Territory, Australia, 4. University of Canberra, Canberra, Australian Capital Territory, Australia*

Objectives: Our aim was to determine the influence of hospital- and community-based aged care and dementia services on outcomes of hospitalisation for people with dementia. Methods: The sample was people aged 50 years and over who had at least one overnight stay in a public hospital in New South Wales (NSW), Australia that ended in the year to June 2007 (N=252,719). Data were integrated from three sources to provide information about patient demographics and health (NSW Admitted Patient Data Collection); availability of hospital aged care and dementia services and staff (NSW public hospital survey; n=163, response rate 82%); and availability of community-based and residential care (Aged and Community Care Management Information System). Negative binomial and logistic regression analyses using information from patient's first hospital stay ending in 2006-07 were undertaken to examine the influence of these factors on placement into residential care and length of hospital stay for people with dementia. Results: Having access to specialist aged care medical staff while in hospital was associated with lower likelihood of placement into residential care (b=.32, p<.01) and shorter stays (b=-.13, p<.01) after allowing for other factors. Presence of dementia education forums but not dementia or delirium policies was associated with lower likelihood of placement into care and shorter stays. Neither pre-admission nor post-discharge hospital services were related to likelihood of placement into care or length of stay. Conclusion: Findings suggest that specialist aged care staff and staff education are associated with better outcomes of hospitalisation for people with dementia.

#### PREDICTORS OF PAIN INTENSITY IN OLDER HOSPITALIZED CANCER PATIENTS

G.L. Towsley<sup>1</sup>, J. Guo<sup>1</sup>, J. Brant<sup>2</sup>, E. Smith<sup>3</sup>, P.H. Berry<sup>1</sup>, M. Pett<sup>1</sup>, S.L. Beck<sup>1</sup>, *1. University of Utah, Salt Lake City, Utah, 2. Billings Clinic Inpatient Cancer Care, Billings, Montana, 3. University of Michigan, Ann Arbor, Michigan*

Pain is highly prevalent in hospitalized cancer patients. The purpose of this study was to examine factors associated with pain intensity in older hospitalized cancer patients. Existing data for this cross-sectional, descriptive study were utilized from a larger study focused on testing the PainCQ survey, which measured pain care quality in individuals with various types of cancer from three hospitals in the U.S. Pain intensity included the mean of four items from the Brief Pain Inventory (worst pain, least pain, average pain, and pain now). Descriptive statistics and regression analyses were conducted to evaluate factors associated with



pain intensity in hospitalized cancer patients age 60 and older. Independent variables included age, gender, race, ethnicity, education, comorbid diseases (e.g., diabetes), and pain quality—the Efficacy of Pain Management subscale of the PainCQ. The sample included 126 patients ranging in age from 60 to 97 (Mean = 69.07); 53.2% were female, 99.2% White, 65.3% married, and 58.3% had some college or higher. Pain intensity subscale items ranged from 0 to 10 (mean = 3.72, SD = 2.03). Three variables were significant negative predictors of pain intensity; Efficacy of Pain Management, education, and arthritis accounted for a significant amount of variance in pain intensity,  $R^2 = .17$ ,  $F(3,121) = 7.99$ ,  $p < .001$ . Patients with lower pain quality efficacy scores, less education, or the presence of arthritis had higher pain intensity scores. The impact of gender was likely confounded with arthritis. Funded by the Robert Wood Johnson Foundation INQRI Program.

#### **FREQUENCY AND DURATION OF NURSE-ASSISTED OLDER PATIENT AMBULATION IN A HOSPITAL SETTING**

B.J. King<sup>1</sup>, J.E. Mahoney<sup>2</sup>, K.E. Pecanac<sup>2</sup>, J. Yoon<sup>2</sup>, R.L. Brown<sup>2</sup>, 1. William S. Middleton Memorial Veterans Hospital, Madison, Wisconsin, 2. University of Wisconsin- Madison, Madison, Wisconsin

**Background:** Loss in ability to independently ambulate occurs in 16-59% of hospitalized older adults. Bed rest and limited ambulation during hospitalization have been identified as the most predictable and preventable causes of walking disability in older adults. Because of their 24-hour presence at the bedside, registered nurses (RN) have been identified as key health care providers who can prevent decline in walking ability in older adults. The purpose of this study was to measure the frequency and duration of nurse-assisted ambulation of older patients in hospital settings. **Methods:** RNs were observed for eight-hour periods for a total of 114 hours. Frequency and duration of five types of nurse-assisted patient ambulation were measured: standing at bedside, transferring to a chair, walking to and from the bathroom, walking within the patient room and walking in the hallway. Research members used Android tablets loaded with a time motion software program to record activity events. **Results:** Older patients spent the majority of their time in bed. Average duration of total patient ambulation activity per 8 hour observation period was 16.69 minutes and percentage time for all patient ambulation activity was 3.48%. Percentage of time RNs engaged patients in ambulation activity included: Standing 0.84% transferring 0.31%, walking to and from bathroom 0.49%, walking in patient room 0.11%, and walking in hallway 1.71%. **Conclusion:** Loss of ability to ambulate is a common problem for hospitalized older adults. Research efforts should be focused on strategies that increase the frequency and duration of nurse assisted patient ambulation.

#### **CASCADE IATROGENESIS: POSTOPERATIVE RESPIRATORY FAILURE IN HOSPITALIZED OLDER ADULTS**

D.K. Thornlow, E. Oddone, R.A. Anderson, Duke University, Durham, North Carolina

**Aims:** Describe postoperative care trajectories of older adult surgical patients who developed postoperative respiratory complications and nurses' attempts to recognize emerging conditions and institute preventive measures. The goal was to outline the events that led to an episode of respiratory dysfunction or failure and identify nursing care that prevented, mitigated, or exacerbated its occurrence. **Methods:** We conducted seven focus group interviews with 30 nurses who worked in one of three hospitals in a health system in the Southeastern United States. The interview guide included 'open-ended' questions with probes intended to encourage narratives from the nurses' perspectives. Text was coded according to the variables in our conceptual model and then the coded data were analyzed to identify patterns or themes. **Results:** Ambulation, pain management, and surveillance comprised key nursing activities during the postoperative period. Nurses supported patients using goal setting, coaching, and education. The nurses described that patients

could be barriers, for example by not doing breathing exercises, and thus noted that enlisting cooperation of patients and families in meeting expected milestones was necessary to achieve desired outcomes. Nurses' judgment, collaboration, and the care environment (e.g., staffing, acuity) also played a role in nurses' ability to recognize emerging conditions and effectively intervene. **Conclusions:** Nurses reported activities consistent with our conceptual framework (e.g., surveillance, ambulation), yet highlighted others: support, cooperation, judgment, and relationships. Identifying nurses' attempts to recognize emerging conditions and institute preventive measures in the postoperative setting are necessary prerequisites for designing solutions to prevent cascading complications in hospitalized older adults.

#### **PREOPERATIVE ASSESSMENT OF THE OLDER ADULT HAVING SURGERY FOR CANCER: TRANSLATING INFORMATION TO IMPROVE POSTOPERATIVE NURSING CARE**

J. Coleman, Department of Surgery, Johns Hopkins Hospital, Baltimore, Maryland

Aging is the most significant risk factor for the development of cancer. The number of persons 65 years and older in the United States is rapidly growing. This expanding older population, with its associated increased risk, creates a demand for oncology care. There is a paucity of data on what nurses perceive as necessary preoperative information about the older adult having surgery for cancer to provide quality care and improve patient outcomes. Thirty patients, 65 years and older, having elective surgery for hepatobiliary and pancreas cancer were administered the Preoperative Assessment for Cancer in the Elderly (PACE) tool. Results were provided to the nurses caring for the patient postoperatively. A nursing questionnaire was administered to each nurse who cared for the patient to assess information identified as necessary for assisting in providing care, instituting safety measures, and discharge planning. A total of 30 questionnaires were obtained either at the time of or after the patient's discharge. Knowledge of the older patient's preoperative performance status was perceived by experienced nurses as significant in order to provide appropriate and adequate postoperative care (Pearson correlation 0.01). Nurses perceived the following information as helpful or necessary at 96.8%: activities of daily living, current medications, and family involvement in care. Knowledge of the older patient's living condition and comorbidities were also perceived to be helpful by more than 90% of the nurses. Nurses need accurate preoperative information about the older patient having surgery for hepatobiliary or pancreas cancer to provide interventions for optimal patient care.

#### **THE RELATIONSHIP BETWEEN DEMENTIA AND ALTERNATE LEVEL OF CARE PATIENTS IN HOSPITALS**

P. Jarrett<sup>1,3</sup>, R.M. McCloskey<sup>2</sup>, C. Stewart<sup>2</sup>, 1. Geriatric Medicine, Horizon Health Network, Saint John, New Brunswick, Canada, 2. University of New Brunswick, Saint John, New Brunswick, Canada, 3. Dalhousie University, Halifax, Nova Scotia, Canada

**Purpose:** The growing number of Alternate Level of Care (ALC) patients in Canadian hospitals is a national trend. The purpose of this study was to characterize these patients by diagnoses, living situation prior to admission, hospital utilization, and length of stay. **Methods and Analysis:** A chart review on all ALC patients as of July 1, 2009 in two hospitals in an urban center in New Brunswick was conducted. **Findings:** Of the 568 acute care hospital beds, 181 (31.87%) of these beds were occupied by ALC patients. The average age was 79.3 years (range 29-98). The average duration of the hospital stay was 379.6 days (range 5-6861). Within one year prior to this hospitalization, 61% had had no hospital admissions and 43% had not been seen in the emergency room. Seventy six (42.4%) were living alone in the community and 85 (47.5%) were living with others. Fifty eight percent had no homemaker assistance prior to hospitalization. Sixty six percent of the patients/families

reported that the living/support system in the home prior to admission was inadequate. Eighty one (45.3%) had a known diagnosis of dementia at the time of admission to hospital. Thirty three patients were diagnosed with dementia during their hospitalization. Discussion/Conclusion: The majority of the ALC patients had a diagnosis of dementia, many of whom were not diagnosed prior to admission. Many of these patients came from their own homes, either living alone or with others. Most had no formal homemaker supports in place prior to admission.

### EFFECTS OF THE DETAILED NURSING MANAGEMENT METHODS ON PREVENTING FALLS AMONG HOSPITALIZED OLDER PEOPLE IN CHINA

D. Baofeng, *Beijing Geriatric Hospital, Beijing, China*

**Objective:** To investigate the effectiveness of detailed nursing management measures for preventing falls of the elderly in hospital. **Methods:** During 2009.6—2010.6, all patients  $\geq 60$  years of age in the Beijing Geriatric Hospital were invited for this study. Overall, 2638 older people participated in this research. 2052 hospitalized older people ( $\geq 60$  years old) in the same hospital from 2008.6 to 2009.6 were regarded as the control group. The fall risk level and related risk factors were evaluated by the Fall Risk Assessment (FRA) for each participant when they first come to the hospital. The detailed nursing management measures were established at the same time for each one according to the results of the FRA. Which include the first-time inform system, the family participatory management model, the reporting system and detailed risk factors correction plan. **Results:** The incidence rate of fall was 0.45% after using the FRA and the detailed nursing management methods. That was 1.07% for the control group. The Chi-square analysis revealed that the incidence of fall for the study group was significantly lower ( $\chi^2=6.110$ ;  $P=0.013$ ). The complaint rate was decreased from 3 times a year to zero. **Conclusion:** Using the FRA to evaluate fall risk level and related risk factors, and taking oriented detailed nursing management measures for each one can effectively reduce fall incidence among the elderly in hospital.

### NUMBER OF FRAILTY CHARACTERISTICS IS ASSOCIATED WITH HOSPITALIZATION IN OLDER MEXICAN AMERICANS AND EUROPEAN AMERICANS INDEPENDENTLY OF SOCIODEMOGRAPHIC FACTORS AND DISEASE

S.E. Espinoza<sup>1,2</sup>, H.P. Hazuda<sup>1,2</sup>, 1. *UT Health Science Center, San Antonio, Texas*, 2. *South Texas Veterans Healthcare System, San Antonio, Texas*

**Background:** Frailty has been associated with hospitalization. This study examined whether number of frailty characteristics is associated with hospitalization. **Methods:** Subjects were 689 Mexican Americans and European Americans participants (age 65+) in the San Antonio Longitudinal Study of Aging baseline exam. Frailty score (range: 0-5) was determined using standard criteria as presence of: weakness, slowness, exhaustion, low physical activity, and weight loss. Number of hospital days in the last year was assessed by self-report, and categorized as none versus any. Multiple logistic regression examined odds of hospitalization by frailty score adjusting for: age, sex, ethnic group, education, income, diabetes, comorbidity, mini mental state exam and geriatric depression scale scores. Diabetes was classified using ADA criteria. Comorbidity was defined as  $\geq 2$  of: hypertension, angina, myocardial infarction, stroke, proteinuria, chronic obstructive pulmonary disease, peripheral arterial disease, non-skin cancer, arthritis. **Results:** Mean age was  $69.7 \pm 3.4$  years (range: 65-80). 18% ( $n=124$ ) of participants were hospitalized during the previous year; average number of hospital days was 8.2, range: 1-45. Frailty score was independently associated with odds of hospitalization (OR=1.35, 95%CI: 1.08-1.68,  $p=.008$ ). Thus, with each 1-point increase in frailty score the odds of hospitalization increased by 35%. Other covariates independently associated with hospitalization were diabetes (OR=1.74, 95%CI: 1.04-2.9,  $p=.033$ ) and

comorbidity (OR=2.05, 95%CI: 1.27-3.31,  $p=.003$ ). **Conclusion:** Each increase in number of frailty characteristics was associated with increased odds of hospitalization, regardless of overall frailty status. Geriatricians should consider screening for frailty characteristics as part of clinical practice in order to identify at-risk older adults.

### CAREGIVER SUPPORT AFTER HOSPITALIZATION FOR ACUTE CORONARY SYNDROME

J. Hyde<sup>1</sup>, M. Waring<sup>1,3</sup>, A. Hajduk<sup>1,3</sup>, D. McManus<sup>1,2</sup>, S. Lemon<sup>2</sup>, J. Saczynski<sup>1,2</sup>, 1. *Meyers Primary Care Institute, Worcester, Massachusetts*, 2. *The University of Massachusetts Medical School, Department of Medicine, Worcester, Massachusetts*, 3. *The University of Massachusetts Medical School, Department of Quantitative Health Sciences, Worcester, Massachusetts*

**Background/Aim:** Support from informal caregivers after hospital discharge can improve patient outcomes. However, support received by patients with acute coronary syndromes (ACS) has not been described. We examine the prevalence and characteristics of caregiver support, and associations with demographic factors, depression and cognitive status among ACS survivors. **Methods:** Adults in central MA without dementia or delirium were interviewed during hospitalization for ACS as part of the ongoing Transitions, Risk, and Actions in Coronary Events: Center for Outcomes Research and Education (TRACE-CORE). A subset ( $n=128$  to date) reported on caregiver support received the week after discharge. Patients reported receipt of assistance with 6 tasks pertaining to instrumental (assistance with activities) and informational (assistance with knowledge) support. Cognitive impairment and depression were assessed using the Telephone Interview of Cognitive Status (range = 0-41;  $\leq 30$ =impaired) and the Patient Health Questionnaire-9 ( $>4$ =high depressive symptoms), respectively. **Results:** Participants were 28% female, 77% non-Hispanic white with mean age of  $62.5 \pm 11.0$  years. The majority reported receiving instrumental support (87%; help with: household: 70%; errands: 59%; getting to appointments: 41%), and informational support (66%; help with: medications: 31%; identifying symptoms: 25%; ACS-related knowledge: 33%). Depressed participants were significantly more likely to receive any informational, but not instrumental, support than non-depressed participants ( $p=0.04$ ). Receipt of support did not vary according to demographic characteristics (age, sex, race, marital status, education, or income), or cognitive status. **Conclusions:** The majority of ACS survivors report receiving caregiver support the week after hospital discharge. Caregivers may be important for transitional care planning after ACS.

### EMERGENCY DEPARTMENTS AND OLDER ADULTS: ANALYSIS OF THE EMERGING TREND OF SENIOR EMERGENCY CENTERS

J. Schumacher, *University of Maryland, Baltimore County, Baltimore, Maryland*

Beginning in 2009 a growing number of hospitals have opened emergency departments or dedicated parts of their emergency department exclusively to the treatment of acute, older adult patients in units sometimes called "Senior Emergency Centers (SECs)" or "Senior Emergency Departments (SEDs)." The structure and organization of these older adult focused ED units varies considerably in terms of admission criteria, staffing levels & composition (e.g., physician, nurses, social work, other staff, etc), physical environment (e.g., # of beds, flooring, lighting, occupancy), billing, and other factors. This research analyzes available data and reports on characteristics of these initial Senior Emergency Centers (N=15) nationwide. Results indicate widely varying admission criteria, staffing models, staff satisfaction, patient satisfaction and uneven tracking of patient level outcome data (e.g, readmissions, preventable hospitalization rates). Conclusions of this research articulate policy level implications and make recommendations for the design, implementation, and study of these emerging dedicated settings for the treatment of older adults.

## A COMPARISON OF TIME-AND-MOTION OBSERVATION AND SELF-REPORT OF NURSE ASSISTED OLDER PATIENT AMBULATION IN HOSPITAL SETTINGS

J. Yoon<sup>1</sup>, B.J. King<sup>2</sup>, K.E. Pecanac<sup>1</sup>, B. Bowers<sup>1</sup>, R.L. Brown<sup>1</sup>, T. Schiefelbein<sup>1</sup>, *1. School of Nursing, Univ of Wisconsin-Madison, Madison, Wisconsin, 2. William S. Middleton Memorial Veterans Administration Hospital, madison, Wisconsin*

Nurses are key health care providers who can promote independent functional walking in hospitalized older patients. The frequency and duration of nurse assisted patient ambulation in hospital settings has not been well documented. Traditionally, nursing studies have used self-report to measure frequency and duration of nursing care. However, limitations related to objectivity and accuracy of data recorded by nurses has been reported. Patient ambulation consists of several activities such as, transferring, walking within the patient room and hallway, which could limit accuracy of nurses self report of care activity. An observational study of nurse assisted patient ambulation was conducted. Registered nurses (RN) were observed for 114 hours. Frequency and duration of nurse assisted patient ambulation activity was collected by 1) observation by research members using Android tablets loaded with time motion software and 2) self-report by nursing staff using paper and pencil method. Four patient ambulation activities were measured, transferring, walking to the bathroom, walking in patient room and walking in the hallway. Nurses underreported frequencies of all four types of ambulatory activity. Time estimates for transferring and walking to the bathroom were over-reported and walking in patient room and hallway were under-reported. Most nurses documented patient ambulation several hours after the activity occurred and estimated time rather than using a watch to measure time spent. Nurse self report of patient ambulation activity was inaccurate. Observation should be used to obtain reliable and accurate estimates of nursing care activity related to patient ambulation.

## USE OF HAND HELD COMPUTERS TO DOCUMENT PHASES OF AMBULATION OF OLDER ADULTS IN A HOSPITAL SETTING

K.E. Pecanac<sup>1</sup>, B. King<sup>2</sup>, J. Yoon<sup>1</sup>, R.L. Brown<sup>1</sup>, T. Schiefelbein<sup>1</sup>, B. Bowers<sup>1</sup>, *1. University of Wisconsin-Madison, Madison, Wisconsin, 2. William S. Middleton Memorial Veterans Administration Hospital, Madison, Wisconsin*

Background: Observational studies have found that 72.9-95.9% of the time hospitalized older patients are not engaged in ambulatory activity. Studies on patient ambulation have primarily used accelerometers to document frequency and duration of patient ambulation. Registered nurses (RN) are identified as key health care providers who can facilitate patient ambulation. Qualitative studies have demonstrated that RNs use a step-wise approach (standing, transferring, then walking) when engaging patients in ambulation. This step-wise approach has not been adequately captured by use of accelerometers. Other technology is needed to document the entire series of mobility activity involved in patient ambulation. This study used an innovative approach to document the phases of patient mobility as well as ambulation by testing hand held computers loaded with time series software to record the frequency and duration of nurse assisted patient ambulation. Methods: Android tablets were used, loaded with a flexible software program (FSP) to record the frequency and duration of mobility activities including ambulation of older patients. One hundred fourteen RN work hours were observed. Results: Advantages of the FSP and tablet were ease in navigation, recording events of short duration (2 seconds), ability to memo field notes related to barriers and facilitators of ambulation, and integration with Excel for easy and accurate data importing. Disadvantages included hand fatigue and errors in event selection related to screen sensitivity. Conclusions: Hand held computers, with a flexible software program, offer viable options for documenting the frequency and duration of patient ambulation in hospital settings.

## SESSION 2125 (POSTER)

### LONG TERM CARE

#### BLADDER BUZZ: A URINARY INCONTINENCE EDUCATIONAL PROGRAM FOR NURSING HOME STAFF

K. Ehlman, S. Mathis, R. Dugger, *University of Southern Indiana, Evansville, Indiana*

Issues around urinary incontinence (UI) are challenging for nursing home staff members who provide emotional and physical care to residents. The rate of UI is estimated at between 45% and 70% for residents in long-term care. A knowledge gap exists among nursing home staff members in the areas of attitude toward UI, types of UI, and assessment of UI. To reduce the existing knowledge gap, an interdisciplinary research team created an evidence-based UI education program entitled Bladder Buzz. The purpose of the Bladder Buzz program is to dispel myths about UI, improve knowledge on the types of UI and improve management and treatment of UI among nursing home staff. This feasibility study explored differences in attitude and knowledge related to UI among nursing personnel who provide care for nursing home residents. A quasi-experimental, within-subject longitudinal design was used to assess within group differences. Data were collected before and after the program was provided. Thirty-eight nursing staff members provided pre-and-post data, which assessed attitude and knowledge about UI. The study intervention resulted in a significant positive change in attitude toward UI and knowledge about types of UI. Providing nursing home administrators and staff educators with tools to improve knowledge about UI can potentially reduce the number of UI episodes residents experience, improve residents' health related quality of life, and improve nursing home quality.

#### INFECTION PREVENTION IN LONG-TERM CARE: A SYSTEMATIC REVIEW OF RANDOMIZED AND NON-RANDOMIZED TRIALS

M. Uchida<sup>1</sup>, M. Pogorzelska<sup>1</sup>, P.W. Smith<sup>2</sup>, E.L. Larson<sup>1</sup>, *1. Columbia University, New York, New York, 2. University of Nebraska Medical Center, Omaha, Nebraska*

Background: Little is known about infection prevention interventions in long-term care (LTC). Objective: To critically review and synthesize current evidence and the methodological quality of infection prevention interventions in LTC. Methods: Two reviewers systematically searched 3 electronic databases MEDLINE, PUBMED, and Cochrane Controlled Trials Register for studies published over the last decade assessing randomized and non-randomized trials with older adults in which primary outcomes were infection rates and reductions of risk factors related to infections. To establish clarity and standardized reporting of findings, the PRISMA (preferred reporting items for systematic reviews and meta-analyses) checklist was used. Data Analysis: Data were extracted based on study design, sample size, type and duration of interventions, outcome measures reported, and findings. Study quality was assessed by two reviewers using a validated standardized quality assessment tool. Inter-rater reliability was found to be excellent. Results: 24 articles met inclusion criteria. The majority were randomized control trials (67%), where the primary interest was to reduce pneumonia (63%) and focused on therapeutic interventions (71%). Thirteen (54%) of 24 studies reported statistically significant results in favor of interventions on at least one of their outcome measures. The interventions audited for this review varied considerably in terms of their nature, point of initiation, intensity, and duration. The methodological clarity of available evidence was limited, placing them at potential risk of bias. Conclusions/ Implications: Gaps and inconsistencies surrounding interventions in LTC are evident. Future interventional studies need to enhance methodological clarity using clearly defined outcome measures and standardized reporting of findings.

## PHARMACIST-MANAGED WARFARIN PROTOCOL IN LONG-TERM CARE

R. Sargent<sup>1,2,7</sup>, C. Brocklebank<sup>3,4</sup>, P. Quail<sup>2,5,7</sup>, D. Turner<sup>2,6</sup>, T. Williamson<sup>7</sup>, H. Tam<sup>1,7</sup>, N. Drummond<sup>1,7</sup>, 1. *Department of Family Medicine, University of Calgary, Calgary, Alberta, Canada*, 2. *Integrated, Facilitated, Supportive Living, Alberta Health Services, Calgary, Alberta, Canada*, 3. *Chronic Disease Management, Alberta Health Services, Calgary, Alberta, Canada*, 4. *Anticoagulation Management Services, Alberta Health Services, Calgary, Alberta, Canada*, 5. *Intercare Corporate Group Incorporated, Calgary, Alberta, Canada*, 6. *Carewest, Calgary, Alberta, Canada*, 7. *Southern Alberta Primary Care Research Network, Calgary, Alberta, Canada*

**Rationale:** Warfarin is an anticoagulant used particularly among the elderly to reduce the risk of thromboembolic events. Due to the variability of responses to this medication in individuals, protocols with nomograms are increasingly used for warfarin management. **Objectives:** This study seeks to investigate the effectiveness of a pharmacist-led warfarin protocol on long-term care (LTC) residents' outcomes, safety, and staff workload. **Methods:** Residents on warfarin from three LTC organizations in Calgary, Alberta, were included in this study. Two of the organizations used a pharmacist-led warfarin protocol. The first phase of the project compared outcomes in residents on warfarin in facilities that used and did not use the protocol. The second phase surveyed staff workloads relating to anticoagulation management among physicians, pharmacists, and nurses. Outcome measures included the proportion of International Normalized Ratio (INR) tests in target range and frequency of major bleeding events. **Results:** INR values of time in target range on a per patient basis showed no statistical differences between residents in the protocol group (72.7%, n=104) and control group (65.2%, n=93), p-value=0.260. Of the 13 major bleeding events identified, 10 were from the protocol group. There was no statistical difference found in workload with 43.5% of staff from the control group (n=69) expressing high workload from the current management of warfarin dosing in their facility compared to 42.2% in the protocol group (n=102) (p-value=0.864). **Conclusion:** Results from this study suggest that protocol-based, pharmacist-led, warfarin management is at least as effective in LTC residents as usual care.

## THE IMPLEMENTATION OF PRACTICE CHANGE TO IMPROVE DEMENTIA CARE IN RURAL NURSING HOMES: AN AUSTRALIAN EXAMPLE

S. Davis<sup>1</sup>, A. Campbell<sup>1</sup>, B. McCarthy<sup>2</sup>, 1. *Palliative and Supportive Services, Flinders University, Adelaide, South Australia, Australia*, 2. *McCarthy Psychology Services, Melbourne, Victoria, Australia*

Person-centred dementia care is increasingly being regarded as synonymous with quality dementia care. Yet despite widespread policy mandates, nursing homes struggle to implement and sustain the practice of a person centred approach to care delivery. This paper reports on a two year study funded by the Australian Government Department of Health and Ageing aimed at implementing practice change to improve dementia care in seven rural aged care homes. Using a pre-posttest non-experimental design for the evaluation, outcome measures included levels of psychotropic drug use, frequency of behaviours of concerns, individualized care measures, quality of life and family involvement. The framework of culture change comprised of processes to target philosophy, management support, leadership, skilled staff and environment. While staff in all seven nursing homes showed increased individualized care scores, analysis revealed that observed differences were significant in only five out of the seven locations (observed differences between  $t = -2.264$ , p.028 and  $t = -6.317$ , p.000). This paper will report on data illustrating nursing homes showing higher levels of improvement in staff individualized care scores also had larger decreases in daytime sleeping, negative interactions between staff and residents, behaviours of concern and in the use of psychotropic medications, showed improvements in family involvement and effectively targeted environmental

modifications. Differences in outcomes are examined in relation to implementation processes specific to educating staff, management support, leadership and staff engagement. This will provide insight into overcoming key factors in nursing home organisations that inhibit the implementation of sustainable person centred dementia care.

## STAFF PERCEPTIONS OF END-OF-LIFE COMMUNICATION WITH FAMILY MEMBERS IN JAPANESE NURSING HOMES

H. Fukahori<sup>1</sup>, N. Yamamoto-Mitani<sup>1</sup>, T. Sugiyama<sup>2</sup>, Y. Chiba<sup>3</sup>, M. Miyashita<sup>4</sup>, M. Ersek<sup>3</sup>, 1. *Tokyo Medical and Dental University, Bunkyo-ku, Tokyo, Japan*, 2. *Faculty of Health Care and Nursing, Juntendo University, Bunkyo-ku, Tokyo, Japan*, 3. *University of Pennsylvania School of Nursing, Philadelphia, Pennsylvania*, 4. *Palliative Nursing, School of Medicine, Tohoku University, Sendai-city, Miyagi, Japan*

Communication between health care professionals and family members at the end-of-life (EOL) is indispensable for quality care for nursing home residents. Little is known, however, about EOL communication in Japanese nursing homes. The purpose of this cross-sectional study was to describe nursing staff's perception of EOL communication between staff and family members in a national sample of 301 nurses 822 CWs in 435 Japanese nursing homes. Data were collected using a 10 items self-administered questionnaire regarding aspects of communication (e.g. asking about preferences of care, education about symptoms, addressing differences between family and residents). Respondents used a 4-point Likert scale that was dichotomized into frequent ("often") and infrequent ("never," "seldom," and "sometimes,"). Nurses had an average of 7.9 (SD: 6.2) and CWs 7.3 (SD: 5.2) years experience in working at their current nursing home. Subjects reported that most frequent communication was "Asking about preferences for care (80.4% and 45.1% for nurses and CWs, respectively)" and the least frequent one was "Discussing differences in attitude on EOL care among family members (36.2% and 18.2% for nurses and CWs, respectively). In all items, nurses communicated more frequently than CWs. Findings suggest that although nurses frequently ask residents about preference of care, Japanese nurses appear to be hesitant to address discrepancies in preferences among family members. It suggests that nurses should be educated to work with family members in nursing homes. CWs also frequently discuss EOL issues with residents and families and should receive education regarding EOL care issues.

## PREVALENCE OF AND RISK FACTORS OF MUSCULOSKELETAL DISORDERS AMONG CARE WORKERS IN LONGTERM CARE FACILITIES IN SOUTH KOREA

M. Park<sup>1</sup>, S. Yu<sup>2</sup>, H. Seo<sup>3</sup>, K. Kang<sup>4</sup>, M. Yu<sup>5</sup>, 1. *Nursing Science, Sunmoon University, Asan, Republic of Korea*, 2. *Sangji University, Wonju, Republic of Korea*, 3. *Gangdong University, Echon, Republic of Korea*, 4. *Paichai University, Daejun, Republic of Korea*, 5. *Namseoul University, Cheonan, Republic of Korea*

**Introduction.** The residents of longterm care facilities are functionally dependent on care workers. Although musculoskeletal disorders of them has been reported as a major problem around world, there is limited information on the prevalence and risk factors of its in South Korea. **Aim.** The purpose of this study is to investigate the prevalence and risk factors of musculoskeletal disorders among care workers in the longterm care facilities. **Methods.** A cross sectional study was conducted among 256 randomly selected care workers from 7 longterm care facilities. A self administered questionnaire, including demographic data, Korean Questionnaire for musculoskeletal disorders, physical and psychosocial workload was used. The criteria of National Institute for Occupational Safety and Health(NIOSH) for musculoskeletal disorders was used as a diagnostic tool. Logistic regression was used to analyze the risk factors of musculoskeletal disorders in care workers. **Results.** The

prevalence of musculoskeletal disorders was 62% at shoulder, 61.3% at low back, 46.6% at hands, 40.6% at legs, 36.1% at arms and 35% at neck. Two predictors of shoulder pain were identified: Career as care worker (above 3 year) (OR=2.78, 95% CI: 1.10-7.52), burden of care activity, especially assistance of toileting (OR=5.90, 95% CI: 1.60-21.75) and Two predictors of low back pain were identified: uncomfortable posture during working (OR= 3.99, 95% CI: 1.49-10.66), fixed posture during working (OR= 4.09, 95% CI: 1.25-13.38). Conclusion: The prevalence of musculoskeletal disorders, especially shoulder and low back pain among care workers in South Korea is high. The nursing interventions, such as education about skill of transfer are needed to reduce the risk factors of musculoskeletal disorders.

### **JOURNEY ACROSS THE CARE CONTINUUM PATIENT AND FAMILY PERSPECTIVES**

R. McCloskey<sup>1</sup>, P. Jarrett<sup>2</sup>, C. Stewart<sup>1</sup>, *1. University of New Brunswick, Saint John, New Brunswick, Canada, 2. Horizon Health Network, Saint John, New Brunswick, Canada*

**PURPOSE:** Delayed discharges from hospital back to the community are a serious issue within many healthcare organizations. In most cases, these delays involve older adults requiring supportive care, such as a long-term care facility. In Canada alone, it is estimated that 14% of the country's acute care beds are occupied each day by people waiting for community services. Although delayed discharges are a priority issue within many healthcare organizations, much of this focus is on the utilization of health services, hospital budgets, overcrowding and wait times. Considerably less attention is given to the individuals who experience delayed discharges. Interviews were conducted with patients and families who were waiting in hospital for long-term care. **FINDINGS:** The majority of participants acknowledged the need for additional services prior to the hospital admission but did not know how to access them. For many, the hospital represented the most accessible way to access long-term care services. Participants did not feel a part of their own discharge plans and experienced extreme guilt over occupying hospital beds that could be better utilized by others and over the fact that their anticipated discharge was contingent on the death of someone currently residing in their preferred long-term care facility. **DISCUSSION/CONCLUSION:** Delayed discharges may be avoided if community based services were more accessible. People waiting for hospital discharge should be active participants in the discharge process and have many emotional and psychological needs that must be addressed.

### **PHARMACEUTICAL CARE PROCESS PROBLEMS IN A BRAZILIAN NURSING HOME**

L.F. Gerlack, A.G. Bós, *Institute of Geriatrics and Gerontology, Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, RS, Brazil*

To evaluate the Pharmaceutical Care process in nursing homes we conducted a cross-sectional observational study. Data was collected by reviewing nursing home medical records, medicine purchase receipts and interviews with residents and nursing homes professionals and observation of the researcher. In the collection period, 113 of the elderly residing in ILPI only 2 did not use any medications. The average drugs consumption was 5.2±2.33. Using the Beers criteria, 27(24.3%) prescriptions contained inappropriate drugs. We observed, in 40(36%) prescriptions 99 drug interactions, 64.9 of those had moderate severity and 22.9% were high severity. The storage conditions of drugs were far from desirable, where most of the expected quality criteria were not met. We observed drugs in high humidity location, presence of mold, boxes placed in direct contact with the ground, and without any control records. A wide range of problems concerning all processes related to the pharmaceutical care was observed, from the purchase to the final use by the elderly. In detailing many problems observed in this study and the complexity of the pharmaceutical care process, whether related to the purchase, access, storage, distribution and use, was identified the

need for inclusion of the pharmacist in nursing home teams working in Brazil. As has been occurring in foreign countries, the presence of a pharmacist generates positive impacts both nursing homes and their elderly residents, and consequently to the health system.

### **MUSCLE MASS, STRENGTH, AND THE ONSET OF NEED FOR THE LONG-TERM CARE INSURANCE SYSTEM IN THE JAPANESE ELDERLY**

Y. Nofuji, H. Yoshida, Y. Fujiwara, M. Nishi, H. Murayama, M. Kim, H. Amano, S. Shinkai, *Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan*

**Objective:** To compare the predictive values of muscle mass and strength for the onset of need for the Long-Term Care Insurance (LTCI) system in a prospective cohort of community-dwelling older Japanese. **Methods:** A total of 437 individuals (men 189, women 248) aged 70 years or older who participated in a baseline survey in 2005 or 2006 and were not qualified for service user under the LTCI system were followed up for 3.8 years (from July 2006 to April 2010). Skeletal muscle mass (SM) and hand grip-strength was measured by the bioelectrical impedance method (InBody 730, Biospace) and by a dynamometer, respectively. Participants were divided into tertiles according to baseline SM, percentage SM (%SM=SM/body mass×100) and grip strength, respectively. **Results:** During the follow-up period, a total of 51 participants exhibited the onset of need for the LTCI system. The Cox proportional model showed that SM was not a predictor for the onset of service use independent of age and sex. However, %SM was marginal and grip strength was significant predictor for the onset of service use, respectively. The age- and sex-adjusted hazard ratio for the onset of service use was 3.31 (95% CI: 1.24-8.78) in the lowest tertile of grip-strength compared with that in the highest tertile. The association remained significant even after additional adjustment for %SM. **Conclusion:** Grip strength, not muscle mass was a good predictor for the onset of need for the LTCI system in Japanese elderly.

### **RESIDENT OUTCOMES OF PERSON-CENTERED CARE IN LONG-TERM CARE: A SYSTEMATIC REVIEW**

J. Li, Y. Chang, D. Porock, *University at Buffalo, Buffalo, New York*

**Purpose:** This paper synthesizes the published evidence on the effectiveness of person-centered care (PCC) on resident outcomes in long-term care. **Background:** Our aging society has dramatically escalated the demand for long-term care services and is driving care quality. PCC claims to be an innovative change in the culture of elder care from the traditional medical model. It focuses on creating a more homelike environment, enabling residents to direct their own care, and empowering the caregivers to corresponding to residents' needs. PCC is being increasingly adopted by long-term care providers across the U.S to improve the resident outcomes. **Method:** A search was conducted using CINAHL, MEDLINE, PubMed, and PsychINFO databases with the following keywords : person-centered care, resident-centered care, relationship-centered care, culture change, green house, eden alternative, wellspring model, pioneer network, long-term care, nursing home. Databases searched, limited to the years 1995 and 2012 and published in English. **Results and conclusions:** All 12 PCC intervention studies reviewed were quasi-experimental longitudinal designs. Eight interventions were developed based on culture change models and 4 interventions were developed from PCC principles. Physical environment, autonomy and staff-resident communication were central components across the interventions. Overall, PCC showed inconsistent effects on residents' cognitive ability, physical function, and quality of life. However, resident's mood and behavioral outcomes were improved in most of the studies. Due to a lack of theoretical and operational definitions, different PCC components were emphasized in different studies, which led

to the conflicted findings. Rigorous research is needed to evaluate the effectiveness of PCC.

### **PROFESSIONAL SUPPORT FOR NURSING HOME NURSE LEADERS: ADAPTATION AND APPLICATION OF THE CONVOY MODEL**

A. Rao, *School of Nursing, University of Pennsylvania, Philadelphia, Pennsylvania*

For decades, academics, activists, and policy makers have voiced concerns regarding the quality of care in nursing homes. Nursing home directors of nursing (DONs) are integral to the delivery of quality care because they assume responsibility for both coordinating clinical care and managing nursing staff. They are, however, often ill-prepared to do either. Typically educated in diploma or associate degree nursing programs, many DONs have little or no formal training in leadership or management, and their awareness of and access to professional development opportunities are limited. Their knowledge gap hampers DONs' abilities to provide the effective leadership necessary to maintain quality. To close this gap and succeed in their roles, DONs are heavily reliant on their organizations to provide support and information that fosters professional development and cultivates organizational knowledge. One of the ways in which DONs can access resources like support is through their professional networks. The purpose of this poster is to explore the utility of adapting the Convoy Model of Social Relations to examine the professional support available to DONs within their professional networks. Little is known about the networks in which DONs are embedded; but understanding to whom DONs are connected and the nature of these relationships may provide insight into systemic factors that enhance or inhibit DON success. Current explanations for DON performance fail to capture the organizational complexity in which DONs are situated. Network explanations, however, may add richness to our perspectives about how to empower DONs to lead their facilities toward improved outcomes.

### **NURSE DIRECTOR PERCEPTIONS OF NURSING HOME CULTURE CHANGE**

D.L. Sturdevant, B.J. Holtzclaw, J.S. Wilson, *University of Oklahoma HSC, Oklahoma City, Oklahoma*

Concerns about quality of life and care of nursing home residents are well-known. However the last decade's national movement termed "culture change," has gained ground toward improving quality of life and care of nursing home residents. Culture change promotes a "person-centered" care model to replace institutional models. Culture change views older adults living in long-term care facilities as not merely waiting to die, but instead seeking to live a purposeful and happy life. Changing care and delivery practices requires change in the roles and responsibilities of those providing that care, including frontline caregivers, licensed nursing staff and Directors of Nursing (DONs). Although the inclusion of nursing in culture change activities has been found to improve implementation and sustainability, little information is available in the literature as to the role of nursing in the process. Purpose: this study was designed to gain information about nursing home DONs understanding of culture change evolution in their facility, their own role perceptions, as well as perceptions of how that role has changed. Data were sought to inform future development of an instrument regarding culture change. Methods: A phenomenological qualitative research design, used structured interviews of 15 DONs. Analysis included recorded field notes, data coding, and categories to identify common themes. Findings revealed general agreement of patient benefits, but diverse experiences in barriers, role impacts, and ways culture change takes place. Responses suggest concepts to be included in future instrument development for study of nursing home culture change.

### **STATE OF THE SCIENCE: PERSISTENT VOCALIZATIONS IN NURSING HOME RESIDENTS WITH MODERATE TO SEVERE DEMENTIA**

J.S. Sefcik, *University of Pennsylvania, Philadelphia, Pennsylvania*

Among the nursing home population, persistent vocalizations are common. Persistent vocalizations, a term used to describe any repetitive vocal noises, can have a negative impact on the residents themselves as well as others in their immediate environment including other residents, staff and family members. These vocalizations can be both episodic with intervals lasting less than 5 minutes to constant and lasting over an entire shift. A systematic review of the literature was conducted using PubMed, Medline and Scopus databases. Search terms used in combination with dementia were persistent vocalizations, vocal behaviors, disruptive vocalization, disruptive vocalizations, problematic vocalizations, and vocally disruptive behaviors. The search produced 79 articles for review. Peer-reviewed articles were selected for review if the research was conducted in a nursing home setting with all residents identified as having dementia. Additionally, articles were selected that focused specifically on persistent vocalizations and not combined with other behavioral symptoms. After the review of the articles, 12 relevant articles remained and 1 additional article was identified (8 descriptive studies and 5 interventional studies). This search has revealed that there is little evidence in the literature regarding effective nonpharmacological interventions used with residents with moderate to advanced dementia who exhibit persistent vocalizations. A comparison of identified studies is complicated by inconsistent definitions and typologies of persistent vocalizations. The implication of this review is that additional research is needed to identify non-pharmacological interventions that are effective for reducing persistent vocalizations in nursing homes.

### **CONFLICT AND POWER: WHY HASN'T PALLIATIVE CARE BEEN EMBRACED IN US NURSING HOMES?**

J.G. Carpenter, *University of Utah, Salt Lake City, Utah*

Older adults compose approximately 88% of the population living in US nursing homes, and in less than 10 years it is expected that 40% of older Americans will die there. Palliative Care (PC) can improve quality of life and death for nursing home residents but is not widely available. Barriers to PC include inadequate staff training accompanied by high turnover, poor communication between clinicians, care setting transitions, lack of facility acceptance of PC, and staff concentration on assigned duties over a focus on resident-centered care. The current approaches to examining and understanding system barriers, including policy and regulatory issues, is limited and has not resulted in actionable strategies to advance PC delivery. US nursing homes have been described as complex adaptive systems with diverse cultures subject to various social influences. A novel and promising approach is through critical inquiry. This theoretical perspective allows for continual examination of person-level resident and staff interactions, assessment of relationships among staff, and potential differences between staff goals and resident needs. Critical inquiry moves from simply understanding the day-to-day situation to exploring the conflict that may be preventing integration of PC in nursing homes and determine approaches that will advance PC delivery. The interplay of power structure, culture, and the healthcare environment of US nursing homes demands knowledge that is socially constructed with a connection between theory and practice critical inquiry can achieve.

### **SYSTEM LEVEL CHALLENGES TO CONDUCTING A RCT OF HAND FEEDING VS. PEG TUBE-FEEDING IN NURSING HOMES**

E.J. Amella<sup>1</sup>, M. Madisetti<sup>1</sup>, C.M. Spencer<sup>1</sup>, V.L. Durkalski<sup>1</sup>, M.B. Aselage<sup>2</sup>, J. Zapka<sup>1</sup>, *1. College of Nursing, Medical University of South Carolina, Charleston, South Carolina, 2. Duke University, Durham, North Carolina*

Background: Studies suggest that in individuals with late-stage dementia, percutaneous endoscopic gastrostomy (PEG) tubes are no

better than hand feeding yet this practice is supported in nursing homes (NHs). Purpose: To identify system level challenges to conducting an RCT of hand and PEG feeding among nursing home administrators (NHA) and corporate officials (CO). Method: As part of a feasibility study, online surveys were sent to 150 NHAs with 9 responding (4 for-profit, 2 non-profit, 1 governmental), and 20 COs with 4 responding, (3 for-profit, 1 not profit) regarding their perceptions of and willingness to enter into a research agreement. Findings: A majority (n=7) NHA would support this RCT, while COs were split (n=2); 2 NHA and COs had previous trial experience; 2 NHA had policies against research. No CO reported having a formal process to review RCTs; and, 2 had facilities with prior trials. Top NHA enablers were need to establish the better feeding option, and improved quality of services. Top barriers included: ethical issues, employee burden, and organizational liability. Top CO enablers were: improved service quality, and key facility personnel support. Top barriers included: consumer satisfaction, subject risk, and lack of infrastructure. Research Attitude Questionnaire means were similar for NHAs and COs; both rated organizational attitude lower. Conclusions: This survey demonstrates the difficulty in accessing the decision-makers responsible for approving RCTs in NHs, the lack of structure to vet RCTs and how attitudes toward research and corporate culture challenge getting real-world answers for critical clinical and ethical issues.

#### **VALIDATING THE PROFESSIONAL ENVIRONMENT ASSESSMENT PROTOCOL: NURSING HOME MILIEU & RESIDENT MOBILITY**

S. Slaughter<sup>1</sup>, D.G. Morgan<sup>2</sup>, *1. Univ of Alberta, Edmonton, Alberta, Canada, 2. University of Saskatchewan, Saskatoon, Saskatchewan, Canada*

**Introduction** This paper examines associations between dimensions of nursing home environments and mobility of residents with dementia, and contributes to psychometric development of the Professional Environmental Assessment Protocol (PEAP). **Methods** This one-year prospective cohort study included a convenience sample of 120 ambulatory residents with dementia in 15 nursing homes. Residents' walking abilities were observed biweekly for a year. At the end of the year, immediately following an interview with unit managers, we used the PEAP to measure the extent nine dimensions of nursing home environments supported the mobility of residents. Cox proportional hazards models evaluated effect of specific environmental features on time to walking disability. **Results** The environmental dimensions associated with reduced hazard of walking disability included 'support of functional ability' (Hazard Ratio (HR) = 0.64; p = 0.02), 'maximizing awareness and orientation' (HR = 0.75; p = 0.04) and better 'quality of stimulation' (HR = 0.70; p = 0.02). Cox Proportional Hazard models using the 13-point PEAP scale were not significantly different from models using the 5-point PEAP scale, indicating the scales did not differ in their ability to discriminate between more and less supportive environments. **Discussion** Specific dimensions of nursing home environments reduced the hazard of walking disability. Modifying these dimensions may reduce disability in residents with dementia. The 5-point PEAP scale discriminates between nursing home environments as well as the 13-point scale. Evidence that resident outcomes vary in relation to environmental dimensions contributes to the construct validity of the PEAP scale.

#### **JOB SATISFACTION IN DEMENTIA CAREGIVERS: AN ORGANIZATIONAL AND INTERPERSONAL APPROACH**

C.K. Coleman, R.E. Herman, K.N. Williams, *School of Nursing, Univ of Kansas, Kansas City, Kansas*

Job satisfaction is important in determining turnover in long-term care and identifying ways to maintain or increase job satisfaction in nursing assistants is a key area of intervention (Castle et al, 2007). This

study investigates the relation between overall job satisfaction, nurse supervisor satisfaction, and relationship closeness with the residents. It is anticipated that both organizational and interpersonal variables would predict total satisfaction (Parsons et al, 2003). As part of a larger intervention study aimed at increasing communication skills in dementia caregivers, participants completed three short questionnaires at two observation periods three weeks apart. The Staff Experience Working with Demented Residents measure assessed overall job satisfaction (Astrom et al., 1991), The Staff Perceptions of Supervisory Scale assessed nurse supervisor satisfaction (Forbes-Thompson et al, 2006), and the Mutuality Scale assessed relationship closeness with the residents (Archbold et al., 1990, Heliker, 2010). Two standard multiple regression analyses were conducted. At observation one, the regression equation was significant,  $R = .65$ , adjusted  $R^2 = .38$ ,  $F(2, 25) = 9.23$ ,  $p < .001$  and, at observation two, the regression equation was also significant,  $R = .70$ , adjusted  $R^2 = .44$ ,  $F(2, 19) = 9.23$ ,  $p < .001$ . At both observations times, more than a third of the variability in job satisfaction is predicted by nurse supervisor satisfaction and relationship closeness with the residents. Results indicate that both variables contribute independently to total job satisfaction and may warrant different types of interventions.

#### **OVERUSE OF WHEELCHAIRS IN NURSING HOMES? FEASIBILITY OF ALTERNATIVE MOBILITY DEVICES**

D. Gavin-Dreschnack, H. Moore, *VA, Tampa, Florida*

This feasibility study explores residents' and other stakeholders' feelings regarding mobility and use of wheelchairs in nursing homes. Through individual interviews with residents and administrators, and focus groups conducted with nursing and rehabilitation staff, we identify factors that define mobility in this setting. Wheelchair use in nursing homes is justified by two goals: improvement in mobility and increased safety, yet residents propel their wheelchairs only about 4% of the time, and improperly maintained or ill-fitted wheelchairs account for 16% of nursing home falls. Up to 84% of residents spend time in a wheelchair every day, regardless of their potential to ambulate. Possible explanations for this include: convenience, entitlement, assumption of need, lack of motivation of residents and staff, and fear of liability and litigation resulting from falls. Unfortunately, indiscriminate wheelchair use increases likelihood of deconditioning. Results from this study will highlight the need for ad hoc assessment of residents' functional mobility and consideration of alternative mobility devices before routinely assigning a wheelchair. Appropriate mobility technology could: 1) reduce risk of pressure ulcer formation, 2) enhance quality of care as a result of increased nursing efficiency, (e.g., minimize/eliminate need for repositioning residents in poorly-fitting wheelchairs and pushing residents in wheelchairs that do not foster independent propulsion), 3) decrease risk of falls, 4) enhance safety, and 5) improve QoL, socialization and independence/self-determination for nursing home residents. This study is a precursor to an intervention study that incorporates mobility assessment and consideration of alternative mobility devices for residents with potential to ambulate.

#### **QUALITATIVE EVALUATION OF A STAFF QUALITY IMPROVEMENT PROGRAM TO REDUCE FALLS IN NURSING HOMES**

K.M. Simpson<sup>1,2,3</sup>, C. Colon-Emeric<sup>1,2</sup>, R.A. Anderson<sup>2</sup>, K.A. Porter<sup>2</sup>, E.S. McConnell<sup>1,2</sup>, K. Daily<sup>2</sup>, A. Stalzer<sup>2</sup>, S. Pinheiro<sup>2</sup>, *1. GRECC, Durham VA Medical Center, Durham, North Carolina, 2. Duke University School of Nursing, Durham, North Carolina, 3. KayeM, Inc, Durham, North Carolina*

Staff education programs have been slow to reduce falls rates in nursing homes. One potential explanation may be that education programs associated with falls reduction quality improvement (QI) programs use approaches that focus on transmission of content and individual mastery, overlooking the social and contextual aspects of learning. As part

of a randomized controlled trial (CONNECT for Quality), eight nursing homes were block randomized to receive either a traditional falls education program (FALLS only), or an innovative social constructivist program in which staff learn to improve their connections and interactions with co-workers, followed by the traditional falls reduction QI program (CONNECT+FALLS). Each education program was delivered over 3 months by trained research assistants and targeted all staff with direct resident contact (n=674). Following the interventions, focus groups (n=16) were conducted with staff who had participated in at least one intervention component (n=87). Using framework analysis, we analyzed staff perceptions of the educational interventions, specifically their perceptions of acceptability and effectiveness of content, instructional methods, and how learning occurred. We also explored their perceptions of how the interventions influenced staff implementation of falls prevention and management in their facilities. Comparative results suggest that staff receiving CONNECT+FALLS perceived more team-oriented working patterns, opportunities for open dialogue, and emphasis on falls prevention as a collective effort. These findings suggest that social constructivist educational approaches may extend learning in nursing homes beyond individual mastery to influence system-level factors that may promote improved falls reductions practices.

### THE USE OF LONG-TERM CARE SERVICES: EFFECTS OF ONSET VERSUS PROGRESSION CHRONIC HEALTH PROBLEMS

R. Basu, *Scott & White Healthcare, Temple, Texas*

**Research Objectives:** The primary objective of this study is to examine how different stages (onset versus progression) of health problems impact the likelihood of long-term health care use among individuals aged 50 or older. **Study Design:** This study employs four waves (2000-2006) of the Health and Retirement Survey (HRS) data to examine how different stages of chronic health problems impact the use of long-term formal home care services and nursing home care. Two outcome variables of interest are likelihood of any long-term care use, and nursing home use. Two main covariates of interest are onset and progression of health problems. The onset of health problem was measured by the transition from the good health status to the onset of one or more chronic health problems between time periods. The progression of health problem was measured by the change in number of chronic health conditions and severity of conditions between successive waves. The random intercept logistic regression model was used to account for correlation among responses for the same individuals given the covariates by the generalized latent and mixed modeling technique. **Results:** Both onset and progression (severity) of health problems are associated with the increased likelihood of the use of formal home care services ( $p < 0.001$ ). Severity of conditions is also correlated with the nursing home care ( $p < 0.001$ ). Older age, poor self-rated health status, and smoking are significantly correlated with higher likelihood of using long-term care services. **Conclusion:** Rebalancing long-term care policies should focus on the different stages of chronic health problems

### RESIDENT AND FAMILY PERCEPTIONS OF THE NURSE PRACTITIONER ROLE IN LONG TERM CARE SETTINGS

J. Ploeg<sup>1</sup>, S. Kaasalainen<sup>1</sup>, C. McAiney<sup>1</sup>, R. Martin-Misener<sup>2</sup>, F. Donald<sup>3</sup>, A. Wickson<sup>3</sup>, N. Carter<sup>1</sup>, E. Sangster-Gormley<sup>4</sup>, *1. School of Nursing, McMaster University, Hamilton, Ontario, Canada, 2. Dalhousie University, Halifax, Nova Scotia, Canada, 3. Ryerson University, Toronto, Ontario, Canada, 4. University of Victoria, Victoria, British Columbia, Canada*

**Background:** Nurse Practitioners (NP) have provided services in long term care (LTC) homes in the United States for several decades, but only for the past decade in Canada. While there is increased emphasis on putting residents and families first, little is known about the perceptions of residents and family members related to the role of the NP in these homes. In this study we explored the perceptions of residents and

family members related to the NP role in LTC homes. **Methods:** An exploratory multiple case study was conducted in four long term care homes across Canada. The homes were selected to represent diversity in size, location, and funding model. Data were collected using in-depth face-to-face individual interviews and focus groups. **Results:** Residents (n=14) and family members (n=21) participated in seven focus groups and three individual interviews across the four sites. Analysis revealed three major themes: (1) fostering relationship centred partnerships, (2) providing enhanced quality of care, and (3) optimizing and sustaining the NP role. Participants explained that NPs had an intimate knowledge of residents, provided informational and emotional support, and facilitated participation of residents and families in decision making. They also described how the NPs used their expert knowledge and skills to improve availability and more timely access to care and prevented or delayed hospitalization. **Conclusion:** Findings suggest that residents and family members view the NP role as critical in providing person centred care and enhancing quality of care in LTC homes.

### TRAINING AND COACHING TO PROMOTE HIGH PERFORMANCE IN VA NURSING HOME CARE

R.L. Engle<sup>1</sup>, J.L. Sullivan<sup>1,2</sup>, D. Tyler<sup>1,3</sup>, V. Parker<sup>1,2</sup>, C. VanDeusen Lukas<sup>1,2</sup>, *1. VA Boston Healthcare System, Boston, Massachusetts, 2. Boston University School of Public Health, Boston, Massachusetts, 3. Brown University Center for Gerontology and Health Care Research, Providence, Rhode Island*

**Background:** This study explored the feasibility of an educational intervention to strengthen workplace-learning systems in VA Community Living Centers (CLCs). **Methods:** Four VA CLCs received Direct Care Worker (DCW) and Coaching Supervision (CS) trainings using a train-the-trainer approach. Pre- and post- intervention qualitative interviews were conducted with trainers from each CLC to assess factors influencing effectiveness of implementation and to understand the impact of the trainings on participants. **Results:** Trainers reported the training sessions were well run, informative, and valuable to their work. Three CLCs successfully implemented the CS training addressing management and supervision practices. Two CLCs also implemented the DCW training targeting clinical knowledge. Both trainings targeted effective communication. One CLC was unable to implement either of the trainings due to staff turnover. Trainers were confident in their ability to deliver the training to other CLC staff and reported positive feedback from their CLC colleagues who received the training. Barriers to implementation included lack of leadership buy-in, initial confusion about the content of the trainings, and lack of staff and time to complete the trainings. **Conclusion:** The project generated knowledge about the feasibility and effectiveness of a multi-level, contextualized training approach that led to the submission of a larger grant proposal and has potential applicability to other settings in which DCWs provide care to veterans. Strategies for successful implementation include initial meetings with leadership and middle managers to get buy-in for the training, obtaining support from VA Central Office, and better coordinating training with existing VA training requirements.

### SESSION 2130 (POSTER)

#### MENTAL HEALTH

#### PAIN AND COGNITIVE FUNCTION IN MID-LIFE WOMEN: CONSIDERING THE ROLE OF DEPRESSIVE SYMPTOMS

K. Tomey<sup>1</sup>, G.A. Greendale<sup>2</sup>, H.M. Kravitz<sup>3</sup>, J. Bromberger<sup>4</sup>, J. Burns<sup>3</sup>, S. Dugan<sup>3</sup>, *1. School of Public Health (Epidemiology), University of Michigan, Ann Arbor, Michigan, 2. University of California, Los Angeles, Los Angeles, California, 3. Rush University Medical Center, Chicago, Illinois, 4. University of Pittsburgh, Pittsburgh, Pennsylvania*

In patient-based samples, poorer cognitive performance has been linked to chronic pain. Less is known about whether pain is associated



with cognitive function in community samples. This cross-sectional analysis evaluated associations between cognitive function and four measures of pain. It also examined whether the effect of pain on cognition was greater in the presence of depressive symptoms. Participants are from the Study of Women's Health Across the Nation, a multiethnic, community-based study of midlife women. An overall cognitive performance score was created by converting raw scores from the Digit Backward, Symbol Digit Modalities, East Boston Memory Immediate and Delayed Recall tests to z scores, then averaging them. We collected self-reported measures of pain intensity, pain interference, frequency of stiffness/soreness, and frequency of back aches/pains. We used ordinary least squares regression to obtain estimates of adjusted associations. Interference from pain was associated with cognitive score (adjusted for demographic factors and depressive symptoms) [ $\beta$  (SE) -0.07 (0.02)  $p=0.0005$ ]. Intensity of pain was associated with cognitive score (adjusted for demographics) [ $\beta$  (SE) -0.04 (0.02)  $P=0.02$ ]. Association with aches was significant only in those with depressive symptoms [ $\beta$  (SE) -0.16 (0.05)  $p=0.002$ ] but this association was not significant after adjustment. Stiffness/soreness was not associated with cognitive score. Cognitive function is associated with some but not all measures of pain and the association with aches is only present in those with depressive symptoms. Supported by NIH/ DHHS, through the NIA, NINR and the NIH ORWH (Grants NR004061; AG012505, AG012535, AG012531, AG012539, AG012546, AG012553, AG012554, AG012495).

#### **INTEGRATION OF MENTAL HEALTH SERVICES INTO A GERIATRICS PRIMARY CARE PRACTICE**

M. Anderson<sup>1</sup>, R. Abrams<sup>1</sup>, R. Adelman<sup>1</sup>, R. Breckman<sup>1</sup>, R. Goralewicz<sup>2</sup>, M. Palombo<sup>2</sup>, R. Shengelia<sup>1</sup>, A. Stern<sup>2</sup>, 1. *Geriatrics & Gerontology, Weill Cornell Medical College, New York, New York*, 2. *NewYork-Presbyterian Hospital, New York, New York*

**PURPOSE:** From 2008 to the present, we conducted a demonstration project to integrate screening, triage and treatment for depression and anxiety into a geriatric primary care practice. A full-time psychiatric nurse practitioner was added to the staff to enhance our mental health team. The other members of the team included a full-time social worker and a part-time gero-psychiatrist. **METHOD:** All new and most established patients were screened for depression and anxiety utilizing standard screening instruments – PHQ-9 and GAD-7. Results were reviewed by the mental health team. For those screening positive further assessment was done to determine severity of symptoms and need for treatment. Referrals were made for appropriate treatment modalities. Patients were re-screened at varying intervals – every three months for those screening positive, annually for those screening negative. **RESULTS:** - 1,921 patients were screened in 3.5 years - Over 600 patients screened positive for depression, anxiety or both - 93% identified as positive and needing mental health services were assessed and treated by the team or referred to a community mental health provider - 3% had active suicidal symptoms or signs and either received or were directed to appropriate services - Of those receiving mental health services, a significant number showed improvement when most recently reassessed **CONCLUSION:** Taken together, these findings present a compelling picture of need for integration of mental health screening, assessment and treatment in geriatric primary care. These conditions might not have been identified without the screening program.

#### **FAMILY RELATIONSHIPS, SOCIAL CONNECTIONS AND DEPRESSION AMONG OLDER CHINESE IMMIGRANTS**

J. Liu<sup>1</sup>, M. Guo<sup>1</sup>, I. Chi<sup>2</sup>, 1. *School of Social Work, University of Iowa, Iowa City, Iowa*, 2. *University of Southern California, Los Angeles, California*

Mental health status among older adult minorities has emerged as an important social issue because age and racial/ethnic disparities are likely to increase their risk of developing mental disorders. Previous

studies indicated that family relationships and social connections are crucial in shaping mental well-being of older racial/ethnic minorities. Focusing on older Chinese immigrants, one of the fastest growing older minority groups in the US, this study explored whether and how family relationships and social connections affect their level of depression. The sample was from the cross-sectional survey data of 156 older Chinese immigrants in Los Angeles in 2010. Multiple regressions were conducted to predict levels of depression among the older adults using variables representing family relationships and social connections. Demographic characteristics, socioeconomic status and acculturation were considered as control variables. Among the variables of family relationship and social connection, perceived filial piety of children and amount of friends were the most significant predictors of depression in older Chinese immigrants. The older adults who considered their children more respectful and supportive to parents, and who have more friends in their communities tended to report lower level of depression. Other predictors of lower depression included older age, being a male and having better health. The finding suggests that maintaining traditional culture in parent-child relationship and developing social network may be helpful to prevent depression among older Chinese immigrants.

#### **CORRELATES OF SERIOUS PSYCHOLOGICAL DISTRESS AMONG LATINO AND ASIAN IMMIGRANT ELDERS**

B. Rodriguez, G. Kim, *The University of Alabama, Tuscaloosa, Alabama*

**Objectives:** The present study sought to (1) examine the prevalence of serious psychological distress (SPD) and (2) identify factors associated with SPD among Latino and Asian immigrant elders. **Methods:** Data were drawn from the 2009 California Health Interview Survey (CHIS). Selected samples included 650 Latino and 1,288 Asian immigrant adults aged 60 and older. Descriptive statistics and hierarchical logistic regression analyses were conducted. **Results:** Results from descriptive analyses show that Asian immigrant elders had a significantly higher prevalence of SPD than their US-born counterparts ( $p < .01$ ), whereas there were no significant differences in the prevalence of SPD between Latino immigrant and US-born elders. Results from hierarchical logistic regression analyses indicate that for Asian immigrants, unmarried status, greater poverty, a greater number of chronic diseases, and disability were associated with SPD and for Latino immigrants, disability was a significant correlate of SPD. After controlling for demographic characteristics and health characteristics, limited English proficiency was a significant correlate of SPD for both Latino (OR = 9.41, 95% CI = 1.12, 78.92) and Asian (OR = 2.50, 95% CI = 1.05, 5.99) immigrant elders. **Discussion:** The findings suggest that English proficiency has an important role in immigrant mental health, which highlights the need to develop immigrant-specific intervention strategies in order to improve immigrant mental health. **Word count:** 213 (250 maximum)

#### **THE IMPACT OF TRAUMA-RELATED GUILT AND COGNITIVE APPRAISAL ON POSTTRAUMATIC GROWTH IN OLDER VETERANS WITH PTSD**

H. Sones<sup>1,2</sup>, L. Moreno<sup>2</sup>, S. Schuitemoerder<sup>2</sup>, J. Fidler<sup>2</sup>, Z. Agha<sup>2,5</sup>, S.R. Thorp<sup>2,3,4</sup>, 1. *San Diego State University/University of California, San Diego, San Diego, California*, 2. *VA San Diego Healthcare System, San Diego, California*, 3. *VA Center of Excellence for Stress and Mental Health, San Diego, California*, 4. *University of California, San Diego, Department of Psychiatry, San Diego, California*, 5. *University of California, San Diego, Department of Family Medicine, San Diego, California*

Prior research has found that posttraumatic growth (PTG) can serve as a protective factor against the development and/or worsening of posttraumatic stress disorder (PTSD) symptoms. The relationship between these two constructs, however, remains unclear.

Given that PTG may provide a valuable buffer against the development of PTSD, this relationship deserves further examination. Utilizing a sample of 200 older male Veterans diagnosed with PTSD who participated in psychotherapy clinical trials, the current study will examine whether the experience of trauma-related guilt and negative cognitive appraisals impacts the degree of PTG experienced. The sample includes men ages 60-81, who have experienced a wide range of traumatic events (e.g., combat, sexual trauma, accidents). We hypothesize the following: 1) A curvilinear (i.e., 'inverted U') relationship will exist between PTG and PTSD, 2) After controlling for PTSD severity, trauma-related guilt will be negatively correlated with PTG, and 3) After controlling for PTSD severity, negative cognitive appraisals of the traumatic event will be associated with lower levels of PTG. These hypotheses will be addressed in hopes of better qualifying the relationship between PTSD and PTG in the older adult population, which in turn can inform the development of interventions focused on bolstering PTG in older trauma survivors.

### INSTITUTIONALIZED AGING OF PATIENTS WITH MENTAL HEALTH CONDITIONS: THE PSYCHIATRIC HOSPITAL NURSING PROFESSIONALS' LIVING AND CARING

C.G. Hansel, J. Da Silva, *medical surgical, Anna Nery School of Nursing, Petropolis, Rio de Janeiro, Brazil*

Research with a mix-methods approach has as objective to describe the institutionalized aging process of patients with mental conditions in a psychiatric institution located in the Sierras Region of Rio de Janeiro State. The quantitative sample size was determined by the number of inpatients 60 and over years old who aged institutionalized. The demographic data and clinical diagnosis were obtained through patient file and hospital document analysis and patient functional status was obtained through the Activities of Daily Living (Katz et al., 1970). Results indicate a hospital stay varying from two to thirty-six years. Among the psychiatric diagnosis in patient files, 60% were of residual schizophrenia (F20.5) being 40% in women and 36.8% in men. The study followed recommendations of the National Council of Health 196/96 Resolution about research with human beings. The informed consent to participate in the study approved by the Ethics Review Board of the Anna Nery School of Nursing / Federal University of Rio de Janeiro. Results indicate that despite the new direction brought to mental health care by the psychiatric reform and its role in preventing other people from growing old institutionalized, deprived from social and family environments, one cannot forget the transition moment we live – where there are still many older people with mental health conditions institutionalized, who need care twice differentiated, for being psychiatric patients and now older adults.

## SESSION 2135 (POSTER)

### NEUROSCIENCE & NEURODEGENERATIVE CONDITIONS

#### REGIONAL CEREBELLAR GREY MATTER VOLUME, PROCESSING SPEED AND GAIT MEASURES

N.K. Nadkarni<sup>1,4</sup>, K.A. Nunley<sup>1</sup>, H. Aizenstein<sup>1</sup>, T.B. Harris<sup>2</sup>, K. Yaffe<sup>3</sup>, J. Brach<sup>1</sup>, A.B. Newman<sup>1</sup>, C. Rosano<sup>1,4</sup>, 1. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *National Institute on Aging, Bethesda, Maryland*, 3. *University of California, San Francisco, California*, 4. *Pittsburgh Older Americans Independence Center, Pittsburgh, Pennsylvania*

Objective: Functional roles ascribed to the cerebellum include motor-control and executive-function based on lesion and functional-imaging research. We investigated whether this functional specialization exists in older adults without cerebellar pathology by exploring the association between regional cerebellar grey matter volumes (rCGMV) and

executive-function and gait measures. Methods: Of the 313 participants of the Health ABC Study cohort who completed 3T-MRI, we analyzed data in 231 free of stroke, significant cognitive impairment or alcohol consumption. Gait-speed and step-length variability, on the GaitMat II, and processing speed, on the Digit Symbol Substitution test (DSST), were assessed. We obtained rCGMV by an automated process that involved segmentation, classification and registration to a standard atlas and volumes were aggregated based on their hypothesized functions as cognitive (Lobules VI, VII, VIII and crus I, II), sensorimotor (Lobules II, IV, V) and vestibular (Lobules IX and X) rCGMV. Partial correlations were adjusted for total intracranial volume, age and gender. Results: Mean age was 82 years with 58% female and 62% Caucasian. Larger cognitive rCGMV correlated with faster gait-speed and smaller step-length variability ( $r=0.15$  and  $-0.13$ , both  $p=0.04$ ), and higher DSST scores ( $r=0.24$ ,  $p<0.001$ ). Larger sensorimotor rCGMV correlated significantly with higher DSST ( $r=0.15$ ,  $p=0.02$ ) but not with gait-speed ( $p=0.06$ ) and step-length variability ( $p=0.2$ ). Vestibular rCGMV showed no significant correlations. After adjusting for DSST, the significant association between cognitive rCGMV, gait-speed and step-length variability disappeared. Conclusion: Cerebellar regions linked to executive-function control may also play a role in gait control and this association appears to be partly mediated by processing speed.

### RESPIRATORY PERIODICITY, EEG AROUSAL, AND CEREBRAL OXYGEN DURING SLEEP IN ELDERS WITHOUT SLEEP APNEA

B. Carlson<sup>1</sup>, V.J. Neelon<sup>1</sup>, J. Carlson<sup>1</sup>, D. Bliwise<sup>2</sup>, 1. *School of Nursing, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*, 2. *School of Medicine, Emory University, Atlanta, Georgia*

**Background:** Like heart rate variability, respiratory periodicity reflects the degree to which the respiratory system can adjust to momentary shifts in metabolic demands, such as during an EEG arousal. The aim of this study was to examine the relationships between respiratory periodicity, EEG arousal, and cerebral oxygenation during sleep in community-dwelling elders without sleep apnea. **Methods:** Subjects (72 women, 40 men,  $\geq 70$  years) underwent one night of polysomnography, including cerebral oximetry. Each consecutive 5-minute segment of recording of sleep was classified as either: (1) *High Respiratory Periodicity [HIGH\_RP]* defined by high variability in the amplitude and frequency of breathing cycles; (2) *Type A-Low Respiratory Periodicity [Type\_A\_LOW]* defined by low variability in amplitude and frequency of cycles; or (3) *Type B-Low Respiratory Periodicity [Type\_B\_LOW]* defined by low variability in the amplitude but high variability in the frequency of cycles. Presence of EEG arousal and the average percent cerebral oxyhemoglobin saturation ( $rcSO_2$ ) was also determined for each segment. General estimating equations, which clustered segments by subject, assessed the relationships between pattern of respiratory periodicity, EEG arousal, and  $rcSO_2$  during sleep. **Results:** *HIGH\_RP* and *Type\_A\_LOW* were associated with EEG arousal ( $X^2_{(df=2)}=60.6$ ,  $p<0.001$ ). *Type\_B\_LOW* was not associated with EEG arousal ( $X^2_{(df=1)}=0.08$ ) but with declines in  $rcSO_2$  ( $X^2_{(df=1)}=4.56$ ,  $p<0.01$ ). Elders with more *Type\_B\_LOW* had lower presleep  $rcSO_2$  ( $r=-.21$ ,  $p=0.03$ ) and greater declines in  $rcSO_2$  during sleep ( $r=-.25$ ,  $p<0.01$ ) than elders with less *Type\_B\_LOW*. **Conclusions:** Predominance of certain breathing patterns, like *Type\_B\_LOW*, may mark elders with low cerebral oxygenation and greater risk for hypoxic injury during sleep. **Support:** NRO8032, M01RR00046, UL1RR025747

### AFFECTS AND MECHANISM OF RAPAMYCIN AS AN INTERVENTION IN THE MOUSE MODEL FOR THE HUMAN MITOCHONDRIAL DISEASE LEIGH SYNDROME

S.C. Johnson, A.S. Castanza, M. Kaeberlein, *Pathology, University of Washington, Seattle, Washington*

Leigh syndrome is a rare genetic disease caused by any of several mutations in proteins required for assembly or function of the electron

transport chain in the mitochondrial inner membrane. Manifestations of the disease include developmental delay, optic atrophy, hypotonia, ataxia, breathing abnormalities, necrotic brain lesions, and drastically shortened lifespan. In mice, Leigh syndrome has been modeled by knockout of NADH dehydrogenase [ubiquinone] iron-sulfur protein 4 (Ndufs4), a component of the multi-subunit respiratory chain complex 1. Ndufs4 knockout mice experience many of the phenotypes associated with the human presentation of Leigh syndrome including necrosis and neurological deficit, delayed development, ataxia, and short lifespan. Currently no effective interventions exist for treating mitochondrial disorders of any etiology. In this study we examined the therapeutic potential of the drug Rapamycin in treating the Ndufs4 mouse model of Leigh syndrome. Ndufs4 knockout mice experienced a partial rescue of many Leigh syndrome associated phenotypes when treated with Rapamycin. We are exploring three potential mechanisms of Rapamycin's action in this disease model. First, through its function as an inhibitor of the mTOR complex of the AKT growth-signaling pathway suppressing the translation initiation factor eIF4E. Second, up regulating cellular and mitochondrial autophagy. Third, by acting through its immunomodulatory activity, as inflammation is a hallmark of this disease. Rapamycin is currently approved by the FDA for use in human patients as an immunosuppressant used for prevention of organ transplant rejection.

### **COGNITIVE AND STRUCTURAL BRAIN CORRELATES OF PHYSICAL ACTIVITY AND FITNESS IN HEALTHY AGING**

Z.Z. Zlatar<sup>1</sup>, K. McGregor<sup>2</sup>, J.M. Dzierzewski<sup>1</sup>, M. Marsiske<sup>1</sup>, T. Manini<sup>1</sup>, B. Crosson<sup>2,1</sup>, *1. University of Florida, Gainesville, Florida, 2. Brain Rehabilitation Research Center Malcolm Randall VAMC, Gainesville, Florida*

The current study investigated whether fitness level (12 minute treadmill challenge) or self-reported physical activity (weekly monitoring questionnaire) is a better predictor of gray matter density in healthy older adults (N=29) between the ages of 60 and 85 using voxel-based morphometry (VBM). The direct relationship between age, executive function, and gray matter density was also assessed. Multiple regressions were carried out on FSL with fitness, physical activity, age, and executive function predicting gray matter density. It was found that fitness level, and not self-reported physical activity, displayed a protective role on gray matter density as age increased, in regions previously shown to be affected by the aging process, such as the cerebellum bilaterally, fusiform/inferior lateral occipital cortex/lingual gyrus, and left hippocampus and parahippocampal gyrus (TFCE corrected  $p < .05$ ). Gray matter density did not predict executive function performance above and beyond the contribution of age  $F(1,27) = .12$ ,  $p = .73$ ,  $R^2 = .005$ ,  $\beta = -.15$ . Hence fitness level moderated the relationship between age and gray matter density in areas previously reported to decline as a function of age, while self-reported physical activity level failed to detect this finding.

### **ASSOCIATION BETWEEN ENDURANCE WALK CAPACITY AND INTEGRITY OF BRAIN REGIONS IMPORTANT FOR PROCESSING SPEED IN VERY OLD ADULTS**

Q. Tian<sup>1</sup>, K. Erickson<sup>1</sup>, E.M. Simonsick<sup>2</sup>, H. Aizenstein<sup>1</sup>, N.W. Glynn<sup>1</sup>, K. Yaffe<sup>3</sup>, A.B. Newman<sup>1</sup>, C. Rosano<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. National Institute on Aging, Bethesda, Maryland, 3. University of California, San Francisco, San Francisco, California*

Purpose: This study examined the association between endurance capacity measured by Long-Distance Corridor Walk (LDCW) and brain MRI markers among very old adults. Methods: Brain MRI and LDCW data were obtained from 313 participants (56% female, 42% black, mean age 82.9 yrs) in 2006-07. LDCW consisted of a 2-minute walk followed immediately by a 400-m walk with the instruction to "walk as quickly as possible". Endurance capacity was categorized as most fit, somewhat

fit, least fit, stopped, and excluded for medical contraindications. Multivariable regression models adjusted for age, sex, race, education, and body weight. Results: Compared to those with contraindications (N=56, 17.9%), those who completed (N=187, 59.7%) and those who stopped (N= 58, 18.5%) were younger and more likely to be male and white, and had a lower BMI. Compared to those with contraindications, those who were somewhat fit and least fit had: (1) greater volume in dorsal cingulate, and (2) lower mean diffusivity (MD) of processing speed-related regions (dorsolateral prefrontal, posterior parietal, and anterior cingulate cortices) and dorsal cingulate adjusted for covariates (all  $p < .05$ ). No differences were observed in brain MRI markers between those with contraindications and those who stopped. Conclusions: Very old persons exhibiting some endurance capacity relative to those with evidence of cardio-vascular disease show less gray matter atrophy in dorsal cingulate and less MD of processing speed-related regions and dorsal cingulate. Implications: Future studies should examine whether endurance walk test performance could be used as a marker of underlying gray matter integrity in late adulthood.

### **HEART AND BRAIN: LONGITUDINAL ASSOCIATIONS BETWEEN MARKERS OF AUTONOMIC FUNCTION AND BRAIN SMALL VESSEL DISEASE IN THE CARDIOVASCULAR HEALTH STUDY**

Q. Tian<sup>1</sup>, P.K. Stein<sup>2</sup>, L.H. Kuller<sup>1</sup>, C. Rosano<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. Washington University School of Medicine, St. Louis, Missouri*

Background: Heart rate variability (HRV), a marker of autonomic function, and white matter hyperintensities (WMH), a marker of small vessel disease, are associated with mortality and dementia. Longitudinal data on the association between HRV and WMH are sparse. Such a relationship would be important because HRV is known to be an earlier marker for increased risk of adverse cardiovascular outcomes. Purpose: Estimate associations between HRV and WMH obtained over eight years in older adults. Methods: Four HRV measures were obtained via 24-hour Holters at study entry (yr2): ln very low frequency power, ln low frequency power, power law slope and short-term fractal scaling exponent. Presence of WMH was quantified at years 5 and 10 of the study. Logistic regression models predicted yr10 WMH after adjustment for age, gender, yr2 health factors (clinical and subclinical cardiovascular disease, hypertension, diabetes, drug therapy, cognitive function and blocks walking) and yr5 WMH. Results: Participants (N=580) were  $70.6 \pm 4.0$  yrs, 59.5% female, 3.1% black. Lower power law slope was associated with higher WMH at yr10 (OR=.174,  $p = .011$ ), independent of WMH at yr5 (OR=.128,  $p = .010$ ) or of covariates (OR=.159,  $p = .010$ ). No other HRV markers were associated with WMH at yr10 after adjustment for WMH at yr5. Conclusions: The temporal relationship observed in this study suggests that power law slope, a non-linear measure of HRV, captures autonomic abnormalities that may precede clinically manifest small vessel disease and may help identify older adults who would benefit from interventions to prevent or delay the progression of brain abnormalities including dementia.

### **FREE-LIVING PHYSICAL ACTIVITY AND BRAIN STRUCTURES IN OLDER ADULTS**

Q. Tian<sup>1</sup>, E.M. Simonsick<sup>2</sup>, N.W. Glynn<sup>1</sup>, H. Aizenstein<sup>1</sup>, K. Yaffe<sup>3</sup>, T.B. Harris<sup>2</sup>, A.B. Newman<sup>1</sup>, C. Rosano<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. National Institute on Aging, Bethesda, Pennsylvania, 3. University of California, San Francisco, San Francisco, California*

Purpose: This study examined longitudinal associations of free-living physical activity (PA) dose with brain MRI markers in older adults. Methods: PA dose was computed at study entry (1997-98) by self-report questionnaire assessing intensity, activity type, and volume. Brain MRI was obtained on 3Tesla scanners in 2006-07. Macro-structural measures included volumes of gray and white matter hyperintensities.

Integrity of micro-structure was measured using DTI separately for normal appearing gray (mean diffusivity, MD) and white matter (fractional anisotropy, FA). Multivariable regression models with PA dose were adjusted for age, sex, race, education, smoking status, alcohol consumption, and DSST at study entry and changes in 3MSE over 9 years. Results: The mean age of the cohort (N=313) was 82.9 yrs in 2006-07, 56% female, and 42% black. Compared to sedentary participants, those engaging in light and moderate intensity PA at study entry, had larger hippocampus and parahippocampus ( $p < .05$ ). Participants who were exercise active had lower MD in cingulate cortex ( $p < .05$ ). Results remained similar after adjustment for other covariates. Volume was not associated with any brain MRI markers. Conclusions: Findings indicate that PA intensity and type, but not volume, are associated with characteristics of gray matter 9 years later in older adults. Intensity was associated with macrostructures of memory-related regions, whereas type was associated with mean diffusivity of cingulate cortex, an important hub for processing speed and memory. Implications: These preliminary findings suggest that engaging in a variety of physical activities at light and moderate intensity may be optimal for brain health over time.

#### **GAIT AND CNS HIPPOCAMPAL VOLUME IN OLDER ADULTS WITH AND WITHOUT AMNESTIC MILD COGNITIVE IMPAIRMENT**

E.L. McGough<sup>1</sup>, V.E. Kelly<sup>1</sup>, R.G. Logsdon<sup>2</sup>, K.E. Weaver<sup>3</sup>, E.H. Aylward<sup>3</sup>, S.M. McCurry<sup>2</sup>, L. Teri<sup>2</sup>, 1. *University of Washington, Department of Rehabilitation Medicine, Seattle, Washington*, 2. *University of Washington, School of Nursing, Seattle, Washington*, 3. *University of Washington, Department of Radiology, Seattle, Washington*

Gait variability is higher in older adults with amnesic mild cognitive impairment (aMCI) than cognitively healthy (CH) older adults. In this study, we aimed to examine relationships between gait and hippocampal volume in older adults with and without aMCI. This was a cross-sectional study of 20 older adults (12 aMCI, 8 CH) mean age 84.8 (SD 4.6). The Mini Mental Status Exam (MMSE), Wechsler Logical Memory (LM) and Clinical Dementia Rating Scale (CDRS) were used for group assignments. Structural Magnetic Resonance Imaging (T1 MRI) was used to measure hippocampal volumes and intra-cranial volume (ICV). Quantitative gait analysis was used to examine gait speed (m/sec) and variability during usual and fast paced walking. Statistical analysis included 1) independent T-tests to examine mean differences between aMCI and CH, and 2) partial correlations, adjusting for age, to examine associations between hippocampal volume and gait. ICV-adjusted hippocampal volumes were larger in the CH group (left:  $p = .008$ ; right:  $p = .05$ ). On average, CH were faster during the usual pace ( $p = .02$ ) and fast pace ( $p = .01$ ) walking, with less stride length variability at faster speeds ( $p = .03$ ). After adjusting for age, greater stride length variability during fast walking was associated with smaller hippocampal volume (left:  $r = -.57$ ,  $p = .02$ ; right:  $r = -.58$ ,  $p = .01$ ). Trends between slower gait speed and smaller hippocampal volume occurred at usual and fast paces ( $r = .47$ ,  $p = .06$ ). In summary, reduced hippocampal volume, a marker of neurodegenerative disease, was associated with slower gait speed and increased stride-to-stride variability after adjusting for age.

#### **SESSION 2140 (POSTER)**

##### **NURSING SCIENCE**

#### **CONTENT ANALYSIS UTILIZED TO DEMONSTRATE THE UPTAKE OF NURSING PROCESS LANGUAGE FOUND IN STUDENT NURSE JOURNALS**

M. Murphy, *Fairfield University, Fairfield, Connecticut*

Content analysis of student nurse journals provides an opportunity to demonstrate student nurse uptake of nursing process language within text. The nursing process provides a framework to deliver standardized

nursing care with valid measurement of patient outcomes. The student nurses are instructed to submit initial and final journals with entries consisting of reflection on activities, observations, knowledge and perspectives gained, as well as feelings experienced, while caring for their first clients. The objective is to determine if final student nurse journals contain more language use related to various aspects of the nursing process when compared to their initial journal submissions, thus demonstrating student nurse application of the course objectives. Content analysis reports the initial student nurse journals contain significantly less uptake of language relating to the nursing process step of implementation when compared to uptake of implementation language found in the final journals. Conversely, uptake of language use reflecting assessment, planning, and evaluation is surprisingly more frequent in the initial journals, but does not reach the level of significance. Success in meeting course objectives may be demonstrated with student uptake of language appropriately applied within the nursing process framework standardizing nursing care with valid measurement of outcomes.

#### **E-LEARNING RESOURCES FOR USE IN GERONTOLOGY ADVANCED PRACTICE NURSING EDUCATION**

H.J. Thompson, M.L. Morrison, A. Doorenbos, B. Belza, *University of Washington, Seattle, Washington*

Purpose: To 1) identify relevant available electronic learning resources (ELR) for use in enhancing geriatric advanced practice nursing (APRN) education and 2) to evaluate the educational utility of identified ELRs based on established criteria. Methods: A multi-level search strategy was used. First, a literature search was performed from 2001-Feb 2012 to identify relevant articles. Second, POGO-e and MedEd-Portal repositories were searched. Third, websites of relevant professional organizations were searched for available ELR as well as references to ELR from other organizations. Finally, we performed a structured search using Google. Two independent team members reviewed the identified ELR against established criteria to ensure credibility. Only resources meeting all criteria were retained as credible. End of life and palliative care is used as an exemplar for this poster. Results: Sixteen resources were found that met all these criteria and ranged in format from self-paced tutorials to slide kits and interactive case studies. Half of the sixteen resources were identified using strategy four, and not through traditional search or search of existing geriatric repositories. In addition, reliable, available resources known by subject matter experts were not returned any of the methods used, indicating particular issues with search engine optimization. The resources identified have been useful to advanced practice educators in improving specific lecture and seminar content in the specific area as well as providing students and preceptors with additional self-learning resources. Conclusion: Efforts are underway to publicize the availability of repositories among educators for the sharing of geriatric teaching resources; however given that half the resources which met all the educational utility criteria were found using non-traditional methods and that search strategies are not optimized, an ongoing concern is accessibility of these ELRs. Addressing both access and sustainability within geriatric education is critical for sharing of best practices among educators and for sustainability of teaching and related resources.

#### **THE RELATIONSHIP OF IRREGULARITIES IN DAYTIME ACTIVITY TO SLEEP, BEHAVIORAL AND EMOTIONAL DEMENTIA SYMPTOMS**

C.R. Kovach, *University of Wisconsin-Milwaukee, Milwaukee, Wisconsin*

People with dementia have profound irregularities in activity/rest rhythms. The purposes of this feasibility study with a sample of 33 nursing home residents were to describe: a) the average useable recording duration of actigraph activity and light measures; b) the relationship of sustained episodes of both high level activity and disengaged wakeful-

ness during the daytime to agitation, nighttime sleep and emotional expression; and c) determine the equivalence between actigraph, observed and caregiver reported estimates of activity. Actigraphs with light meters recorded two nights and one day of activity and light exposure. A research assistant concurrently observed and rated daytime activity, emotional expression and agitation every 15 minutes. Actigraph data was complete for 97% participants. The average loss of light data was 42% (SD = .25) of daytime epochs. The intraclass correlation for minutes of sustained activity between the actigraph, research assistant nursing assistant observations was .876 ( $p < .001$ ). Time spent in sustained high level and disengaged low level activity during the daytime was significantly associated with poorer sleep the following night, but the previous night's sleep quality did not account for sustained activity. Agitation during time periods of sustained activity averaged 43.48 (SD = 27.55) and averaged 27.06 (SD = 22.65) during time periods of fluctuating activity levels. Time spent in sustained activity was negatively associated with emotional expression ( $r = -.448$ ). In summary, temporal associations between sustained activity level during the daytime and negative outcomes suggest a possible need to regulate daytime activity schedules.

**A CONCEPT ANALYSIS: NURSE NAVIGATION PURPOSES/AIMS: TO PRESENT A CONCEPT ANALYSIS OF THE STATE OF THE SCIENCE REGARDING NURSE NAVIGATION, IDENTIFY GAPS IN CURRENT KNOWLEDGE, AND PROPOSE AREAS FOR FUTURE RESEARCH**

P.J. Johnson, 1. School of Nursing, OHSU, Portland, Oregon, 2. John A. Hartford Foundation's Building Academic Geriatric Nursing Capacity Award Program, Washington D.C., District of Columbia

Rationale/Background: The elderly population in the United States is projected to double by 2030, meaning approximately 70 million people will be 65 years or older. Cancer has a disproportionately higher rate of occurrence in the elderly. The elderly are increasingly suffering from multiple co-morbidities and chronic illnesses that intersect with the cancer trajectory, thus impacting treatment options and outcomes. Diagnosis of cancer and the associated onset of treatment decisions are extremely complex and stressful for elderly persons and their families. There are higher rates of depression and anxiety, increased risk of drug interactions, and greater likelihood of negative or serious side effects from treatment options. Given the challenges posed by such circumstances, there is a critical need to address the care needs and improve support of elderly persons diagnosed with cancer. Nurse navigation poses potential for managing the care of this population. To date, the nurse navigator role has been poorly defined, inadequately differentiated from other nursing roles, and minimal research has been conducted on the nature and impact in cancer care. Implications: The emerging field of nurse navigation offers a promising opportunity for nurses to expand their influence and develop interdisciplinary team approaches to help patients and families steer through the complex and challenging world of cancer and chronic illness. Nurse navigators are a natural and essential extension of emerging care models. The conceptual intersection of nurse navigation with the call for innovative models to improve care indicate a need for further exploration of the role of nurse navigation.

**IMPROVING QUALITY OF CARE: INCORPORATING GERIATRIC CARE PLANNING WITH NURSE CARE PLANNING**

T. Davis<sup>1</sup>, S. Rosenberg<sup>2</sup>, 1. Gerontology, University of KY, Lexington, Kentucky, 2. University of Central Florida, Orlando, Florida

One way to improve the quality of care provided to older adults, as a whole, in medical settings is to incorporate methods of geriatric care planning with nurse care planning. With the increasing numbers of older adults living longer, it is essential that nurses under-

stand the aging patient as a whole and not just as a medical patient. The purpose of this research is to identify differences among geriatric and nurse care planning, as well as to identify areas in which nurses can incorporate aspects of geriatric care planning in an effort to increase the quality of care provided to older patients. By presenting data on the current state of care planning in both fields, students, professors and nurses will recognize the need to incorporate aspects of geriatric care planning into nurse care planning and, as a result quality of care will increase amongst the aging population in medical care settings.

**THE EFFECTS OF DEPRESSION AND BURDEN ON DEMENTIA CAREGIVERS SLEEP**

H. Peng<sup>1</sup>, Y. Chang<sup>1</sup>, L.O. Wray<sup>2</sup>, 1. The University of New York at Buffalo, School of Nursing, Buffalo, New York, 2. Buffalo VA medical Center, Center for Integrated Healthcare, Buffalo, New York

Background: Providing informal care to a loved one with dementia compromises caregivers' mental and physical health. Family caregivers may experience sleep disturbance due to overwhelming caregiving task provided to their care recipient. Insufficient sleep may cause serious consequences that can affect caregivers' immune system and daily functioning. Purpose: This study aims to examine the effects of depression and burden on dementia caregivers' sleep. Method: This ongoing study uses a cross-sectional design. Participants are recruited from the Alzheimer's Association Western New York Chapter at Buffalo and Buffalo VA Medical Center. Caregivers' sleep are measured by Actigraph (a wrist-watch measuring movement and light; wore for 7 days) and Pittsburgh Sleep Quality Index (PSQI). Other measures include burden (Caregiver Burden Inventory) and depression (Center for Epidemiologic Studies Depression). Descriptive and regression statistics are used for data analysis. Results: We expect that a total of 60 family caregivers will participate in this study. Preliminary findings indicate that caregiver burden is associated with awaking up during the night ( $r = .40$ ,  $p < 0.05$ ) and awaking times ( $r = .43$ ,  $p < 0.05$ ) measured by Actigraph. Caregiver burden is associated with PSQI global score ( $r = .68$ ,  $p < 0.001$ ), sleep disturbance ( $r = .64$ ,  $p < 0.001$ ), and sleep latency ( $r = .60$ ,  $p < 0.001$ ). Caregivers depression is associated with PSQI global score ( $r = .89$ ,  $p < 0.001$ ) and sleep efficiency ( $r = -.57$ ,  $p < 0.05$ ). Regression analysis will be used to further examine the association between caregiver burden, depression, and sleep. Conclusion: Our findings suggested that caregiver depression and burden may influence their sleep. Research is needed to identify effective interventions to improve caregivers' sleep.

**THE INVESTIGATION ON TOBACCO-RELATED KNOWLEDGE OF THE TERTIARY HOSPITALS' NURSES FROM SIX URBAN DISTRICT OF BEIJING**

Q. Wang, People's Hospital, Peking University, Beijing, China

Method: A cross-sectional survey was conducted among 294 nurses who are from six hospitals in six urban district of Beijing, and the relevant questionnaires have been filled in validly. Result: Most participants knew that tobacco is bad for health (12.0%-96.8%) and can result in respiratory disorders (85.6%-100%). Conclusion: Most nurses have general knowledge about tobacco and health and tobacco-related diseases, but they underestimate the risk of tobacco and are not familiar with tobacco dependency treatment. Key words: Nurses; Smoking-cessation; Knowledge

**SESSION 2145 (POSTER)**

**OLDER ADULT ONCOLOGY**

**EARLY-ONSET FRAILTY IN OLDER BREAST CANCER SURVIVORS**

J. Bennett, K. Winters-Stone, J. Dobek, L. Nail, School of Nursing, Oregon Health & Science University, Portland, Oregon

Introduction. Older breast cancer survivors (BCS) and are at risk for persistent symptoms caused by long-term effects of cancer treatment.

These symptoms may be considered a syndrome of accelerated aging or early-onset frailty. The purpose of this study was to compare prevalence of frailty in BCS and older women without cancer. Methods. Frailty was described in 216 older BCS (age 53-87, mean 66.7 ± 7.3 years). Frailty was defined as ≥ 3 of 5 components of the Frailty Phenotype developed for older adults: weight loss, exhaustion, low activity level, slowness, and weakness. Data were compared to published frailty findings from two population-based studies: 1) 1741 women in the Cardiovascular Health Study (CHS) aged 70-79, and 2) 786 women in the Women's Health and Aging Studies (WHAS) aged 70-79. Results. Though BCS in this study were generally younger than comparison samples, 12% were frail, compared to 12% in CHS and 11% in WHAS, suggesting onset of frailty at a younger age in BCS. Exploratory analysis of 66 BCS of same age as women in CHS and WHAS (70-79 years) showed that 18% of BCS were frail, higher than CHS and WHAS samples of same age. Conclusion. The similar prevalence of frailty in BCS at a younger age than that of women without cancer in CHS and WHAS studies provides preliminary evidence of early onset frailty in BCS who have undergone treatment. Further research to assess frailty in cancer survivors is warranted and primary care providers should be alert for indicators of early onset frailty.

### COLORECTAL CANCER SCREENING IN OLDER ADULTS BY 5 YEAR LIFE EXPECTANCY

K. Bellizzi<sup>1</sup>, E.S. Breslau<sup>2</sup>, *1. HDFS, UConn, Storrs, Connecticut, 2. National Cancer Institute, Bethesda, Maryland*

Background: The decision to screen or discontinue screening for colorectal cancer in older adults is complex since it includes issues beyond age alone. The purpose of this study is to describe colorectal screening patterns in adults 75 years and older by 5 year life expectancy. Methods: The analytic sample comprised 1,027 men and women 75 years and older from the 2010 National Health Interview Survey. Colorectal cancer screening guidelines were assessed according to United States Preventive Services Task Force recommendations. A validated 5 year mortality index was used to assess individual life expectancy. Results: Among men and women in our sample, screening rates varied by estimated 5 year life expectancy: rates were 63.9% in individuals with high life expectancy (<15% probability of 5-year mortality), 56.1% in men and women with intermediate life expectancy (16% to 48% probability), and 52.5% in individuals with low life expectancy (> 48% probability). In multivariate logistic regression models, older age and education were related to higher screening rates; whereas, Hispanic race/ethnicity, fewer comorbid conditions were related to lower screening rates. Discussion: In an era of escalating healthcare utilization and expenditures in the United States, identifying areas for cost containment while concurrently improving quality of care in our healthcare system is increasingly paramount. These findings point to the large proportion of older adults (52.5%) with low life expectancy that continue to be screened despite the low likelihood of screening providing any survival benefit. Benefits and harms of continued screening need to be discussed with patients.

### PERCEIVED INFLUENCES ON EARLY STAGE PROSTATE CANCER TREATMENT DECISION MAKING IN AT-RISK MEN: THE ROLE OF AGE, NUMERACY AND HEALTH LITERACY

K. Echt<sup>1,2,3</sup>, T.W. Gillespie<sup>1,2</sup>, J.A. Petros<sup>1,2</sup>, J. Lipscomb<sup>1,3</sup>, L. Herrell<sup>1</sup>, L. Britan<sup>2</sup>, J. Rowell<sup>3</sup>, M. Goodman<sup>3</sup>, *1. Emory University School of Medicine, Atlanta, Georgia, 2. Atlanta VA Medical Center, Decatur, Georgia, 3. Emory University Rollins School of Public Health, Atlanta, Georgia*

Prostate cancer (PCa) is the most common cancer diagnosed among US men, and ranks second in tumor site-specific mortality. PCa treatment options are primarily determined by tumor grade and patient life expectancy. This study investigated the perceived influence of selected

PCa treatment decision-making factors of at-risk men (n=212; 66% African American) with normal screening PSA results recruited from five national study sites. The men ranged in age from 45 to 74 years (M=60; SD=7) and 28% were age 65 or older; 72% were low numerate and 50% were low health literate. Overall, the men most frequently identified the doctor's treatment recommendation (89.5%), curative potential (77.1%), and spouse's preference (74.8%) as influential factors in PCa treatment decision-making. Low health literate men reported significantly fewer influences overall on decision-making. Information seeking in particular was perceived as an influential factor by only 51% of the low health literate men compared to 75% of higher health literate men (p<.001). While older men (65.5%) more frequently reported the influence of cost relative to younger men (51.3%; p=.06), no additional differences based on age were found in treatment decision-making factors including side effect profile, curative potential, or life expectancy after treatment. These findings highlight the need for improved patient education and decision support strategies, especially for men who are older, to address important gaps in knowledge such as the role of life expectancy in PCa treatment informed decision-making.

### THE RELATIONSHIP BETWEEN SELF-RATED HEALTH, FUNCTIONAL STATUS AND OUTCOMES OF CANCER AND TREATMENT

M. Puts<sup>1</sup>, J. Monette<sup>2</sup>, V. Girre<sup>3</sup>, M. Monette<sup>2</sup>, C. Wolfson<sup>4</sup>, G. Batist<sup>2</sup>, H. Bergman<sup>2</sup>, *1. Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Ontario, Canada, 2. Jewish General Hospital, Montreal, Quebec, Canada, 3. Centre Hospitalier Departemental, La Roche sur Yon, France, 4. McGill University Health Centre, Montreal, Quebec, Canada*

Introduction: SRH has shown to predict functional decline and mortality in community-dwelling older adults, but it has been less frequently studied in older cancer patients. The one-item SRH question can provide a clinician with a quick tool to evaluate subjective health status. Methods: Patients aged > 65 newly diagnosed with cancer were recruited for a prospective pilot study at the Jewish General Hospital, Montreal, Canada. SRH was evaluated prior to the start of treatment, and at 3, 6 and 12 months. Treatment toxicity and mortality data were abstracted from the chart. Correlation was used to examine the association between SRH, comorbidity and functional status (frailty using seven frailty markers: grip strength, nutrition, fatigue, physical activity, mood, cognition and weight loss), instrumental and basic activities of daily living (IADL and ADL), and ECOG performance status (ECOG PS)). Logistic and Cox regression were used to examine the association between SRH (dichotomized as very good/good vs. fair, poor and very poor) and treatment toxicity/ time to death. Results: 112 participants participated, median age 74.1, 70% women. At baseline, 74 (66.1%) had a good SRH and 38 (33.9%) had poor SRH and those had more comorbidities, more frailty markers present, lower ECOG PS and IADL impairments. There was no association between SRH and toxicity or mortality. Conclusion: There was a moderate correlation between SRH and the number of frailty markers, IADL disability and comorbidities but it did not predict toxicity or time to death.

### HOW OFTEN DO OLDER CANCER PATIENTS FALL PRIOR TO AND DURING THE FIRST SIX MONTHS AFTER DIAGNOSIS?

M. Puts<sup>1</sup>, J. Monette<sup>2</sup>, V. Girre<sup>3</sup>, M. Monette<sup>2</sup>, C. Wolfson<sup>4</sup>, G. Batist<sup>2</sup>, H. Bergman<sup>2</sup>, *1. Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Ontario, Canada, 2. Jewish General Hospital, Montreal, Quebec, Canada, 3. Centre Hospitalier Departemental, La Roche sur Yon, France, 4. McGill University Health Centre, Montreal, Quebec, Canada*

Introduction: Evidence suggests cancer patients are at high risk for falls due to disease and treatment but this has not been frequently stud-

ied in older newly diagnosed cancer patients prospectively. Objectives 1) To explore the number of older adults who report a fall during the course of the six months after diagnosis; 2) To explore if those who fell are frailer than those who did not fall. Methods: Patients aged 65 and older with a new cancer diagnosis using a prospective pilot study, Jewish General Hospital, Montreal, Canada. Falls in the previous three months were assessed at baseline, three and six month's follow-up. The frailty markers and functional status was obtained at baseline, three and six month's follow-up. Chi-square and t-tests were used to compare the fallers to the non-fallers. Results: During the six month follow-up period, 17 participants (15.2%) reported one or more falls. Fifteen participants reported one or more falls prior to baseline. The fallers and non-fallers were not different in terms of health and functioning. None of the sociodemographic and health characteristics were associated with falls. Conclusion: Falls are common in cancer patients. Fifteen percent of participants reported one or more falls during the six month follow-up. 13% had a one or previous fall(s) prior to the cancer diagnosis. The fallers were not frailer than the non-fallers, nor did they differ in terms of health and functional status.

#### **A SYSTEMATIC REVIEW OF UNMET NEEDS OF NEWLY DIAGNOSED OLDER CANCER PATIENTS RECEIVING TREATMENT**

M. Puts, A. Papoutsis, E. Springall, A. Tourangeau, *Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Ontario, Canada*

Cancer and its treatment can lead to physical disability, psychological distress and increased health care needs. No systematic review on needs in older adults has been conducted. Research questions: 1) what are the unmet care needs of older persons diagnosed with cancer that are undergoing active cancer treatment? 2) What are the predictors of unmet needs of older persons while undergoing active cancer treatment? Methods: a systematic review of the literature published between January 1996 and December 2010 was completed. Manuscripts could be published in English, French, Dutch or German searching the Medline, Embase, Psycinfo, Cinahl and the Cochrane Library databases. The literature search was performed by two researchers with the assistance of a university librarian. Abstracts were reviewed by two reviewers for inclusion. Results: Thirty studies were included. A significant proportion of newly-diagnosed patients undergoing cancer treatment had unmet needs, ranging from 15% to 93%. The most common needs varied by study but included psychological needs, information needs, and needs in the physical domain. Most studies showed that the level of unmet needs was highest after diagnosis and start of treatment and decreased over time. Predictors of unmet needs included: younger age, female gender, depression, physical symptoms, marital status, treatment type, income and education. Conclusions: The level of unmet needs is high, and the most common needs are psychological and information needs. More research is needed which would focus on the needs of older adults with comorbid conditions, and how these comorbid conditions influence the level of unmet needs.

#### **THE ROLE OF FEVER IN CLARIFYING THE CANCER SYMPTOM CLUSTER OF PAIN, FATIGUE, AND SLEEP PROBLEMS**

R.B. Francoeur, *Adelphi University, Garden City, New York*

Objectives: Sickness behavior theory posits fever as the initial symptom of illness that triggers and aggravates pain and other symptoms. This study assesses whether pain-based symptom clusters co-moderated by fever can explain symptom clusters in the literature of pain/fatigue/sleep problems. Methods: Secondary data were from 268 outpatients (ages: 30-90; 97.4% over 40; 85.8% over 50) initiating palliative radiation for bone pain. Frequencies were calculated across ordinal categories for degree of control over physical symptoms and Depressed Affect, an indicator of sickness malaise. Three descriptive

quadratic and moderated multiple regressions (QMMRs) tested whether the Pain-Depressed Affect relationship was moderated by each symptom (i.e., Fatigue-weakness, Fever, Sleep) and symptom pair. An explanatory QMMR was executed with the three 3-way Pain-related interactions, the remaining 3-way interaction (Fever/Fatigue-weakness/Sleep), and all derivative interactions/terms. Results: In a descriptive QMMR, Pain/Fatigue-weakness/Sleep was tentatively significant ( $p=.102$ , increasing slightly in an explanatory run). Pain/Fever/Sleep was significant ( $p<.05$ ) only as a descriptive QMMR. Pain/Fever ( $p<.05$ ) and Pain/Fever/Fatigue-weakness ( $p<.01$ ) were robust in descriptive and explanatory runs, and Sleep-related interactions became newly significant in the explanatory run. Post-hoc analysis revealed Sleep (no control) magnified the Pain-Depressive Affect relationship only when there was no control of Fever. Fever (no control) magnified the Pain-Depressive Affect relationship when there was no control of Fatigue-weakness—at six times greater than the buffering effect when Fever was completely controlled. Conclusions: Fever is supported as a sentinel symptom that aggravates pain and malaise in sickness behavior and helps explain the symptom cluster of pain/fatigue/sleep problems.

#### **CANCER OF THE PALATE; 2-YEARS TO DIAGNOSIS: A CASE REPORT WITH REVIEW OF THE LITERATURE**

K.E. Noel<sup>1,2</sup>, M.S. Cappuccilli<sup>1</sup>, J. York<sup>1,2</sup>, S. Zwetchkenbaum<sup>2</sup>, *1. Community Health, UMDNJ-New Jersey Dental School, Somerdale, New Jersey, 2. UMDNJ-School of Osteopathic Medicine, Stratford, New Jersey*

Oral squamous cell carcinoma (OSCC) makes up more than 90% of all oral malignancies. This disease has the potential to have a major negative impact on a patient's quality of life. All areas of the oral cavity can be affected. The initial clinical appearance of OSCC can be deceiving; presenting in some cases as a barely noticeable white or red spot on the oral mucosa. Early surface lesions can be treated surgically with a resultant high cure rate. Most lesions are diagnosed at the stage when the neoplasm is invading the underlying sub-mucosal regions with ready access to nerves and vasculature; arteries, capillaries, veins and lymphatics. Our patient is a 74 year old woman who presented with a chief complaint of "an infection in the upper part of my mouth", "painful sore throat radiating to ears and trouble swallowing". A liquid diet resulted in weight loss of about 25-pounds. Oral exam revealed a palatal mass that the patient claimed was present for more than 2-years. The population segment most frequently affected by OSCC is the over 40-age group. With an increasingly aging population; it is essential for the healthcare community to employ aggressive cancer detection methods in order to identify malignant oral lesions early. This would require clinicians, who treat senior patients to receive education and training with a focus on identifying pathologic changes on the visible surfaces of the oral mucosa. Preclinical curriculum for dental and medical students should also provide greater emphasis understanding oral mucosal changes.

#### **PHYSICIANS DISCUSS BENEFITS, BUT NOT RISKS OF CANCER SCREENING: A LOOK AT THE HEALTH AND RETIREMENT STUDY**

K. Garcia, E. Crimmins, *University of Southern California, Los Angeles, California*

A high percentage of older Americans undergo cancer screening well past the recommended age for routine screening. Due to insufficient evidence of the mortality benefit of screening adults beyond a certain age, individualized screening decisions are of critical importance. Although screening guidelines recommend discussing the risks and benefits with a health care provider (HCP), there has been limited information on whether these discussions occur. We examined the prevalence of patient-provider discussions before making a decision to screen for breast or prostate cancer by age. Data were analyzed from the ninth wave (2008) of the Health and Retirement Study, a nationally representative study

of individuals born in 1960 or earlier and their spouses. The analytic sample included 1044 individuals 40 years and older with no history of breast or prostate cancer who completed a cancer screening module, and reported receiving a test (mammogram/PSA test) or had discussed the option with a HCP in the previous two years. Overall, 66.9% of respondents (40-69: 69.1%; 70+:63.6%) reported having a discussion about screening with their HCP before making a decision. HCPs discussed the pros of a test in ~75% of the discussions in both age groups but infrequently addressed the cons (40-69: 12.1%; 70+:15.6%). Only 12.9% of respondents reported discussion of both the pros and cons of screening. There was no significant relationship between age and having a discussion ( $P=0.12$ ) or discussion of the pros ( $P=0.91$ ) or cons ( $P=0.15$ ). Our findings suggest adults are not being fully informed by HCPs, especially among older ages.

## SESSION 2150 (POSTER)

### PHYSICAL ACTIVITY & EXERCISE

#### CHANGES IN PATTERNS OF PHYSICAL ACTIVITY IN A MOUSE MODEL OF AGING

S.L. Hong, A. Houston, S.J. Barton, G.V. Rebec, *Indiana University, Bloomington, Indiana*

Physical activity and exercise are key components of healthy aging. We tracked changes in amount and distribution of exercise wheel activity in a normally aging mouse. Eleven mice were placed into individualized cages with exercise wheels at age 5 weeks, where the number of complete revolutions of the wheel was recorded hourly over a period of 6 to 7 months (equivalent to teens to early middle age). The mice were kept in constant 12-hour light (7AM-7PM) and dark (7PM-7AM) cycle. Because mice are normally most active in the dark and were undisturbed once the lights were turned off, we analyzed only the patterns of exercise wheel use from 7PM-7AM. Data were taken from the first and last 30 days that the mice spent within the cage. Interestingly, we did not observe significant declines in the amount of exercise engaged in by the mice in terms of either the maximum number of revolutions within an hour or the average over a one month period. We also analyzed the distribution of activity using information entropy. With age, the entropy of exercise wheel revolutions decreases, indicative of a narrower distribution. Similar to humans, heterogeneity of variance in the amount and pattern of exercise increased with age, supporting the idea of increased inter-individual variability with age. Our results suggest that the aging process alone does not result in a decrease in levels of physical activity. Instead, aging results in a narrowing of the distribution of high and low volume bouts of physical activity.

#### STRENGTHENING EXERCISE FOR OLDER ADULTS: COGNITIVE BENEFITS AND SALIVARY BDNF

V. Yerokhin<sup>1</sup>, C. Anderson-Hanley<sup>1</sup>, M. Hogan<sup>2</sup>, M. Dunnam<sup>3</sup>, D. Huber<sup>3</sup>, S. Osborne<sup>3</sup>, M. Glennon<sup>2</sup>, M. Shulan<sup>3</sup>, *1. Union College, Schenectady, New York, 2. National University of Ireland, Galway, Ireland, 3. Veterans Affairs Medical Center, Albany, New York*

Exercise may help older adults offset declines in cognition (Colcombe et al., 2004) and may even promote neurogenesis (Erickson et al., 2011). Recent research (Anderson-Hanley, 2010) has shown similar promise for strengthening exercise an alternative to aerobic exercise which may be contraindicated in some older adults with cardiovascular risk factors. We recently reported neuropsychological and neurophysiological benefits following ten weeks of strengthening exercise for older adults with and without dementia (Yerokhin, 2011). The mechanism of change is unclear. A variety of biomarkers linking exercise to brain health are under investigation. Brain Derived Neurotrophic Factor (BDNF) has been found to promote neuronal development, while low levels of BDNF have been associated with deteriorated working memory (Erickson et al., 2011). BDNF is typically measured in serum,

but blood draws can be a deterrent to research participation. Some researchers have begun investigating BDNF via saliva as a non-invasive, cost-effective method (Mandel et al., 2011). Salivary BDNF was measured in a subset of 11 older adults participating in the ten-week strengthening exercise program noted above (age = 72; education = 12). Salivary samples were collected pre-, mid-, and post-exercise. Neuropsychological function was assessed pre- and post-exercise. Increased salivary BDNF was associated ( $r = -.52$ ) with decreased time to complete Color Trails (B-A). This pilot lends credibility to the novel use salivary BDNF may be a viable biomarker of improved executive function associated with exercise.

#### PHYSICAL ACTIVITY OF OLDER ADULTS RELATIVE TO THE BUILT AND NATURAL GEOGRAPHY OF WHERE THEY LIVE

K. Tsunoda<sup>1</sup>, Y. Soma<sup>1</sup>, N. Kitano<sup>1</sup>, T. Muraki<sup>2</sup>, K. Hotta<sup>2</sup>, I. Sanada<sup>2</sup>, T. Monma<sup>1</sup>, T. Okura<sup>1</sup>, *1. University of Tsukuba, Tsukuba, Ibaraki, Japan, 2. Ibaraki Prefectural University of Health Sciences, Ami, Ibaraki, Japan*

In this cross-sectional study, we investigated whether total physical activity (PA) of older adults is related to environmental characteristics as estimated by a geographic information system. We randomly selected 3,000 rural Japanese adults aged 65–85 years, and obtained 521 eligible samples (73.3±5.2 years old). We estimated residential density, built environmental attributes, green space, altitude, street length, and number of street intersections within each 1 km grid square. Scores for these items were divided by tertile. Additionally, we assessed distances from residential addresses to public transportation, medical facilities, shops, recreational facilities, and parks. Each distance was categorized as short ( $\leq 500$  m), middle ( $\leq 1000$  m), or long ( $> 1000$  m). Total PA, including leisure-time, household, and occupational PA, was assessed using the physical activity scale for the elderly (PASE). An analysis of covariance was performed, controlling for age, gender, education, and clinical history. Older adults living in areas with the longest tertile of street length, which means a good traffic network, were significantly more inactive than those living within the shortest tertile (PASE score: 112.1±55.7 vs. 131.4±63.4 points). Those who lived within a short distance from public transportation (115.4±57.7 vs. 132.6±65.6), medical facilities (117.1±58.6 vs. 138.7±73.9), or shops (114.9±57.0 vs. 137.2±66.9) indicated a lower level of total PA compared with those who lived long distances from these destinations. Several of our findings differ from previous studies. Older Japanese adults who live in a convenient location might be more sedentary than those who live in less convenient locations.

#### WEIGHT-BEARING ACTIVITY AND LINKS TO FOOT HEALTH IN NATIVE AMERICANS WITH DIABETES

E.T. Cuaderes, B.J. Holtzclaw, *College of Nursing, University of Oklahoma HSC, Norman, Oklahoma*

Diabetes, referred to as an accelerated aging disease, contributes to sensory peripheral neuropathy which has been linked to lower limb abnormalities that raise the risk for foot ulcers (DFU) and amputations. These conditions affect mobility, comfort, and employability, and they account for a significant portion of health care costs worldwide. Since amputations are one of the most common reasons for hospitalizations in Native Americans (NA), it is of critical importance to gain insight into DFU risk factors in this population. With inadequate evidence, the American Diabetes Association (ADA) recommends that severe neuropathic individuals consider nonweight-bearing exercise because of the higher risk for ulceration. The physical forces and inflammatory processes of weight-bearing activity (WBA) foot stress may contribute to ulceration but more recent studies have found no link between WBA and ulcers. The purpose of this study was to compare self-reported levels of WBA with foot characteristics that have been known to contribute to DFU. T tests for unequal sample sizes found no differences between



exercisers and nonexercisers in plantar pressures, skin hardness and surface skin temperatures except for higher temperatures at the first metatarsal head ( $p = 0.02$ ) in exercisers, a site that is common for ulceration. Neuropathic individuals tended to have harder plantar skin ( $p \leq 0.04$ ), but contrary to previous findings, lower pressures. A multiple regression analysis revealed that older age predicted more neuropathy and higher plantar pressures. Results of this study partially support the ADA recommendations.

#### **BALANCE CONTROL DURING SEATED TAI CHI**

B.L. Roberts<sup>1</sup>, H. Li<sup>2</sup>, R. Geib<sup>2</sup>, G.N. Waite<sup>2</sup>, P. Lam<sup>4</sup>, G. Paganacco<sup>3</sup>, E. Oggero<sup>3</sup>, 1. *University of Florida, Gainesville, Florida*, 2. *Indiana University School of Medicine, Terre Haute, Indiana*, 3. *University of Wyoming, Laramie, Wyoming*, 4. *Tai Chi for Health Institute, Sydney, New South Wales, Australia*

**Background:** Tai chi consistently has been found to improve balance in older adults. Although seated tai chi is recommended for those unable to do it standing, little is known about balance control while seated. **Purpose:** Use posturography to assess differences between experts and non-expert practitioners of seated tai chi. **Methods:** 5 men and 18 women (mean age=60 years) were recruited from those attending 10-day tai chi workshop. Master (n=3) and senior trainers (n=3) were considered experts because they were certified in seated tai chi and taught instructors. All others were non-experts. While seated in a hard back chair centered on a force platform, participants performed for 1 minute individual Sun style movements (commence, open/close, single whip and wave hands) and then did them in a continuous sequence. All participants were familiar with Sun style. Center of pressure (COP) indices to assess balance were normalized by height. **Results:** For the entire sequence and open/close, experts had significantly greater average velocity and path length ( $p < .05$ ) but not for 95% ellipse of the COP. No significant differences in the COP were found for commence, single whip and wave hands. **Conclusion:** A few differences in balance control in seated tai chi movements were found. Future biomechanical and kinetic studies are needed to determine whether these can be accounted for by quality of the tai chi movements or factors associated with the seated position. More research is needed to determine whether seated tai chi has similar balance enhancing effects as standing tai chi.

#### **EFFECTS OF ACTIVE VIDEO GAMES (WII FIT™) ON SENIOR ADULT BALANCE, FITNESS AND MOOD**

D. Fent, C. Little, K. Garver, C. Murray, J. Todd, *Kinesiology and Health Studies, University of Central Oklahoma, Edmond, Oklahoma*

Active video games are being utilized to increase physical activity levels and potentially improve balance in senior populations. The aim of this pilot study was to assess and compare balance, balance confidence, fitness levels, and mood in six senior adults (approximately 74 years old) recruited from a local retirement center. Two participants were assigned to one of three groups: a traditional balance class, a Wii Fit™ balance program and a control group who refrained from participating in additional daily physical activity. The seniors in the two balance classes participated in 35 minutes of activity consisting of 20 minutes of strength training exercises and 15 minutes of balance exercises twice a week for 6 months. Pre, mid and post assessments were conducted utilizing components of the Senior Fitness Test (chair stand, arm curl, chair sit-and-reach, back scratch and 8-ft. up-and-go) and grip strength to evaluate functional performance measures. Similarly, balance was evaluated utilizing the Berg Balance Scale and the Activities-specific Balance Confidence (ABC) Scale. And, mood was assessed via the Positive and Negative Affect Schedule (PANAS). Differences between pre, mid and post measurements, as well as differences between groups, were analyzed using analysis of variance (SAS) and effect size. There were very few instances in which significant differences ( $p < .05$ ) occurred. However, the majority of comparisons indicated a large effect ( $\eta^2 p > .14$ ). These findings imply that future studies with larger sam-

ple sizes may result in clarification of how Wii Fit™ impacts seniors' balance.

#### **CHANGES IN FITNESS OF THE ELDERLY BASED ON LONGITUDINAL DATA AND INCREASED TENDENCY TO FALL**

M. Kimura, Y. Yamada, Y. Okayama, E. Yamagata, *Kyoto Prefectural University of Medicine, Kyoto, Japan*

The objective of this study was to evaluate the relationship between longitudinal changes in fitness and tendency to fall in the elderly. The subjects were 175 elderly people with analyzable data among those who had participated in annual fitness measurement events over 9 years from 2002 to 2010. Eleven items including the grip strength and walking speed were examined as indices of fitness. During the 9-year observation period, 81 had no incident of falling (Group A), 66 had less than 1 fall per year (Group B), and 28 had 1 or more falls per year (Group C). Changes in the fitness test results were greater in those aged 75 years or above at the beginning of observation than in those aged less than 75 years. The declines of walking speed, grip strength, and agility differed significantly among Groups A, B, and C. The age was higher, and the declines of fitness test results were greater, in Group C than in Group A. These results suggest that a rapid exacerbation of the fitness level as well as a high age is related to increased tendency to fall in elderly people.

#### **THE POSITIVE EFFECT OF PHYSICAL FITNESS ON EXECUTIVE FUNCTIONS IN HEALTHY YOUNGER AND OLDER WOMEN**

J. Payette<sup>1,2</sup>, L. Desjardins-Crépeau<sup>1,2</sup>, S. Mekary<sup>2,3</sup>, F. Lesage<sup>4</sup>, R. Hoge<sup>2,3</sup>, M. Desjardins<sup>4</sup>, C. Gauthier<sup>2,3</sup>, L. Bherer<sup>1,2</sup>, 1. *Université du Québec à Montréal, Montreal, Quebec, Canada*, 2. *Centre de Recherche de l'Institut de Gériatrie de Montréal, Montreal, Quebec, Canada*, 3. *Université de Montréal, Montreal, Quebec, Canada*, 4. *École Polytechnique de Montréal, Montreal, Quebec, Canada*

Many studies suggest that physical exercise training improves cognition. However, few of these have used cardiorespiratory function measures as a factor to discriminate participants on neuropsychological assessment. In this study, 22 younger women (M=24,63; SD=3,69) and 35 older women (M=62,89; SD=5,4) underwent a direct VO<sub>2</sub>max test and a computerized stoop task. For analysis purposes, we separated our sample into two fitness groups using Shvartz & Reibold's (1990) norms on VO<sub>2</sub>max measures. Our results show a Fitness x Condition interaction ( $p < .05$ ) such that higher fit women scored better on measures of executive functions than the lower fit participants. Indeed, they had better scores on the switching condition of a modified Stroop computerized task. No effect was observed on the non-executive condition of this test. Importantly, there was no interaction between age and fitness, thus suggesting that good cardiorespiratory functions have a positive impact on cognition, regardless of age. These results support the notion that physical fitness training could help improve cognition and that this benefit can be explained by higher cardiorespiratory functions as measured by VO<sub>2</sub>max in higher fit participants. This study also demonstrates that the positive effect of improved cardiorespiratory functions on cognition is the equivalent in both younger and older adults.

#### **TESTING THE USE OF INCENTIVES TO INCREASE MODERATE PHYSICAL ACTIVITY IN SEDENTARY OLDER ADULTS**

J. Purath, J. Roll, *WSU College of Nursing, Spokane, Washington*

In many behavioral intervention studies to increase physical activity (PA), older adults increase their activity, but still do not achieve recommended levels of 150 minutes/week or more of moderate-intensity

activity. Contingency management-based interventions (CM) are powerful behavior change interventions. CM delivers incentives contingent on the initiation or completion of a behavior. The strategy of providing incentives to increase PA is endorsed by older adults. However, to date we have limited information on the efficacy of CM to promote activity. This pilot study tested the hypotheses that sedentary older adults who receive a CM intervention will increase 1) objectively measured and 2) self-reported moderate PA. Acceptability and feasibility of the intervention components was also tested. A single-group repeated-measures design with baseline and weekly follow-up for four weeks determined accelerometer and self-reported PA changes overtime in 7 physically inactive older adults. Participants with accelerometer results of 30 minutes of moderate activity on 5 days per week or more received an incentive. Data were analyzed using descriptive statistics and ANCOVA. Based on accelerometer measurement, five of seven participants met or exceeded PA guidelines during all 4 weeks of the study, one met recommendations for 3 of 4 weeks and one was active for 15-30 minute 5 days/week or more. Participants significantly increased their weekly self-reported minutes of moderate activity ( $F=4.9$ ;  $p=0.03$ ) and weekly frequency of moderate activity ( $F=4.9$ ,  $p=0.02$ ). Accelerometer-measured minutes doing moderate PA increased, but not significantly. The project provides initial support for the hypothesis that incentives can increase moderate PA.

#### **EFFECTIVE ADAPTATION OF ENHANCE FITNESS EXERCISE INTERVENTION FOR A SENIOR LIVING SETTING**

J.S. Hahn<sup>1</sup>, B. Fish<sup>2</sup>, 1. Center for Gerontology, Western Michigan University, Kalamazoo, Michigan, 2. Heritage Community, Kalamazoo, Michigan

This session addresses adaptation, implementation, and results of a fitness program in a continuing care retirement facility. The evidence-based Enhance Fitness program was adapted for elders living in independent and assisted living. Due to higher rates of disability, exercises were altered to be more chair-based and moderate. This included lowering the weight lifted in strength training, lowering the number of repetitions, and allowing the use of a walker for some measures and activities. Participants were assessed at many points during the program. Investigators evaluated outcomes for 40 participants. Without controlling for other variables, the number of times a person could stand from a chair in 30 seconds improved for 50% of the participants, stayed the same for 13%, and decreased for 27%. Participants reported improved flexibility, lower pain, and increased strength after participation. We will share outcomes and specific recommendations for exercise adaptation, as well as methods to increase and sustain program participation.

#### **CLINICALLY IMPORTANT EFFECTS OF EXERCISE ON FUNCTIONAL PERFORMANCE IN PATIENTS WITH HEART FAILURE**

E. Cress<sup>1</sup>, M.K. Higgins<sup>2</sup>, R. Gary<sup>2</sup>, 1. University of Georgia, Athens, Georgia, 2. Emory University, Atlanta, Georgia

Background: Exercise interventions improve physical function in patients with heart failure (HF) (Gary et al., 2011), however the clinical importance of these changes on health related quality of life (HRQoL) is not fully understood. Methods: Men and women ( $n=97$ ; 65(13) yrs; 31-91) diagnosed with NYHA II (45%) and III (54%) HF were randomized into exercise (EX;  $n=47$ ) or attention control (AC;  $n=50$ ) for 12 weeks of progressive exercise training. Primary outcomes included the Continuous Scale Physical Functional Performance test (CS-PFP10 test; 0-100; 100, better function), 6-min walk (m), and the Minnesota Living with HF questionnaire (MLHFQ; 0-105; 0, better health). A sequential (hierarchical) regression was used to evaluate the baseline and changes scores adjusted for baseline. Results: MLHFQ: baseline/change AC 37,6(24,9)/-4.8(14.4) EX 39.4(23.7)/-

9.8(19.8) CS-PFP10: baseline/change AC 36.3(15.2)/1.0(9.6); EX 40.7(17.5)/5.6 (8.4)  $\alpha$  6-min walk(m) baseline/change AC 301.1(129.7)/-7.7(72.1) EX337.7(117.5)/27.5(59.3)  $\theta$   $\alpha p=.027$ ;  $\theta p=.012$  Baseline and change of CS-PFP10 accounted for 30.4% ( $R^2=.304$ ;  $p<.001$ ) and 4.7% ( $R^2=.047$ ;  $p=.026$ ) of the variance in the MLHFQ, respectively. One unit change in CS-PFP10 was associated with 0.413 units of improved MLHFQ. Discussion: Where a participant improved functional performance by 5 units the expected improvement in HRQoL would be 2.1 units over that enjoyed by the AC, thus indicating that exercise therapy is clinically important in this sample of patients with HF.

#### **RELATIONSHIP BETWEEN PHYSICAL FUNCTION SELF-PERCEPTION AND PERFORMANCE IN COMMUNITY DWELLING OLDER ADULTS**

R.L. Cromwell, P.E. Meyers, Office of Sponsored Programs, University of Houston-Clear Lake, Houston, Texas

Tools assessing self-report of physical activity in older adults are often used as indicators of actual physical function in older adults. This study examined the relationship between responses on the Medical Outcomes Short Form-20 (SF-20) physical function subscale and physical activity performance. Forty healthy community-dwelling older adults aged  $73.2 \pm 6.6$  years old responded to the SF-20. Participants were then tested using the timed up and go (TUG), backward reach, sit and reach, walking velocity and the gait stability ratio (GSR). Average score for the SF-20 physical function subscale was  $83.3 \pm 15.7$ . Scores for the TUG averaged  $10.4 \pm 2.5$  sec, backward reach  $21.1 \pm 5.2$  cm, sit and reach  $19.9 \pm 8.2$  cm, walking velocity  $2.4 \pm 0.6$  m/s, and GSR  $0.9 \pm 0.2$  steps/m. Regression analyses revealed no significant correlations between perceptions of physical activity and actual performance ( $p > 0.05$ ). These results indicate that self-perceptions of physical function should be used with caution. Tests of physical function should be used whenever possible when assessing older adults physical abilities.

#### **EFFECTS OF GROUP EXERCISE PROGRAM WITH EXERCISE PROGRAM USING I-PAD COMPUTER ON PERCEIVED HEALTH STATUS, FLEXIBILITY, STRENGTH, DEPRESSION, AND COGNITIVE FUNCTION OF THE ELDERLY**

D. Jung<sup>1</sup>, J. Lee<sup>2</sup>, 1. Ewha, Seoul, Republic of Korea, 2. Yonsei, Seoul, Republic of Korea

Purpose: The purpose of this study was to identify the effects of the group exercise program with I-pad computer on perceived health status, flexibility, strength, depression, and cognitive function of the elderly. Methods: A total of 25 subjects were ( $exp=16$ ,  $control=9$ ) elderly of the experimental group and 9 elderly of the control group. The exercise program was carried out one time for 8 weeks as group exercise program and individualized exercise with I-pad computer in their home for daily exercise bases. The dependent variables were measured by Perceived Health Status Scale, The Senior Fitness Test, K-MMSE, and GDS-K. The collected data were analyzed by Fisher's exact test, Chi-square test and t-test, and ANCOVA using SPSS 18.0 program. Results: Overall, group exercise program using I-pad computer was effective on elderly physical strength and cognitive function with significant differences. Perceived health status and depression were not significant different among groups. Conclusion: In this study, the group exercise program and individualized I-pad exercise was effective and safe for the elderly, and resulted in improving physical and cognitive status in the elderly. This demonstrated that the group exercise program with I-pad computer on the basis of the subject's fitness played an essential role in maintaining and improving the health for old adults.

## SHORT-TERM EFFECT OF PHYSICAL ACTIVITY AND OBESITY ON FUNCTIONAL DEPENDENCE IN A SAMPLE OF RURAL ELDERLY IN MEXICO

A. Salinas-Rodríguez, K. Moreno-Tamayo, B. Manrique-Espinoza, M. Tellez-Rojo Solís, *Instituto Nacional de Salud Pública, Cuernavaca, Morelos, Mexico*

The negative consequences of functional dependence (FD) in the elderly are multifold. It undermines their health, self-esteem, perception of well-being and quality of life, exacerbates the burden on hospital services, heightens the demand for health care, and constitutes an important mortality predictor. Among the main risk factors for FD are physical activity and obesity. In order to estimate the effect of physical activity and obesity on the cumulative incidence of functional dependence (FD), a longitudinal cohort study was carried out among a sample of elderly participants in the impact evaluation study of a non-contributory pension program in México. For this study we selected 2,460 elderly without FD in ADLs at baseline. Body Mass Index (BMI), physical activity and covariates were measured at baseline. Katz index was used to assess FD in basic ADLs, both at baseline and follow-up (2007, 2009). The effect of physical activity and obesity on the cumulative incidence of functional dependence was estimated by using a logistic regression model. After 14-months of follow-up, the cumulative incidence of FD in ADLs reached 10.1%. High physical activity was found to reduce FD risk (OR=0.74, IC95%=0.55-0.99), and the association between obesity and FD was marginally significant (OR=1.36; IC95%=0.96-1.94). Also, higher risk for FD (OR=1.68; CI95%=1.26-2.25) was observed for elderly with arthritis and/or arthritis symptoms. High physical activity and obesity constitutes protective factors in the development of FD. Since both of them are modifiable factors, interventions are needed to increase physical activity and reduce levels of BMI.

## META-ANALYSIS MODERATOR ANALYSES OF SUPERVISED EXERCISE INTERVENTIONS AND ANTHROPOMETRIC OUTCOMES AMONG HEALTHY OLDER ADULTS

J. Chase, T. Ruppert, L.J. Phillips, V.S. Conn, *University of Missouri-Columbia, Columbia, Missouri*

**Purpose:** To determine if characteristics of supervised exercise interventions are associated with better anthropometric outcomes among healthy older adults. **Methods:** Meta-analysis moderator analyses of 11 intervention characteristics were conducted across 48 studies among healthy adults age 60 and older. Potential moderator variables included gender, body mass index (BMI), randomization, number of sessions, number of supervised exercise minutes, number of days over which the intervention was delivered, exercise frequency, exercise intensity, presence of resistance or flexibility components, and type of personnel delivering the intervention. Meta-analysis analogues of regression and ANOVA were used to analyze continuous and dichotomous variables respectively. **Results:** Higher intensity exercise ( $d=0.23$ ) was significantly more effective than lower intensity exercise ( $d=0.20$ ) in improving anthropometric outcomes ( $p=.005$ ). Interventions were similarly effective in improving anthropometric outcomes across demographic, exercise dose, and interventionist characteristics. **Conclusions:** Supervised exercise interventions are effective in positively changing anthropometric outcomes among healthy older adults despite variations across intervention characteristics and subject demographics. Clinicians should consider recommending these interventions for their healthy older adult patients, emphasizing higher intensity exercise for better anthropometric outcomes. Further research could explore mechanisms of enrollment and retention into supervised exercise programs among healthy older adults and subsequent effects on health outcomes and chronic illness prevention in this population.

## EFFECTS OF RESISTANCE TRAINING INTERVENTION ON BALANCE CONFIDENCE AND EXERCISE SELF-EFFICACY

K. Hubble<sup>1</sup>, R. Westrup<sup>1</sup>, K. Bogda<sup>1</sup>, K. Garver<sup>1</sup>, M. Powers<sup>1</sup>, M. Gray<sup>2</sup>, *1. University of Central Oklahoma, Edmond, Oklahoma, 2. University of Arkansas, Fayetteville, Oklahoma*

The purpose of this study was to assess changes in self-efficacy and balance confidence in a one-year resistance training intervention. Fifty-four adults over the age of 75 years were recruited. Subjects were randomly assigned to one of three groups: low velocity (LV), high velocity (HV), or the control group. Assessments included an Exercise Self-Efficacy (ESE) Survey and the Activities-specific Balance Confidence (ABC) Scale. Measurements were taken at baseline, six months, and 12 months. Repeated measures ANOVA and univariate effect sizes were conducted for analysis. No significant interactions or time effects were found. Effect sizes indicate a moderate improvement in balance confidence in the HV group ( $d = 0.47$ ) and a strong decline in exercise self-efficacy in the LV group ( $d = -0.93$ ). Although non-significant statistically, results suggest that HV training may be more beneficial for improving balance confidence. Reasons for the decline in exercise self-efficacy for LV was not evident, thus further research is warranted.

## EFFECTS OF RESISTANCE TRAINING ON MOOD, LIFE SATISFACTION, AND DEPRESSION

K. Garver<sup>1</sup>, K. Bogda<sup>1</sup>, R. Westrup<sup>1</sup>, K. Hubble<sup>1</sup>, M. Gray<sup>2</sup>, M. Powers<sup>1</sup>, *1. University of Central Oklahoma, Edmond, Oklahoma, 2. University of Arkansas, Fayetteville, Arkansas*

The purpose of this one-year study was to assess the impact of resistance training protocols on mood, depression, and life satisfaction among older adults. Participants over the age of 75 years were randomly assigned to the active control (AC), low velocity (LV), or high velocity (HV) group ( $n = 54$ ). All groups trained two days per week following their designated protocol. Participants were assessed by the Visual Analog Mood Scale (VAMS), Center for Epidemiological Studies Depression Scale (CES-D), and the Satisfaction with Life Scale (SLS) at baseline, six months, and one year. Repeated measures ANOVAs were used for analyses and univariate effect sizes were calculated. Results indicated no significant group-by-time interactions for any of the three scales. There were significant time effects for the VAMS subscales of afraid ( $F = 3.79$ ,  $p = .033$ ), happy ( $F = 6.60$ ,  $p = .009$ ), and tense ( $F = 6.72$ ,  $p = .015$ ). Dependent t-tests indicated significant differences between baseline testing and six-month testing as well as baseline testing and 12-month testing for happy and tense ( $p \leq .05$ ), while there were no significant differences for afraid. The strongest effects for improvements were in the AC group for sad, angry, energetic, and happy ( $d \geq .80$ ). LV had a strong effect for an increase in depressive symptoms ( $d = -1.47$ ). While preliminary, results indicate exercising without weights has more positive effects on mood than exercising with weights.

## RELATIONSHIP BETWEEN DEPRESSION SYMPTOMS AND LEG STRENGTH OR ENDURANCE CAPACITY IN HEALTHY ELDERLY

E. Yamagata<sup>1,2</sup>, Y. Yamada<sup>1</sup>, Y. Sugihara<sup>1</sup>, M. Komatsu<sup>1</sup>, M. Kimura<sup>1</sup>, Y. Okayama<sup>1</sup>, *1. Kyoto Prefectural University of Medicine, Kyoto, Japan, 2. Doshisha University, Kyoto, Japan*

**Background:** The aim of this study was to examine the relationship between geriatric depression scale (GDS) and elements of physical fitness in the community-dwelling, healthy, female elderly in Japan. **Methods:** This is a cross-sectional study. A total of 886 healthy, female elderly aged 65- years living in Kyoto prefecture who were willing to participate the physical performance tests were participated in this study. One leg standing, leg power, leg strength, grip strength, endurance capacity, trunk flexion, usual and maximal gait speed, chair stand, chair stepping, and functional reach tests were examined. 15-item GDS and a battery of health status questionnaires were used to assess the participants' health status. **Results:** The 21 percent of the participants scored five or

less in GDS and were categorized a group of depressive symptoms (D group). Leg power, leg strength, endurance capacity, gait speed and chair stepping were significantly less ( $P < 0.05$ ) in D group than in the group without depressive symptoms (ND group). After adjustment with physical characteristics and eating and physical activity habits as co-variances, leg power, leg strength, and endurance capacity were still significantly less in D group than in ND group ( $P < 0.05$ ). Conclusions: Non-negligible number of healthy elderly reported depressive symptoms. The leg power and strength were associated with depressive symptoms independently of physical activity habits. The results suggest that increase of leg strength and endurance capacity might be a factor to improve depression symptoms in the elderly.

### THE QUANTITY OF PHYSICAL ACTIVITY FOR DISCRIMINATING LOW-GAIT SPEED IN OLDER ADULTS

Y. Osuka, N. Yabushita, S. Seino, M. Nemoto, S. Jung, Y. Okubo, R. Figueroa, K. Tanaka, *University of Tsukuba, Tsukuba, Japan*

**Background:** Although physical activity is well-associated with usual gait speed (UGS), quantity of physical activity for discriminating low-gait speed is unclear after adjusted for various confounders (e.g., age, disease). Classification and regression tree (CART) analysis can identify the interaction by stratification and segmentation. The purpose of this study was to identify the association between objective physical activity and UGS using CART analysis in older adults. **Methods:** A cross-sectional analysis was conducted on data from 466 older Japanese adults, aged 60-89 years ( $73.2 \pm 6.0$  years: 104 male, 362 female). Subjects were interviewed about medical history, joint pain, cohabitation, smoking, drinking, depression. Physical activity (step counts: SC) was assessed by using a uniaxial accelerometer. UGS less than the lowest quarter ( $\leq 1.05$  m/s) was defined as low-UGS. CART analysis was performed to identify a hierarchical order and interaction between SC and other variables (age, number of medications, low back pain, knee joint pain, depression) with low-UGS. **Results:** Age and SC were significantly associated with low-UGS. Age ( $\geq 77.5$  years) was the most decisive factor to increase the prevalence of low-UGS. For those aged less than 77.5 years, there was no factor associated with low-UGS. SC ( $< 7661$  steps/day) was the secondary decisive factor to increase the prevalence of low-UGS in those aged over 77.5 years. Misclassification rate of this tree was 19.1%. **Conclusion:** It is suggested that adults aged 78 years or over who do not participate in gait activity ( $\leq 7500$  steps/day), are likely to have low-UGS.

### ASSOCIATION BETWEEN INACTIVITY AND METABOLIC SYNDROME AMONG JAPANESE OLDER WOMEN

R. Kawakami<sup>1,2</sup>, H. Murakami<sup>2</sup>, Y. Gando<sup>1</sup>, M. Higuchi<sup>1</sup>, M. Miyachi<sup>2</sup>, *1. Waseda University, Tokorozawa, Japan, 2. National Institute of Health and Nutrition, Tokyo, Japan*

**PURPOSE:** Moderate-to-vigorous intensity physical activity (MVPA) are beneficially associated with the prevention of metabolic syndrome (MetS). Recent studies have shown that sedentary time, such as sitting and watching television evaluated by using questionnaire, is related to developing MetS. However, it is unclear whether day-long inactivity time assessed objectively is associated with MetS. Therefore, this cross-sectional study aimed to examine the association between inactivity determined by a tri-axial accelerometer and MetS among Japanese older women. **METHODS:** A total of 118 women, aged 61 to 80 years, participated in this study. Time spent of inactivity and MVPA ( $> 3.0$  METs) were measured objectively by a tri-axial accelerometer. The time spent in inactivity was defined as the sum of sedentary ( $< 1.1$  METs), and non-wearing time such as taking a bath and sleeping. The Japanese criteria for MetS were used to evaluate and categorize as MetS or pre-MetS. The association between inactivity and MetS was analyzed using logistic regression with adjusted for MVPA. **RESULTS:** The body mass, %body fat, and fasting glucose in the longer inactivity group were significantly higher than those in the shorter inactivity group. Moreover, the odds ratio in both MetS and pre-MetS in the longer inactivity

group was 6.36 (95%CI 1.35-29.94) compared with the shorter inactivity group. However, there was no association between time spent in inactivity and MetS (OR 4.12, 95%CI 0.45-37.82). **Conclusion:** These results of the cross-sectional study suggest that the longer time spent in inactivity was associated with higher risk of MetS/pre-MetS in Japanese older women.

### MODERATE PHYSICAL ACTIVITY AND WATER DISTRIBUTION IN COMMUNITY-DWELLING ELDERLY IN JAPAN

M. Ikenaga<sup>1</sup>, Y. Yamada<sup>3</sup>, N. Takeda<sup>2</sup>, Y. Higaki<sup>1,2</sup>, H. Tanaka<sup>1,2</sup>, A. Kiyonaga<sup>1,2</sup>, N. Group<sup>2</sup>, *1. Graduate School of Sports and Health Science, Fukuoka University, Fukuoka, Fukuoka, Japan, 2. The Fukuoka University Institute for Physical Activity, Fukuoka, Fukuoka, Japan, 3. Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan*

Regular daily physical activity is associated with muscle atrophy (Sarcopenia) in the elderly. We previously reported that the expansion of extracellular water (ECW) relative to intracellular water (ICW) masked actual muscle cell atrophy with aging. We investigated the association between the duration of moderate physical activity ( $> 3$  METs, MPA) and the distribution of cell water. Participants were 484 men and 512 women free-living Japanese, aged 65-93. Physical activity (number of steps and intensity of activity) was measured by a triaxial accelerometer. The total water (TW), ICW, and ECW in the upper and lower extremities was estimated by segmental multifrequency bioelectric impedance spectroscopy (S-BIS). Knee isometric extension strength and grip strength were measured to assess the lower and upper muscle strength. There is a positive correlation between MPA and ICW after adjustment for age, sex, and body weight. Men and Women data were divided into quartiles based on the duration of MPA. Lower and upper muscle strength were decreased significantly ( $p < 0.05$ ) in the lowest quartile ( $< 13$  min/day). In addition, lower and upper extremities ICW/TW ratios were decreased ( $p < 0.001$ ), and ECW/TW ratios were increased significantly ( $p < 0.001$ ) in the lowest quartile. Duration of MPA was associated with water distribution and muscle strength. The results suggest that the very low MPA ( $< 13$  min/day) may be associated with a water imbalance in the elderly.

### EXPLORING LEVELS, TYPES, AND DEMOGRAPHIC DETERMINANTS OF PHYSICAL ACTIVITY IN OLDER ADULTS RAISING CHILDREN

T.L. Young<sup>1</sup>, M. Janke<sup>2</sup>, *1. School of Aging Studies, University of South Florida, Tampa, Florida, 2. University of South Florida Polytechnic, Lakeland, Florida*

The number of older adults engaged in raising children has increased over the past twenty years. Researchers suggest older adults who raise children may be at an increased risk for health issues. Physical activity (PA) may reduce health issues experienced by these caregivers. However, there is a lack research that specifically examines levels, types, and predictors of PA engagement in this population. Using a national representative sample of older adults who are raising children from the 2010 Health and Retirement Study, levels, types (i.e. vigorous, moderate, and light), and demographic predictors of PA were examined using t-test, descriptive, and linear regression analyses. The sample consisted of 251 older adults with a mean age of 69. On average, older adults had two chronic illnesses and rated their health as good. T-test results indicated a significant mean difference among the types of PA suggesting caregivers engaged in mild PA more than moderate or vigorous PA. Linear regression analyses illustrated that self-rated health and number of chronic conditions was associated with engaging in vigorous, moderate, and mild PA. In addition, race was associated with vig-

orous PA and education, Hispanic ethnicity, and being married was related to mild PA. Limitations and future directions for research are discussed.

### IS AWARENESS AND PROXIMITY TO COMMUNITY-BASED FITNESS RESOURCES PREDICTIVE OF PHYSICAL ACTIVITY IN OLDER ADULTS?

C. Dondzila, A. Swartz, R. Azen, K. Finco, S. Strath, *University of Wisconsin-Milwaukee, Milwaukee, Wisconsin*

**PURPOSE** The purpose of this study was to examine if awareness and distance from community-based fitness resources (CBFR) could predict physical activity (PA) engagement in older adults. **METHODS** Two hundred seventy seven older adults ( $72.7 \pm 7.8$  years) were randomly recruited from three spatial tiers ( $\leq 1$ , 1-2, and  $>2-5$  miles) surrounding six sites with CBFR. Participants were mailed and returned a CBFR questionnaire and the CHAMPS PA survey. Low/high moderate-vigorous PA (MVPA) was delineated based upon MVPA median values. Chi square tests were performed to examine if awareness of CBFR differed across spatial tiers. Logistic regression analyses were performed to examine if awareness and distance from CBFR were significant predictors of high MVPA, after controlling for age, gender, education, income, and car ownership. **RESULTS** There were no differences in awareness of CBFR across spatial tiers ( $\chi^2=4.7$ ,  $df=2$ ,  $p=0.93$ ). Within this sample 45% were aware of CBFR in  $\leq 1$  mile radius, 60% in the 1-2 mile radius, and 44% in the  $>2-5$  mile radius. Awareness of CBFR was not a significant predictor of high MVPA, whereas distance from CBFR was. Specifically, those residing in the  $>2-5$  mile radius were 2.4 times more likely to engage in high MVPA compared with those in the  $\leq 1$  mile radius. **DISCUSSION AND CONCLUSION** The lack of difference in awareness of CBFR across spatial tiers, coupled with the increased likelihood to accrue more MVPA the further one resides from CBFR, indicate that other determinants of PA engagement in this population are paramount and warrant greater exploration.

### THE EFFECTS OF USING VIRTUAL REALITY GAMING TECHNOLOGY TO PROMOTE PHYSICAL ACTIVITY IN OLDER ADULTS: STATE OF THE SCIENCE

Y. Chao, Y. Scherer, *SUNY-BUFFALO, Amherst, New York*

**Purpose:** Virtual reality offers 3-dimensional interactive environments and hierarchical tasks. Gaming technology such as the Nintendo Wii™ gaming system is increasingly used as a therapeutic tool in health care. The purpose of this literature review is to summarize and synthesize the effects of using virtual reality gaming technology to promote physical activity in older adults. **Methods:** To identify relevant studies published in English, a search was conducted on MEDLINE, CINAHL, PubMed, and PsycINFO. The search was limited to empirical studies and particular attention was paid to the effects of physical function, cognition and psychosocial benefits in older adults. **Results:** A total of 8 empirical studies that met the inclusion criteria were included in this review. Sample size ranged from 1 to 31 and age of participants ranged from 60 to 92 years old. Settings included hospitals, long term care settings, and community-based environments. The frequency of the exercise ranged from 2 to 4 days a week and the duration of exercise programs ranged from 1 to 12 weeks. Positive effects included improving upper and lower extremity function (e.g., strength, flexibility, balance, and mobility), improvements in cognition, anxiety, depression, and quality of life. Improved socialization and motivation to exercise were also reported. **Conclusions and implications:** Using virtual reality gaming technology does show promise as an intervention to promote physical activity in older adults. Additional research is needed to test its effectiveness on elderly in different types of long term care facilities utilizing large sample size.

### PHYSICAL ACTIVITY AND ACTIVITY PARTICIPATION PREDICT ONE YEAR MORTALITY IN LONG TERM CARE – THE SHELTER PROJECT

M.D. Denkinger<sup>1</sup>, A. Lukas<sup>1</sup>, D. Fialova<sup>4</sup>, J. Gindin<sup>2</sup>, R. Bernabei<sup>3</sup>, G. Onder<sup>3</sup>, T. Nikolaus<sup>1</sup>, *1. Agaplesion Bethesda Hospital, Ulm, Germany, 2. Kaplan Medical Center, Rehovot, Israel, 3. Università Cattolica del Sacro Cuore, Rome, Israel, 4. Dept of Geriatrics and Gerontology, Charles University, Prague, Czech Republic*

**Background:** Despite its importance in population-based studies physical activity and participation have rarely been examined with respect to mortality in long term care facilities. **Methods:** The Services and Health for Elderly in Long TERM care (SHELTER) study is a prospective cohort study that was conducted in 57 nursing homes in seven countries from the European Union and Israel. A complete dataset with regard to mortality was available from 2758 residents. All participants were assessed using the InterRAI LTCF instrument. The follow-up time was twelve months. Different activity dimensions were tested separately in multiple logistic regression models controlled for common risk factors (age, sex, BMI, drugs, comorbidity, different diseases, unstable condition, immobility, oxygen therapy, activities of daily living, fixation). Activity levels were estimated via different scores, ranked into quartiles: (a) participation in different activities, (b) all physical activities, (c) psychosocial aspects of physical and cognitive activities “i.e. feeling involved” and (d) physical exercise in last three days. **Results:** Participation (a) and physical activity (b) significantly predicted mortality with an odds of 1.64 (least participation versus highest participation, CI 95% 1.18-2.28) and an odds of 1.86 (least activity versus highest activity, CI 95% 1.25-2.75). Intermediate quartiles were also significantly different from the highest activity level. Sense of involvement (c) and physical exercise in the last three days (d) were not related to one year mortality. **Discussion:** Participation in cognitive and physical activities and overall physical activity significantly influenced survival in nursing home residents and should be included in common prediction models.

### IMPACT OF HIGH-VELOCITY TRAINING BODY COMPOSITION OF ELDER ADULTS

M. Powers<sup>1</sup>, K. Garver<sup>1</sup>, K. Hubble<sup>1</sup>, K. Bogda<sup>1</sup>, R. Westrup<sup>1</sup>, M. Gray<sup>2</sup>, *1. University of Central Oklahoma, Edmond, Oklahoma, 2. University of Arkansas, Fayetteville, Arkansas*

The purpose of this study was to examine changes in body composition following high-intensity, low-velocity resistance training (LV) and low-intensity, high-velocity resistance training (HV). Thirty-seven adults over the age of 75 were randomly assigned to a LV or HV group. Both groups trained two days per week using free-weight resistance. HV completed 24 weeks of LV before transitioning to HV. Body composition was assessed as fat mass, lean tissue mass, total mass, and percent body fat using a GE Lunar iDXA total body scan at baseline, 24 weeks, and 52 weeks. Repeated measures ANOVAs were conducted for each dependent variable. Results indicated a significant time effect for the total mass variable ( $p < .05$ ) with total mass decreasing from 162.18 pounds to 160.39 pounds. There was also trend toward a time effect for fat mass ( $p = .07$ ). Fat mass decreased by 1.20 pounds. The interaction effect approached significance for lean tissue mass ( $p = .08$ ). The LV group experienced a slight increase in lean tissue mass (+0.34 pounds) from 24 to 52 weeks, while the HV group experienced a decrease in lean tissue mass (-1.43 pounds) during the same time period. No significant effects were observed for percent body fat. These results indicate that both LV and HV training may reduce total body mass and fat mass. Although non-conclusive, there is evidence that LV training may be more beneficial for lean tissue mass. This may be due to the training intensity which was higher in the LV group.

## IS OCCUPATIONAL PHYSICAL ACTIVITY RELATED TO DISABILITY IN OLD AGE? THE SNAC-KUNGSOLMEN STUDY

E. Rydwick, A. Welmer, S. Angleman, L. Fratiglioni, H. Wang, *Neurobiology, Caring Science and Society, Aging Research Center, Karolinska Institutet, Stockholm, Sweden*

**Objectives:** It is known that leisure-time physical activity (PA) is related to number of years lived without disability. However, less is known about the relationship between occupational PA and disability in old age. Therefore, the aim of the study is to investigate if occupational PA during the longest held occupation in mid-life is related to late-life disability. **Methods:** The study population was derived from the Swedish National Study on Aging and Care, and consisted of a random sample of 1804 subjects, aged 70+ years. Occupational PA during the longest held occupation in relation to disability in old age was analyzed with logistic regression. **Results:** There were no significant relationship between occupational PA and disability in activities of daily living (ADL) after controlling for demographic and health-related factors. However, moderate occupational PA decreased the risk for dependency in personal ADL (OR=0.34 95% CI 0.12-0.98) in white collar workers. **Conclusions:** The study showed that occupational PA in mid-life was not associated with either PADL or IADL disability in late-life. However, moderate occupational PA decreased the risk of PADL disability among white but not among blue collar workers. These findings highlight the importance of taking into account level and the quality of PA, either at work or at leisure time.

## PERCEPTION OF NEIGHBORHOOD BUILT ENVIRONMENT AND HEALTH ON WALKING IN MINORITY URBAN OLDER ADULTS

A.B. Mitchell, *University of Pennsylvania, Philadelphia, Pennsylvania*

A descriptive, cross sectional, non-experimental survey with a sample of 140 minority adults over age 65 was conducted in a large northeastern city. The purpose was to describe the relationship of self-reported health status and perceived neighborhood built environment with the amount of self-reported walking. The theoretical framework was based on the Ecological Theory of Aging (Nahemow & Lawton). The quantitative instruments used were: the SF-12 Health Survey, Neighborhood Environment Walkability Scale (NEWS), and the Community Healthy Activities Model Program Seniors (CHAMPS). Multiple regression analysis found that older age ( $p = .001$ ), BMI ( $p = .002$ ), and gender ( $p = .007$ ) were significant for less total minutes of walking per week. For transport walking, having access to a car ( $p = .013$ ) 48 less walking minutes, and health problems such as pain or unsteady gait ( $p = .018$ ) 27 less walking minutes per week were significant, yet the number of comorbidities was not. In non-transport walking, BMI was most significant, ( $p = .006$ ). For NEWS subscales, significant were access to services ( $p = .041$ ) for transport walking and neighborhood surroundings ( $p = .040$ ) for non-transport walking. Crime and traffic subscales were not significant. For the SF-12, the PCS ( $p = .004$ ) was significant for total walking and transport walking ( $p = .011$ ), while the MCS ( $p = .046$ ) was significant for non-transport walking. The significance of age, gender and BMI were similar to findings with non-minority samples. Health perceptions were statistically more significant than built environment features. Implications are to address health symptoms and to modify the environment to accommodate health conditions, and promote neighborhood walking.

## "IT'S GOOD FOR ME": PHYSICAL ACTIVITY IN OLDER ADULTS WITH SCHIZOPHRENIA

H. Leutwyler<sup>1</sup>, E. Hubbard<sup>1</sup>, D. Jeste<sup>2</sup>, *1. Physiological Nursing, UCSF, San Francisco, California, 2. UCSD, San Diego, California*

Older adults with schizophrenia are a growing segment of the population yet their physical function is poor. Targeted physical activity interventions to improve their physical function are necessary but cur-

rently not available. Given disordered thought processes and institutionalization, it is likely that older adults with schizophrenia have unique barriers and facilitators to physical activity. The perceptions of older adults with schizophrenia about barriers to and facilitators of physical activity must be considered in order to design a feasible intervention. The purpose of this study was to describe the perceptions of older adults with schizophrenia about barriers and facilitators to engage in physical activities that promote physical function. **Design and Method:** We conducted qualitative interviews with 16 older adults with schizophrenia from a locked facility, a transitional residential facility, and an assertive community treatment center. Data were collected and analyzed with grounded theory methodology. **Results:** The majority of participants expressed interest in becoming more physically active for a variety of perceived benefits including pain management, psychiatric symptom management, vitality, joy, and maintenance of basic function. Key barriers and facilitators to physical activity emerged in two broad categories: Patient and Environmental. The most commonly discussed barriers were physical limitations and no longer feeling like a "spring chicken". Facilitators included ease of access, pride, regularly scheduled activities, friends, and boredom. **Implications:** Given that older adults with schizophrenia want to be physically active, interventions in this population should address negative attitudes towards aging and promote activities that enhance joy, companionship, and minimize boredom.

## SESSION 2155 (POSTER)

### REHABILITATIVE CARE & PHYSICAL THERAPY

#### IMPLEMENTATION OF THE SPACED RETRIEVAL TECHNIQUE BY A CAREGIVER

R. Karim<sup>1</sup>, P. Higgins<sup>3,1</sup>, T. Hornick<sup>1,2</sup>, *1. Cleveland VISN 10 GRECC, Louis Stokes Cleveland Department of Veterans Affairs Medical Center, Cleveland, Ohio, 2. Case Western Reserve School of Medicine, Cleveland, Ohio, 3. Case Western Reserve, Frances Payne Bolton School of Nursing, Cleveland, Ohio*

**Background and Purpose.** Family caregivers are often ill prepared to face the challenges of living with a person with dementia (PWD). This case report describes how to teach a caregiver to use spaced retrieval (SR), a memory augmentation technique that uses verbal cues and positive reinforcement, to help a PWD perform a basic activity of daily living. **Case Description.** The participants were an 86 year-old male, MMSE 9/30, GDS 0/15 and his primary caregiver (daughter). The caregiver chose the task: improve her father's bedtime routine by helping him respond to verbal cues to place his dentures in two pre-filled cups in the bathroom. **Intervention.** The intervention was developed and refined with input from geriatric clinicians and researchers and an SR expert. After consent was obtained, a certified geriatric physical therapist (PT) made five home visits over a two-week period. During the home visits the PT instructed the caregiver in the 2-part SR technique: 1) a name-face association task that demonstrated that the caregiver was capable of performing SR and the PWD was responsive to the technique; 2) prompting the PWD to place his dentures in the cup. **Outcomes.** The caregiver successfully used SR to teach both tasks. Motor learning of the ADL task occurred by the fourth week with retention of performance at week eight. **Conclusion.** This case study supports past research on the preserved ability for motor learning in a person with severe dementia. The simple methodology and low risk are ideal for family caregivers to use at home.

## MEANINGFUL CHANGE IN THE WALKING SPEED OF OLDER ADULTS

K.K. Chui<sup>1</sup>, E. Hood<sup>2</sup>, D. Klima<sup>3</sup>, 1. *Physical Therapy and Human Movement Science, Sacred Heart University, Fairfield, Connecticut*, 2. *St. Luke's Warren Hospital Balance Center, Phillipsburg, New Jersey*, 3. *University of Maryland Eastern Shore, Princess Anne, Maryland*

In addition to considering clinometric properties such as reliability, validity, and feasibility, the evidence-based practitioner must also consider the sensitivity to change or “responsiveness” of an outcome measure. The responsiveness of an outcome measure refers to its ability to accurately detect a change or difference when it has occurred and the importance of calculating and reporting this clinometric property in physical therapy research has been emphasized. Walking speed is a robust outcome measure, especially for older adults, since it predicts important health outcomes (e.g., overall survival, risk of hospitalization, discharge destination following hospitalization, risk of functional decline, and risk for future hip fracture). In this synthesis of recent literature on walking speed, the 6th vital sign, we summarize walking speed data from older adults who are: 1) community-dwelling, 2) patients with neurologic conditions (i.e., stroke, Parkinson's disease, and Alzheimer disease), and 3) patients with orthopedic conditions (i.e., hip fracture and knee osteoarthritis). We also report the most commonly published distribution-based and anchor-based indexes of responsiveness, which include effect size, standard error of the measurement, minimal detectable change, standardized response mean, and minimally clinically important difference. Whenever possible, we also calculate the minimal detectable change (MDC90) to better enable the user to compare and contrast the responsiveness of walking speed from different populations of older adults. For each study cited, we describe the population examined, the method and distance used to measure walking speed, and the index of responsiveness.

## PROPERTIES OF RELATIONSHIPS BETWEEN IN PHYSICAL, COGNITIVE FUNCTION AND REACTION TIME IN INSTITUTIONAL RESIDENTS

T. Komatsu<sup>1,2</sup>, F. Togo<sup>3</sup>, H. Park<sup>3</sup>, T. Mitani<sup>4</sup>, T. Midorikawa<sup>4</sup>, 1. *School of Health Science, Dep of Physical Therapy, Tokyo University of Technology, Tokyo, Japan*, 2. *The University of Tokyo, Tokyo, Japan*, 3. *National Center for Geriatrics and Gerontology, Nagoya, Japan*, 4. *Watanabe Hospital, Kamisu, Japan*

Relationship between physical and cognitive functions in elderly institutional residents with cognitive dysfunction is unclear. The aim of this study was to investigate physical and cognitive functions in elderly institutional residents. Subjects were 32 elderly institutional residents (age 71-95) with cognitive impairment (MoCA) in this subjects. All subjects were able to walk independently or with the help of a walking aid. The Flanker Task (Ericsson) refers to a set of reaction time (RT) used in cognitive psychology to examination the ability. The Flanker displayed arrow line segments (neutral), all targets and all facing the same direction (congruent), all is facing the opposite direction (incongruent) on the PC screen. There were conducted total task of 96 enforcements that intervals of 4 sec each stimulus 32 enforcements in random order. There were make examination RT of each subject under each condition. Statistical were examined the correlation between each variable by other bodily functions. And, make analysis using partial correlation analysis and control variables age. We examined the characteristics of physical function for 65 to 74 as elderly and elderly aged over 75. Total RT as the multiple with neutral and congruent and incongruent and showed significant correlations with single-leg standing (time) ( $r=0.643$ ,  $p<0.05$ ) for 65 to 74 as elderly. On the other hand, MoCA showed significant correlations only Total RT ( $r=-0.573$ ,  $p<0.05$ ) for elderly aged over 75. Our results showed that physical function decreased only in the group of subjects with reduced reaction time, suggesting that cognitive decline might cause prevention to falls.

## NOVEL MOVIE THERAPY ENHANCES RECOVERY IN OLDER VETERANS

B.A. Bensadon<sup>1,2</sup>, K.H. Sorocco<sup>1,2</sup>, 1. *University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*, 2. *Oklahoma City VA Medical Center, Oklahoma City, Oklahoma*

Bibliotherapy and life review have been established as viable, evidence-based, therapeutic modalities for enhancing older adult mental health, particularly in patients diagnosed with clinical depression and/or anxiety. Less is known about the efficacy of similar, modified approaches implemented with older medical patients in skilled nursing or rehabilitation settings. To fill this void, the Aging Film Series was created and continues to be implemented with a heterogeneous older Veteran population receiving care in the Community Living Center of a Midwestern VA Medical Center. Consistent with the VA's national focus on patient-centered care and cultural transformation, this monthly film series provides an innovative and informal forum in which to address aging-specific challenges and model various coping strategies. Films such as “Up” and “Grumpier Old Men” were shown on a large screen TV in a short-stay rehab unit. Veterans and interdisciplinary providers watched the films together. Qualitative case-based examples illustrate the films' effectiveness in stimulating participant reflection and empathy, reducing feelings of isolation, and providing a heightened sense of empowerment that appeared to facilitate recovery. In addition to these individual outcomes, the series has provided an environment of camaraderie that fosters socialization and interaction between patients and their providers. The program's theoretical rationale and clinical implications were reinforced by the data. The poster's discussant will offer templates for replicating this program in other facilities.

## ADVANCING CLINICAL ASSESSMENT OF MOBILITY FOR OLDER ADULTS LIVING IN CONGREGATE CARE

K. Van Ooteghem<sup>1,2</sup>, B. Badiuk<sup>1</sup>, M. Sharratt<sup>3</sup>, W. McIlroy<sup>1,2</sup>, 1. *University of Waterloo, Waterloo, Ontario, Canada*, 2. *Toronto Rehabilitation Institute, Toronto, Ontario, Canada*, 3. *Schlegel-UW Research Institute for Aging, Waterloo, Ontario, Canada*

Detecting subtle changes in mobility among older adults can inform early therapeutic strategies and help to maintain and maximize functional independence. Lack of sensitivity among current clinical mobility assessments (CMAs) however limits their ability to reveal onset of meaningful changes. We propose two approaches for advancing assessment, both serving to improve diagnostic and therapeutic utility: 1) incorporating inexpensive and unobtrusive technologies to aid in quantifying function, and 2) evaluating multiple dimensions of mobility to identify underlying deficits. Methods: To date, 53 residents living in congregate care have completed a CMA comprised of 13 tasks simulating everyday activities that challenge static and dynamic balance, gait, strength, and endurance. Participants wore accelerometers affixed to each ankle and the waist. For tasks assessing balance, participants placed each foot on a Nintendo Wii balance board. Customized algorithms extracted balance and gait characteristics specific to each task (e.g. sway path during standing). Preliminary correlational analyses were conducted to examine relationships between variables. Findings: Measures derived from the added technologies revealed balance and gait challenges that would not have been detected by conventional clinical assessment. Correlational analyses revealed no relationships between variables (range:  $R^2=-0.21$  to  $0.3$ ) suggesting that static and dynamic balance, gait, strength, and endurance represent independent dimensions of mobility. Implications: Accelerometer and Wii technology adds significant utility to a CMA by augmenting its sensitivity to detect subtle changes in balance and gait function. The multi-dimensional nature of mobility warrants assessment of individual elements to identify underlying deficits and guide intervention. Early and targeted interventions

will help older adults to maintain and maximize functional independence. Acknowledgements: Funding support from CIHR Team Grant (Mobility and Aging) and NSERC

#### LEARNING HOW TO USE ASSISTIVE DEVICES IN OLDER ADULTS: ARE ILLUSTRATIONS HELPFUL?

C. Liu, S. Pape, K. Bayson, M. Hahn, L. Stahl, B. Powers, *Indiana University at Indianapolis, Indianapolis, Indiana*

Rehabilitation therapists often teach older adults how to use assistive devices to increase independence. Some assistive devices can be purchased without proper instructions from therapists. In this case, older adults may need to rely on print instructions to learn how to use these devices. Prior research has shown that older adults do not effectively use illustrations to understand disease knowledge. However, illustrations may be beneficial to help older adults understand the correct and safe procedure for using assistive devices. The purpose of this study was to examine whether incorporating illustrations into print instructional materials could improve older adults' understanding and proper use of assistive devices, such as a walker. Twenty-seven older adults without prior experience of using a walker were randomized to read either text-only instructions or a text with illustration instructions. After reading the instructions, participants demonstrated how to use a walker and completed a text comprehension test. A ceiling effect was found in the text comprehension test. However, the demonstration results were less than optimal. Error analyses show that fewer participants who read the text with illustration instructions were able to correctly demonstrate to move the walker forward, keep walker still while stepping into it, and place both feet inside the walker before moving it forward. Additionally, more participants who read the text with illustration instructions made recall errors. This study suggests that illustrations may not assist older adults learning how to use assistive devices. Older adults should consult rehabilitation therapists for purchasing and using any assistive devices.

#### USABILITY OF A FEEDBACK MEDIATED ORTHOPEDIC TRAINING SYSTEM – RESULTS FROM A RANDOMIZED CONTROLLED CLINICAL TRIAL

M. Gövercin, A. Ratzinger, E. Steinhagen-Thiessen, *Charité-Universitätsmedizin Berlin, Berlin, Berlin, Germany*

Objektive: Hip fractures are often caused by falls and are a major cause for immobility. Early and prolonged physiotherapy treatment could avoid the physical deterioration. The compliance for carrying out prolonged physiotherapy exercises increases when the elderly patient is motivated (1,2,3,4). Design: We performed a three armed multicentered randomized controlled clinical trial with two intervention groups and one control group. The first intervention group consisted of participants with intensive (5x/week) paper based self-administered physiotherapy treatment. The second group had a self-therapy training with the orthopedic trainer (5x/week). The control-group had a 2x/week paper based self-therapy (usual care). Main goal was to detect the effectiveness of a motivational self administered physiotherapy training program for elderly. Secondary outcomes were the assessment of motivation, usability and the cost-efficiency of the orthopedic trainer versus a conventional, paper-based self-therapy. A follow-up was conducted after six month including the analysis of harris-hip scores, Barthel-Index, Usability-Questionnaires and ADL. Results: 78 patients were recruited within two rehabilitation centers. 23 women and 55 men with hip fracture were randomized. The self-therapy with the orthopedic trainer was almost as usable as paper based training for elderly people after hip surgery regarding to the questionnaires USE-FORT, USE-IT, IMAGINE-FORT. The orthopedic trainer group was highly motivated to perform the exercises. The use of the orthopedic trainer appears to consume more cognitive resources than the paper based therapy. Main barriers that affect the usability were difficulties in putting on the sensors of the wearable sensor system and the understanding of the dialog system.

#### THE EFFECTIVENESS OF PHYSICAL THERAPY CONSISTING OF MANUAL THERAPY, THERAPEUTIC EXERCISES, AND PATIENT EDUCATION FOR TREATING OLDER ADULTS WITH ADHESIVE CAPSULITIS

K.K. Chui, *Physical Therapy and Human Movement Science and Program in Geriatric Health & Wellness, Sacred Heart University, Fairfield, Connecticut*

Introduction: While an increasing number of studies have reported the effectiveness of manual therapy for treating middle-aged adults with adhesive capsulitis, few studies have examined older adults. The purpose of this retrospective case series was to examine the effectiveness of physical therapy consisting of manual therapy, therapeutic exercises, and patient education for treating older adults with adhesive capsulitis. Methods: Six older adults (mean age =  $70.7 \pm 4.4$  years, 100% female) referred to physical therapy with adhesive capsulitis (mean duration =  $4.3 \pm 1.3$  months) participated in this retrospective case series (mean number of sessions =  $13.0 \pm 3.4$ ). All participants had impaired shoulder range of motion (ROM), measured with a goniometer, when compared to their uninvolved shoulder and published norms. All patients reported pain and disability on the Shoulder Pain and Disability Index (SPADI). Physical therapy interventions included passive joint mobilization techniques (i.e., anterior glide, posterior glide and distraction), manual stretching, and patient education on self-mobilization techniques and self-stretching exercises, among others interventions (mean visits =  $9.8 \pm 4.4$ ). Results: Average ROM improvements were obtained for flexion ( $44.0 \pm 15.5$  deg), abduction ( $47.0 \pm 9.6$  deg), external rotation ( $35.5 \pm 12.4$  deg), and internal rotation ( $18.7 \pm 7.2$  deg). Average SPADI pain scale scores decreased by  $41.3 \pm 13.4\%$  and average disability scale scores decreased by  $43.7 \pm 15.4\%$ . Conclusions: Physical therapy consisting of manual therapy, therapeutic exercises, and patient education improved shoulder ROM, decreased pain, and decreased disability in older adults with adhesive capsulitis. Furthermore, these interventions were done without adverse effects.

#### SPINAL CURVATURE AND POSTURAL SWAY IN OLDER ADULTS

M. Saghazadeh<sup>1</sup>, T. Okura<sup>2</sup>, Y. Mitsuishi<sup>1</sup>, K. Tsunoda<sup>1</sup>, *1. Doctoral program in Health and Sport Sciences, University of Tsukuba, Tsukuba, Ibaraki, Japan, 2. Faculty of Health and Sport Sciences, University of Tsukuba, Tsukuba, Ibaraki, Japan*

Numerous studies have been reported; ageing, history of falls, muscle weakness and home hazards as risk factors for falls. Spinal deformity might represent another possible risk factor for balance impairments and falls. Twenty elderly women ( $65.6 \pm 1.2$  years old) were evaluated. A flexicurve ruler was used to measure the degree of kyphosis (T2-T12) and lordosis (T12-S2). To convert the collected data to degree, the equation,  $\text{degree} = 4 \text{ Arc tang } 2H/L$  was used. In the equation, L is a straight line connecting two obtained spinous process and the H is the length of a perpendicular line drawn from the L to the deepest part of the curve. Total Path Length (TPL) and Area of Center of Pressure (CoP) were evaluated while standing on force distribution using the Zebris FDM measuring system. Relationships among spinal curvature and postural sway were analyzed using Pearson's correlation coefficients. According to the obtained results, no significant correlations were observed between postural sway scores and angle of kyphosis. However there was significant positive correlation between the score of TPL of CoP and lordosis in older adults ( $r = 0.457$ ;  $p < 0.05$ ). These results possibly occurred due to reduction of muscle strength and displacement of the Center of Gravity (CoG) following spinal deformity, which in turn would result in increasing body sway. Moreover compensatory mechanism for lumbar changes in spinal, comparing to thoracic, is limited. These results suggest that lumbar curvature, lordosis,



might be an important factor in defining postural sway and balance control in older adults.

### **MOTOR SKILLS ASSOCIATED WITH FUNCTIONAL AUTONOMY OF OLDER ADULTS: RESULTS FROM THE NUAGE STUDY**

A. Carrier<sup>1,2</sup>, M. Levasseur<sup>1,2</sup>, H. Payette<sup>2,3</sup>, 1. School of Rehabilitation, Faculty of Medicine and Health Sciences, Université de Sherbrooke, Sherbrooke, Quebec, Canada, 2. Research Centre on Aging, Health and Social Services Centre – University Institute of Geriatrics of Sherbrooke (CSSS-IUGS), Sherbrooke, Quebec, Canada, 3. Department of Community Medicine, Faculty of Medicine and Health Sciences, Université de Sherbrooke, Sherbrooke, Quebec, Canada

**Introduction.** Functional autonomy level has a major impact on older adults' daily activities and social participation. Despite their potential importance as explaining variables, motor skills' associations with functional autonomy level have not been comprehensively studied. **Aim.** Identify among a range of motor skills the variables that best explain functional autonomy of older women and men. **Methods.** This research is embedded in NuAge, a multi-centric observational longitudinal study of older adults. Recruitment was realized using a random stratified by gender and age strategy. Data included functional autonomy and motor skills variables such as strength (hands, arms and legs), balance (unipodal and dynamic), change of position, and walking (normal and fast pace). Controlling for age, a multiple linear backward regression strategy was used separately for women and men. **Results.** Both female (n = 652) and male (n = 616) participants were aged 73 years on average and had a mild to moderate loss of functional autonomy. For women, a higher level of functional autonomy was explained by greater unipodal and dynamic balance, and greater biceps strength ( $R^2 = 0.31$ ;  $p \leq 0.001$ ). Greater unipodal balance and faster walking pace explained higher functional autonomy of men ( $R^2 = 0.12$ ;  $p \leq 0.001$ ). **Conclusion.** This study informs health professionals on which motor skills to target in their interventions to optimize functional autonomy of their older clients. Further studies are needed to better understand gender differences.

### **ACCEPTANCE AND USE OF VIRTUAL GAMING AS AN INTERVENTION WITH OLDER ADULTS IN OCCUPATIONAL THERAPY**

B. Walker, 1. School of Occupational Therapy, University of Indianapolis, Indianapolis, Indiana, 2. Indiana University Bloomington, Bloomington, Indiana

Virtual gaming has taken the world by storm and is being used by a much larger population than originally anticipated. Since the Wii was put on the market, occupational therapists around the world have begun to incorporate its use as an intervention strategy for patients recovering from a wide scope of ailments. This use is ad hoc, intuitive, and idiosyncratic on the part of individual occupational therapists. Little research has been done to investigate the factors influencing occupational therapists' acceptance and use of virtual gaming as an intervention strategy to enhance the occupational performance of their older adult clients. The purpose of this study is to investigate the appropriateness of using the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003) to explain occupational therapist's acceptance and use of off-the-shelf virtual gaming as an intervention strategy with their older adult clients. In order to prepare for the future and respond appropriately to the demands of an aging society within an evolving healthcare arena, it is essential to examine the factors that influence or deter acceptance and use of all therapeutic strategies used with older adults.

## **SESSION 2160 (POSTER)**

### **LONG TERM CARE; SESSION 2**

#### **THE TRAINING NEEDS OF NURSING FACILITY SOCIAL WORKERS DISCHARGING RESIDENTS**

E. Beaulieu, School of Social Work, Simmons College, Scituate, Massachusetts

There are over 2 million individuals annually discharged from the nation's 14,000 skilled nursing facilities. Social workers in SNFs are the primary resource for short-term patient discharge planning and their need for training in this area is crucial for effective work with older adults and families. This study provides a clearer understanding of the current SNF social work practice of discharging short-stay individuals and the training that prepares them to assess and to understand the multifaceted needs of older adults' transitional care and engage appropriate post-discharge services. Almost 40% of nursing facilities discharge between 6-19 individuals per month, many SNF social workers, have not received training in key discharge areas; risk assessments for hospital re-admission (67%), assessment of need for housing/assisted living (65%), or care transition models (94%). This study suggests that training for currently practicing SNF social workers better prepares them to meet these needs.

#### **THE INFLUENCE OF INDIVIDUAL AND CONTEXTUAL CHARACTERISTICS ON THE PROVISION OF INDIVIDUALIZED CARE**

S. Caspar<sup>1</sup>, S.W. MacDonald<sup>2</sup>, 1. Univ. of British Columbia, Vancouver, British Columbia, Canada, 2. University of Victoria, Victoria, British Columbia, Canada

**Purpose:** Previous research examining improved individualized care (I-Care) in long-term care (LTC) facilities has largely considered contextual influences (e.g., culture change models) with little consideration for the influence of individual staff characteristics. The present study examined the impact that both individual and contextual characteristics exerted on care staffs' reported ability to provide I-Care in LTC facilities. **Methods:** Linear mixed models were used to examine 567 care staffs' reported ability to provide I-Care, nested within 41 LTC facilities. Specifically, I-Care was modeled as a function of within-individual (e.g., age, job title, experience) and between-context (e.g., facility ownership status, culture change models, staffing assignments) variables. Independent of these predictors, we then assessed the influence of staffs' perceived access to support and informal power on reported ability to provide I-Care. **Results and Implications:** Computation of the intraclass correlation coefficient indicated that 91.7% of the total variance in perceived ability to provide I-Care reflected within- vs. between-person differences. The addition of support and informal power accounted for 46% of this within-person variance in perceived ability to provide I-Care, with these variables clearly more influential in predicting quality of care than factors such as years of experience or education. Notably, between-context variables (e.g., facility ownership status) did not significantly influence provision of I-Care, and did not further modify the influence of support or informal power on I-Care. These findings suggest that individual-level factors, which have largely been ignored in the literature, need to be carefully considered when studying the provision of I-Care in LTC facilities.

#### **THE EXAMINATION OF SERVICE UTILIZATION PATTERNS AFTER TAIWAN'S IMPLEMENTATION OF THE TEN-YEAR LONG-TERM CARE PLAN**

Y. Lin<sup>1</sup>, T. Kuo<sup>2</sup>, 1. Long Term Care Management Center, Taichung, Taiwan, 2. Central Taiwan University of Science and Technology, Taichung, Taiwan

Taiwan has become the fastest aging places in the world. In 2007, Taiwan government passed the "Ten-year Long Term Care Plan" to

implement basic long-term care services in hoping to develop a universal long-term insurance. This Ten-year Plan included services such as home care and adult day care, home-based nursing, community rehabilitation, assistive devices, transportation, nutrition, respite care and institutionalized services. Depending on the functional and income levels, individuals can receive different ranges of services after a careful assessment by care management professionals. The purpose of this paper was to analyze and compare service utilization patterns among users in 2009 from one of the biggest counties in Taiwan. More specifically, it was the first study that examined reasons and factors for variations in service utilization types and quantity. The demographic characteristics and service data were extracted and analyzed from the Long Term Care Management Center, excluding personal identifiers. The results showed that the majority of the users were men, people with moderate income, and people who lived with others. The most frequently used services were home care and institutional respite service, followed by community-based rehabilitation services, transportation and assistive devices. Unlike common beliefs, this paper found that long-term care services were not used by the most needy (low income or isolated individuals) but by those who knew how to best use services. The conclusion discussed suggestions on how government should ensure that the resources and services were equitably distributed and efficiently delivered to those really in need.

#### **DEVELOPING A TYPOLOGY OF QUEBEC'S PRIVATE RESIDENTIAL CARE FACILITIES FOR OLDER ADULTS**

C. Lestage<sup>1,2</sup>, N. Dubuc<sup>1,2</sup>, G. Bravo<sup>1,2</sup>, 1. *Health and Social Services Centre - Sherbrooke Geriatric University Institute, Sherbrooke, Quebec, Canada*, 2. *Research Centre on Aging, Université de Sherbrooke, Sherbrooke, Quebec, Canada*

**Rationale.** As in other countries, Canadian Residential Long-Term Care Facilities (RCFs) fill the gap between independent housing and nursing homes. In the province of Quebec, RCFs have, until recently, operated without government regulation. There are, however, marked differences between RCFs, such as facility size, staffing mix, and services provided. **Objective.** To identify different types of RCFs based on their physical and organizational features. **Methods.** We conducted a provincial census of 1,989 RCFs. The data was collected with a new self-report questionnaire on the physical and organizational environments of RCFs, called the EPO questionnaire. We used different combinations of cluster analysis methods to identify plausible typologies. They were evaluated based on their stability, reproducibility, homogeneity, and clinical meaningfulness. The final choice was made by a committee of experts with clinical experience. **Results.** Of the 1,989 RCF owners, 552 (28%) returned the questionnaire. No significant differences were found between participants and non-participants with regard to facility size and geographical location. Three plausible solutions were submitted to the expert committee. The selected typology was derived from combining the Ward and K-means methods. It contains five clusters that differ according to eleven dimensions of the questionnaire such as availability of services, level of privacy and security. **Conclusion.** RCFs vary considerably. This heterogeneity often makes it difficult to compare facilities. Our typology contains five types of RCFs that share common features. This typology may help health professionals, older adults and families compare facilities and select the one most appropriate when the time comes.

#### **AN INVESTIGATION OF STATE TRENDS IN THE HOME CARE WORKFORCE, 2005-2007 TO 2008-2010**

C.M. Kelly<sup>1</sup>, J. Deichert<sup>2</sup>, L. Holley<sup>2</sup>, K. Kosloski<sup>2</sup>, 1. *Gerontology, University of Nebraska, Lincoln, Nebraska*, 2. *University of Nebraska at Omaha, Omaha, Nebraska*

Home care workers comprise two distinct populations: nursing, psychiatric and home health aides who provide medical services (such as changing bandages, taking blood pressure, and administering oral medications) and personal and home care aides who provide non-medical

services (such as ADL and IADL assistance). The present study compares the proportional distribution of these two types of workers by state over two recent three-year periods (2005-2007 and 2008-2010), using the American Community Survey Public Use Microdata Samples (ACS PUMS). The ACS is an ongoing survey covering every county in the U.S. and identifies workers by industry and occupation. Our findings indicate that personal and home care aides grew at the fastest rate (26.6%) over this six-year period and currently represent a majority (50.7%) of the home care workforce. However, while the overall national trend in the home care workforce is toward a higher proportion of personal and home care aides (who are mostly non-credentialed), we identified unique trends within certain states: 1) states with greater than 3X the national growth in personal and home care aides (e.g. North Dakota, Louisiana, and New Hampshire) or nursing, psychiatric, and home care aides (e.g., Wyoming, Delaware, and the District of Columbia) from 2005 to 2010 and 2) states with a decline in personal and home care aides (e.g. South Dakota and the District of Columbia) or nursing, psychiatric, and home care aides (e.g. Hawaii, Idaho, Mississippi, and Utah) over this six-year period. Given population aging and the overall growth of home care services, the second set of findings is the most surprising and suggests that state-level factors such as client demographics, labor force trends, and public policy merit further consideration.

#### **VERIFICATION OF FACTORS INFLUENCING ELIGIBILITY AND BENEFITS OF LONG-TERM CARE INSURANCE IN JAPAN**

H. Sumii<sup>1</sup>, Y. Makihata<sup>2</sup>, Y. Sawada<sup>3</sup>, A. Kariya<sup>1</sup>, S. Imaizumi<sup>1</sup>, 1. *Health and Welfare, Prefectural University of Hiroshima, Mihara, Hiroshima, Japan*, 2. *NPO Japan Kaigo Research, Mihara, Hiroshima, Japan*, 3. *Nihon Fukushi University, Nagoya, Aichi, Japan*

**Purpose:** Japanese government has enacted several changes to long-term care insurance (LTCI) eligibility/benefits assessment form and government computer program in the fiscal year 2009. The purpose of this study is to verify the differences and effects of changes on LTCI eligibility determination and benefits before and after 2009. **Methods and Participants:** This study, which was conducted from October 2009-January 2010, selected 400 residents from 8 long-term care facilities and 208 clients from 8 home care agencies across the country. During the study period, assessors assessed the participants using two different assessment forms created by the Ministry of Health, Labour and Welfare of Japan for the years of 2006 and 2009. The results of these assessments were then analyzed by two government computer programs, versions 2006 and 2009, created by above mentioned ministry, to determine the LTCI eligibility and benefits. **Results:** Although the assessment form version 2006 had 82 assessment items, the version 2009 had 74 items. Of those, 69 assessment items were the same on both forms. When the results of assessment version 2006 were analyzed by the computer program version 2009, it showed a significantly higher number of nursing care hours that should be provided to participants (median 1.70 min.;  $p < 0.003$ ). However, when the results of assessment version 2009 were analyzed by the computer program version 2006, it did not show statistically significance ( $p < 0.579$ ). **Conclusion:** The results suggest that the computer program changes may have a greater effect than assessment item changes do on LTCI eligibility/benefits determination.

#### **TIME STUDY OF SOCIAL SERVICES COORDINATORS AND CARE MANAGERS IN LONG-TERM CARE FACILITIES IN JAPAN**

Y. Sawada<sup>1</sup>, K. Kageyama<sup>2</sup>, H. Ishida<sup>3</sup>, M. Kunisada<sup>2</sup>, H. Sumii<sup>2</sup>, 1. *Center for Well-Being and Society, Nihon Fukushi University, Nagoya, Aichi, Japan*, 2. *Prefectural University of Hiroshima, Mihara, Hiroshima, Japan*, 3. *NPO Japan Kaigo Research, Mihara, Hiroshima, Japan*

**Purpose:** To determine the role of social services coordinators (SSCs) and care managers (CMs), and the services they provide in long-term

care facilities in Japan. Methods: Study data came from a time-study worksheet mailed to 2000 SSCs and 2000 CMs of 2000 long-term care facilities across the country. Participants were asked to record the number of minutes they spent in each of their activities as well as the types of activities performed during a period of 2 consecutive days from October 15-November 30, 2010. A total of 1312 responses (654 SSCs and 658 CMs of 896 facilities) were received (33%). The reported activities were coded and grouped into 10 large and 110 smaller categories. The average amount of time and frequency per day and activity were analyzed using Spearman's rank correlation and Mann-Whitney rank tests. Results: While SSCs were primarily involved in indirect activities (e.g., documentation; 80.76 min.), non-resident care (e.g., break time; 53.88 min.) and team management (28.76 min.), CMs were primarily involved in indirect activities (51.50 min.), constructing care plans (46.38 min.) and non-resident care (46.00 min.). Moreover, the SSCs had a higher frequency in indirect activities and pre-admission assessments, whereas the CMs had a higher frequency in creation of care plans and regular assessments. Conclusion: While the role of CMs is to manage care processes of resident assessment and care planning in accordance with Long-Term Care Insurance Law, that of SSCs is characterized by a wide range of activities ranging from admissions to community social work.

### **NORC-SSP AS A LTC OPTION IN CHINA: EXPLORING THE POSSIBILITY**

J.J. Liang, K. McGrew, *MU, Ohio, Oxford, Ohio*

The Naturally Occurring Retirement Community-Supportive Services Program (NORC-SSP) is recognized as a consumer-driven, person-centered long-term care alternative. NORC-SSPs have developed in the US in response to the desire of older Americans to age in place. Findings from a phenomenological study conducted in Xi'an City, China, suggest possibilities for application of the NORC-SSP concept to neighborhoods in urban China. In-depth qualitative interviews were conducted with ten people born in the 1950s to explore components of a meaningful retirement and perceived challenges to the self-defined meaningful retirement life. A remarkable finding is the importance of the existing work unit residential compounds. Workers retire and age in their compounds. These are quintessential naturally occurring retirement communities. Members of the 1950s birth cohort hold negative stereotypes of institutional care at the same time they experience unavailability of familial care provided by adult children. They express a desire to stay at home and a willingness to volunteer in their communities. These factors suggest great promise for the application of the NORC-SSP paradigm. We propose a collaborative, locally-adapted model for China, through developing partnerships among residents, volunteers, community service centers, government, enterprises, philanthropic organizations, research institutes, and colleges, to assist those who are aging at home in their work unit residential compounds. We conclude by applying a model developed by Vladeck (2004) to include service programs (physical, medical, social, educational, recreational, cultural and spiritual) that aim to promote quality of life for Chinese elders and a cost-effective LTC option in urban China.

### **ASSESSING THE ORGANIZATIONAL NEEDS OF LONG TERM CARE ORGANIZATIONS IN SOUTHERN ALABAMA**

G.T. Savage<sup>1</sup>, V.A. Yeager<sup>2</sup>, C.N. Goolsby<sup>1</sup>, 1. *MISQ, University of Alabama at Birmingham, Birmingham, Alabama*, 2. *UNiversity of Alabama at Birmingham- SOPH, Birmingham, Alabama*

The purpose of this study was to examine the infrastructure and needs of Long Term Care organizations (LTCs) in the region of Alabama affected by the 2010 Gulf Oil Spill. We conducted a paper-based, mail survey of LTCs in the eight southern counties of Alabama, with a 41.2% (n=14) response rate. Despite being medically necessary, LTCs reported difficulties accessing the following services for patients: transportation services (n=7 LTCs, 50%), inpatient mental health care (n=5, 35.7%),

and high quality outpatient mental health services (n=5, 35.7%). The lack of timely reports from other physicians/facilities was perceived to be a problem among 12 (85.7%) LTCs. Patients' inability to pay for needed care was perceived to be a problem by almost all LTCs in the region (n=13, 92.8%). Lastly, the lack of qualified specialists/therapists in the area was also a problem among the majority of LTCs (n=8, 57.1%). Findings from this study highlight the potential for telemedicine in LTC setting as it may address the need for improved access to qualified specialists/therapists. Further, these findings emphasize the need for electronic health records as a means of sharing findings/reports from other health care providers.

### **ACCESS DISPARITIES IN IN-HOME CARE SERVICE USAGE AFTER INTRODUCING LONG-TERM CARE INSURANCE IN JAPAN**

H. Sugisawa<sup>1</sup>, Y. Nakatani<sup>2</sup>, Y. Sugihara<sup>3</sup>, M. Shimmei<sup>3</sup>, H. Kodama<sup>3</sup>, Y. Watanabe<sup>4</sup>, 1. *J.F. Oberlin University, Machida, Tokyo, Japan*, 2. *Japan Women's University, Bunkyo-ku, Tokyo, Japan*, 3. *Tokyo Metropolitan Institute of Gerontology, Itabashi-ku, Tokyo, Japan*, 4. *Musashino University, Nishitokyo, Tokyo, Japan*

We investigated whether disparities in accessing in-home care, based on care needs and economic status changed after introducing the long-term care insurance (LTCI) system in Japan. Five repeated cross-sectional surveys were conducted to family caregivers to frail elders in 1996 and 1998 prior to introducing the reforms, and in 2002, 2004, and 2010, after the new system was introduced. Participants in the study were selected by a screening survey to identify elderly with or without care needs among a randomly selected sample of elderly people living in a suburban city of Tokyo. The need for in-home care services was assessed based on three indices; activities of daily living, cognitive symptoms, and caregiver burden. Economic status was measured by subjective financial position. Access disparities were examined for three types of in-home care services: home help, respite, and day-care. In the first step of logistic regression analyses we entered each care usage indices as dependent variables and care needs, economic status, and survey year as independent variables. In the next step, interaction terms for each need variable and economic status by survey year were entered. Results indicated that access to each type of care service was facilitated after the enforcement of the new system, even after controlling for care needs and economic status. Especially, access to day-care services improved among people with high caregiver burden. In addition, access disparities in the use of home help; regardless of available sub-caregiver, disappeared after the new system was introduced.

### **USING THEATRE AS A KNOWLEDGE EXCHANGE STRATEGY IN THE CARE OF OLDER ADULTS**

M. Speechley<sup>1</sup>, I. Gutmanis<sup>2,1</sup>, R.T. DeForge<sup>1</sup>, L. VanBusse<sup>1,2</sup>, S. Horgans<sup>3</sup>, C. Ward-Griffin<sup>1</sup>, 1. *Epidemiology & Biostatistics, Western University, London, Ontario, Canada*, 2. *St. Joseph's Health Care, London, Ontario, Canada*, 3. *Providence Care, Mental Health Services, Kingston, Ontario, Canada*

We are exploring theatre as a knowledge exchange strategy with frontline care providers for older adults, by writing and presenting two short (<25 minute) plays. Both scripts present themes identified in qualitative analyses of transcripts from focus groups of providers and family members. Each play tells a story about the care of older adults, with a Personal Support Worker and family members as central characters. Parts of the fictional characters' dialogue are based on verbatim quotes from the transcripts. One play, All Behaviour Has Meaning, is set in a long-term care facility. A major theme is the meaning behind responsive behaviours among residents. The second play, Advocating For Hilda, concerns an older woman with dementia who is able to remain in her house with minimal home care. A major theme is the contrast between effective and ineffective care networks. Both plays have been presented live to providers and managers in long term care facilities and home

care agencies. Workshopping involves trained facilitators discussing the play with the audience immediately afterwards. The audience is encouraged to comment on issues ranging from the resonance of the themes to the realism of the dialogue. The feedback is used to refine the script, which is then performed for another audience. One evaluation strategy is to return to the site of a previous performance months after the play was presented, to see how issues raised post-performance are being addressed in that facility. Results suggest that this strategy may be superior to traditional methods of teaching and problem solving which have yielded minimal uptake of best practices.

#### **“SHE’S LIKE A DAUGHTER TO ME:” OLDER ADULTS AND PAID CAREGIVING IN A CONSUMER MODEL OF CARE**

A. Choi<sup>1,2</sup>, K.G. Kietzman<sup>2</sup>, S. Wallace<sup>2</sup>, E. Durazo<sup>2</sup>, J. Torres<sup>2</sup>, C. Mendez-Luck<sup>2</sup>, A. Benjamin<sup>2</sup>, 1. *California State University Dominguez Hills, Carson, California*, 2. *UCLA Center for Health Policy Research, Los Angeles, California*

The focus on consumer driven care in the US is part of the larger “aging in place” movement that emphasizes independence for older adults. However, there is limited research on how older adults who need home-based care recruit and hire non-family paid caregivers and manage their care. Drawing on a sample of qualitative interviews from a study of California older adults, who qualify for publically financed in-home supportive services (IHSS), this paper examines the relationships between older adults and their paid caregivers. Data were collected over a one year-period on older adults (age 65 and over) who are consumers of public programs that provide long-term in-home care services and supports. In-depth, face-to-face interviews were conducted with the older adult and their paid caregiver. Data were independently coded by two researchers. The results of thematic analyses suggest that in a consumer-driven model, some older adults had significant difficulties finding and interviewing non-family caregivers, and negotiating the care that they needed. Additionally, it was discovered that the nature of relationship had a significant impact on consumer satisfaction. For example, some older adults needed the care, and especially intimate personal care, to be framed in the discourse of familial ties such as “she is like a daughter to me.” Others felt much more at ease with a clear employer-employee relationship. More often than not, in successful consumer-caregiver relationships, it was a mix of these two understandings that created the best quality of life and an enhanced sense of independence for the older adult.

#### **COMPARING STAKEHOLDERS ON INFLUENTIAL FACTORS IN PROXY CONSENT FOR DEMENTIA RESEARCH**

G. Bravo<sup>1</sup>, S.Y. Kim<sup>4</sup>, M. Dubois<sup>1</sup>, C. Cohen<sup>2</sup>, S. Wildeman<sup>3</sup>, J.E. Graham<sup>3</sup>, 1. *University of Sherbrooke, Sherbrooke, Quebec, Canada*, 2. *University of Toronto, Toronto, Ontario, Canada*, 3. *Dalhousie University, Halifax, Nova Scotia, Canada*, 4. *University of Michigan, Ann Arbor, Michigan*

Dementia research often involves individuals who lack the capacity to consent. Permission to enroll such subjects must be provided by proxies, usually family members. Knowledge of the factors that influence proxy consent is critical to the success of dementia studies. Objective: To compare stakeholders on factors that would influence their decision to let a decisionally-incapacitated relative participate in research. Methods: We surveyed 2,060 Canadians: 679 adults aged 65 and over, 384 informal caregivers, 495 physicians, 177 researchers, and 325 Institutional Review Board (IRB) members. Survey participants were given a list of seven factors and asked to select those that would most and least influence their decision to allow a close relative to participate in a study. Results: The prospect of direct benefits to the incapacitated relative was the most influential factor for 55.8% of the respondents, followed by the possibility of adverse events (30.0%). Inconvenience and prospect of benefits to the proxy were least influential for 42.2% and 20.9% of

the respondents. Older adults, informal caregivers and physicians considered direct benefits as more influential than risks in proxy consent, while the reverse was observed among researchers and most IRB members. Conclusions: Our survey shows the overall tendencies in how individuals perceive research studies. Older adults, informal caregivers and physicians tend to see therapeutic opportunities; researchers tend to see research’s long term goals. Consequently, IRBs must ensure that study risks are minimized and justified, while researchers and physicians must highlight research risks when soliciting consent from prospective subjects and proxies.

#### **MEDICAL STAFF MODELS IN VETERANS HEALTH ADMINISTRATION COMMUNITY LIVING CENTERS**

O. Intrator<sup>1,2</sup>, S. Hyde<sup>1</sup>, S. Cai<sup>1,2</sup>, G. Kochersberger<sup>3</sup>, J. Karuza<sup>3</sup>, C. Hojlo<sup>4</sup>, P. Katz<sup>5</sup>, 1. *Providence VAMC, Providence, Rhode Island*, 2. *Center for Gerontology and Health Care Research, Brown University, Providence, Rhode Island*, 3. *Canandaigua VAMC, Canandaigua, New York*, 4. *VA Center Office, Washington, District of Columbia*, 5. *Baycrest, Toronto, Ontario, Canada*

The variation in organization of medical staff (MSO) in nursing homes among health systems has not been described. We sought to compare MSO in Veteran Health Administration Community Living Centers (CLCs) with MSO in free-standing and hospital-based community nursing homes (FSNHs, HBNHs). MSO characteristics were obtained from medical directors of 103 of 134 CLCs in 2010, and a random sample of 202 FSNHs and 10 HBNHs which participated in a study conducted in 2006/7. Previously validated measures of MSO were quantified on a 5-point Likert scale. Statistically significant differences in average system results are presented (CLC, FSNH, HBNH). Although there were fewer physicians in CLCs, total physician FTE was higher than in FSNH and HBNHs (1.78, 0.5, 0.8 respectively, henceforth in this order). Physician cohesiveness was higher in CLCs (3.5, 3.0, 3.0) as was physician supervision (3.1, 2.7, 2.6) and, expected physician participation in care planning meetings (3.9, 2.0, 2.2). CLCs had more formal review processes (4.0, 1.0, 2.0), but perception of relationships with administrator and director of nursing was modestly worst (3.5, 3.9, 4.0). CLC Medical Directors were more likely to be women (50%, 30%, 30%), had more administrative responsibilities (35.2%, 25.5%, 10.0%) and were less involved in clinical work (49.0%, 73.2%, 40.0%). On average, CLCs medical staff were more cohesive, integrated, and supervised, and were more likely to participate in care planning meetings, while medical directors had more administrative duties and conducted less clinical work. Future work should examine relationship of MSO and outcomes of resident care.

#### **PLACING THE LONG-TERM CARE PROVISIONS OF THE PATIENT PROTECTION AND AFFORDABLE CARE ACT INTO HISTORICAL CONTEXT**

E.A. Miller, P. Nadash, *Gerontology, Univ Mass Boston, Boston, Massachusetts*

The Patient Protection and Affordable Care Act (ACA) includes a number of provisions aimed at addressing extant deficiencies in the long-term care (LTC) sector. The most prominent was the Community Living Assistance Services and Supports Act, a national voluntary LTC insurance program, implementation of which has since been suspended by the Obama Administration due to concerns over program solvency. Other pertinent provisions include incentives and options for expanding Medicaid home- and community-based services (HCBS), a number of research and demonstration projects, particularly in the areas of chronic care coordination and the Medicare-Medicaid dually eligible, and a grab bag of quality reforms meant to increase transparency and prevent elder abuse and neglect. There are also provisions that could improve the quality of the LTC workforce and slow down the rate of growth in Medicare’s skilled nursing facility and home health benefits. The purpose of this study is to place the ACA’s LTC provisions into a

broader historical context, beginning with the late-1990s on through the present day. Key trends and events in three major areas are analyzed: quality improvement and regulation (regulatory enforcement, culture change, quality measurement, malpractice litigation, disaster preparedness/responsiveness); financing and insurance (Medicare, Medicaid, personal preparation, asset accumulation, private insurance); and service organization (HCBS expansion, managed LTC, consumer direction). Findings indicate that the LTC reforms adopted by the ACA represent a natural outgrowth of policy choices and business decisions that have impacted the way LTC is regulated, delivered, and financed for well over a decade.

## SESSION 2165 (POSTER)

### MENTAL HEALTH AND AGING

#### NATURE AND PREVALENCE OF SUBSTANCE MISUSE DISORDERS AMONG OLDER PUBLIC HOUSING RESIDENTS

S.M. Cummings, L. Cooper, *College of Social Work, University of Tennessee, Nashville, Tennessee*

This study investigated the nature and prevalence of substance abuse among low income residents of two public housing facilities in a mid-size southern city. In-home surveys were conducted to examine substance abuse, mental health disorders, physical illness and treatment usage among residents 50 years and over (n=187). The majority of residents were African American (75.3%) males (54.5%). Ages ranged from 50 – 89 years (M= 66.2, SD=7.6). Eighty percent had incomes of \$900/month or less. Mental health symptoms at clinical levels were found for depression (18.2%) and anxiety (10.2%). Half of the residents reported their health as being very bad-fair and 46% reported elevated pain levels. Over half (54%) smoked. Thirty-one percent reported one or more substance misuse problems - alcohol (23%), illegal drugs (6.4%), and prescription medications (5.9%). Of those abusing alcohol, 34.2% were hazardous drinkers (>14 drinks/wk) and 40.7% were binge drinkers (> 4 drinks per sitting). Less than 5% received mental health services and none received substance abuse treatment. Regression analysis, conducted to determine factors related to alcohol misuse, indicated that race (African American),  $\beta=.194$ ,  $p=.006$ , age (younger),  $\beta=-.192$ ,  $p=.011$ , gender (male),  $\beta=-.186$ ,  $p=.01$ , and smoking (more years smoking),  $\beta=.21$ ,  $p=.003$ ,  $R^2=20.8$ ,  $F=6.3$ ,  $p=.000$ , were significant predictors of alcohol misuse. Older public housing residents in this study had high levels of substance misuse and mental and physical health problems but received little treatment. Implications are discussed.

#### MENTAL HEALTH CURRICULA FOR AGING HOLOCAUST SURVIVORS: A TREATMENT MODEL FOR ADDRESSING THE INTERACTION OF AGING AND TRAUMA ISSUES

D. Greenberg, A. Scalmati, G. Kennedy, *Geriatrics Division, Montefiore Medical Center, Bronx, New York*

Purpose: The population of holocaust survivors is rapidly aging and few mental health providers have training in providing care with either a geriatric medical or mental health focus for these older adults. In 2010, the Montefiore Medical Center, Division of Geriatric Psychiatry implemented a consultation service to offer specialized training to providers of care to holocaust survivors and to introduce issues common in work with the geriatric population and the impact of past trauma on that work. Methods: Consultations were offered to social service agencies through staff identified cases discussed through assessment interviews or group supervision. Staff training presentations and participation in conference lectures on geriatric mental health issues in treatment of older survivors were offered. A training manual with curricula was developed for those working with older adults for addressing the mental health needs of holocaust survivors. Results: The lectures, assessments and consultations focused around trauma, aging and end of life care. Tools for eval-

uating elder mistreatment, performing a capacity assessment and introducing a will to live scale were offered as methodologies to help determine long and short term care plans Conclusion: Addressing mental health needs of holocaust survivors, a specific population, can be a model for the care of older adults, such as aging veterans, can be the basis for generalized geriatric mental health care for traumatized populations. Staff trained in providing services to aging survivors develop treatment skills in the area of trauma and aging, understand the interaction between them which can be replicated in other settings.

#### COPING RESPONSE TO DEPRESSIVE SYMPTOMS AMONG HOMEBOUND OLDER ADULTS: EFFECT ON TREATMENT OUTCOME

N.G. Choi, *School of Social Work, University of Texas at Austin, Austin, Texas*

Due to their homebound state, lack of financial resources, and/or other life demands, a significant proportion of depressed, low-income homebound older adults experience depression. However, little research has been conducted regarding the nature of coping responses to their depressive symptoms among older adults in general and homebound older adults in particular. The purposes of the present study were to examine the type of coping responses to depressed mood and the effect of passive coping responses on depression severity and treatment outcomes among low-income homebound older adults (n=121) who participated in a pilot randomized controlled trial of problem-solving therapy (PST). Depressive symptoms were measured at baseline and 12- and 24-week follow-ups with the 24-item Hamilton Rating Scale for Depression. Coping responses were measured with a 22-item checklist of coping responses to depression was compiled based on the findings of a previous study of depressed, low-income older adults' help-seeking behaviors. The findings show that cognitive passive coping, but not behavioral passive coping, was significantly associated with baseline depressive symptoms. The main effect of baseline cognitive passive coping response was also significant in mixed-effects regression analysis, but the interaction between coping pattern and group (PST vs. attention control) was not significant. The results point to a possibility that cognitive passive copers may have benefited as much from PST as the rest of the PST participants. Coping responses to depressive symptoms need to be further examined as a moderator in the future research of treatment efficacy of psychosocial interventions for late-life depression.

#### ANXIETY, DEPRESSION, AND HEALTH SERVICES UTILIZATION: FINDINGS FROM THE 2010 NSDUH

K. Mazurek<sup>1</sup>, J. Ciesla<sup>2</sup>, 1. *University of Illinois Urbana-Champaign, Urbana, Illinois*, 2. *Northern Illinois University, DeKalb, Illinois*

According to the National Institute of Mental Health, depression is under-diagnosed and commonly linked with suicide among older adults. Anxiety disorders often accompany depression and are associated with many chronic conditions. Therefore, it is important to advance the goals of Healthy People 2020 to improve mental health by ensuring access to appropriate mental health services. The purpose of this research is to examine mental health service utilization among elders with depression and anxiety using the National Survey on Drug Use and Health, 2010. This research provides odds ratios in three settings: inpatient hospital, outpatient hospital, community based mental health clinics. Findings indicate that elders with depression are 4.054 times more likely to receive hospital-based outpatient care (OR: 4.054, 95% CI 4.038 to 4.069,  $p\leq.000$ ) and 94.3 times more likely to receive hospital-based inpatient care (OR: 94.303, 95% CI 92.912 to 95.715,  $p\leq.000$ ). However, elders are considerably less likely to receive treatment at community based mental health clinics (OR: 0.080, 95% CI .079 to 0.080,  $p\leq.000$ ). Further findings indicate that elders with anxiety are 2.043 times more likely to receive hospital-based outpatient care (OR: 2.043, 95%

CI 2.517 to 2.538,  $p \leq .000$ ) and 26.5 times more likely to receive hospital-based inpatient care (OR: 26.535, 95% CI 26.272 to 26.801,  $p \leq .000$ ). However, elders are considerably less likely to receive treatment at community-based mental health clinics (OR: 0.120, 95% CI 0.119 to 0.121,  $p \leq .000$ ). This presentation will discuss the policy implications of disproportionately high admission rates to hospital-based treatment.

### DEPRESSIVE SYMPTOMS AMONG AGING INDIVIDUALS IN CHINA: DOES THE ENVIRONMENT MATTER?

L. Li, J. Liang, *School of Social Work, University of Michigan, Ann Arbor, Michigan*

**Purpose:** This study analyzes depressive symptoms as a function of individual attributes within the context of household, community, and province among middle-age and older adults in China. **Methods:** Data came from the Chinese Health and Retirement Longitudinal Study (CHARLS) in which a probability sample of adults age 45 and older and their spouses, if living together, in two Chinese provinces (Zhejiang & Gansu) were interviewed ( $N=2,685$ ). Data about the respondents' community were obtained through interviews with local leaders. Depressive symptoms were assessed by the 10-item CES-D. A 4-level mixed effects model was employed to examine depressive symptoms at the individual, household, community, and provincial levels. **Results:** Some 50% of the total variance in depressive symptoms was accounted for at the individual level. In addition, attributes at the levels of household, neighborhood, and province explained respectively 34%, 5%, and 11% of the total variance. Depressive symptoms were significantly associated with not only individual attributes (i.e., age, education, and health) but also characteristics of the household (i.e., composition and socioeconomic status [SES]), community (i.e., rural/urban, SES) and province (i.e., GDP). There is indication that community SES moderates the effects of household income and individual's education on depressive symptoms. **Implications:** This study suggests that environmental contexts are as important as individual characteristics in understanding depression in middle and old age. Future research is needed to examine how household and community environment exerts its influence.

### ASSESSING THE UNMET NEEDS OF OLDER ADULTS WITH SERIOUS MENTAL ILLNESS (SMI) IN THE REPUBLIC OF GEORGIA

K.A. Zurlo<sup>1</sup>, E. Chkonia<sup>2</sup>, *1. Rutgers University, New Brunswick, New Jersey, 2. Tbilisi State Medical University, Tbilisi, Georgia*

The Republic of Georgia (Georgia) became independent in 1991 and initiated health care reform in 1995. Since that time, mental health care has become a national priority, but services are limited by scarce financial resources. Although psychiatric care in Georgia is universally available, state provision satisfies only about 30 percent of existing need, which is under-estimated and does not reflect actual demand for services. Short-term and long-term institutional care is the mainstay of mental health service provision, which includes treatment from psychotropic drugs exclusively. Because existing mental health services are minimal in scope, there is significant risk associated in meeting the current and future mental health needs of Georgia's growing older adult population. As a result, this study explores methods that can be used to assess the unmet needs of this population. The perspectives of the patient, primary caregiver, and physician are solicited so one can ascertain differences in perceptions of need and more accurately guide the delivery of care in proposed community-based services. Using these three perspectives, qualitative and quantitative survey data must be compiled. Quantitative surveys administered include the Brief Psychiatric Rating Scale (BPRS), the Camberwell Assessment of Need - Elderly (CANE), and the Health of National Outcomes Scale (HONOS). Additionally, qualitative sur-

vey questions are critical to understanding the needs of this population and are derived from the results of the quantitative survey data.

### PUNJABI SENIORS WELLNESS INITIATIVE: EXPLORING THE DETERMINANTS OF MENTAL HEALTH

S.D. Koehn<sup>1,2</sup>, S.K. Bains<sup>3</sup>, *1. Simon Fraser University, Vancouver, British Columbia, Canada, 2. Providence Health Care, Vancouver, British Columbia, Canada, 3. University of the Fraser Valley, Abbotsford, British Columbia, Canada*

The Punjabi Seniors Wellness Coalition is a group of researchers and community partners engaged in health promotion. In 2010, the group secured Community Action Initiative funding to explore the extent to which community services targeted at Punjabi seniors in the Fraser Valley, British Columbia, address the social determinants of mental health, as identified by Keleher and Armstrong (2005). These determinants fall into three broad categories: social inclusion, freedom from violence and discrimination, and access to economic resources. Two groups of participants—Punjabi seniors ( $n = 20-25$ /forum) and community service providers ( $n=14$ /forum)—were involved in each of two forums held in Abbotsford and Surrey. Ethics clearance was secured. Punjabi seniors were interviewed in gender-specific focus groups about their experiences of these determinants and the community supports that they accessed; community service providers separately discussed if and how their work with Punjabi seniors addresses these determinants of mental health. Our consultations confirmed that Punjabi older adults are hard to reach and a relatively vulnerable population in terms of their mental health needs. Social inclusion is an important determinant of mental health and wellness in this population, in terms of the need to feel respected and valued, to have supportive relationships, to participate in the community and to have access to basic human entitlements. Service providers play a key role in facilitating social inclusion and other determinants of mental health but need additional supports in terms of training and sustainable resources to adequately support the mental health needs of their clients.

### A STUDY OF INDEFINITE CONFINEMENT OF OLDER SEX OFFENDERS TO MENTAL HEALTH TREATMENT FACILITIES

D. Mukherjee, *Social Work, SIUC, Carbondale, Illinois*

At least seventeen states in the US have passed various versions of "sexual predator" legislations along with nursing home care acts that encourage indefinite involuntary commitment of older adults with history of sex offense to mental health treatment facilities. The impetus for these legislations were to make nursing homes comply with emergency rules and repeal of the indeterminate sentencing laws under which serious sex offenders previously were confined in prison until prison officials were satisfied that they were no longer a threat to society. This study carries out a survey of the mental health treatment facilities ( $N = 78$ ) in 15 states to explore this trend of older non-mentally ill sex offenders being put up in such facilities. Furthermore, it conducts 9 qualitative interviews of nursing home administrators to understand their attitudes towards accommodating older persons of similar profiles. The study is based on the value that the mental health system is not the appropriate place for long-term confinement of older sex offenders as they do not necessarily have any treatable mental illness. Thus, the paper argues that the "sex predator" legislations do not constitute sound public policy. Moreover, the findings from the qualitative component of the study identify several themes that show that nursing homes in general are unwilling to accommodate older sex offenders because of the monetary commitment that such admissions entails under various nursing home care acts. The paper concludes by making a case of human rights violations against older sex offenders under current legislations.

## A STUDY USING WEB-BASED TOOLS TO ENHANCE THE INFORMED CONSENT PROCESS IN SCHIZOPHRENIA RESEARCH

A. Harmell<sup>1,2</sup>, B. Palmer<sup>1,3</sup>, D. Jeste<sup>1,3</sup>, 1. *University of California San Diego, Department of Psychiatry, La Jolla, California*, 2. *San Diego State University, Department of Psychology, San Diego, California*, 3. *Stein Institute for Research on Aging, La Jolla, California*

**Objective:** To examine the feasibility and effectiveness of a computer/web-based multimedia aided consent procedure among people with schizophrenia and normal comparison (NC) subjects. **Method:** 19 middle-aged and older people with schizophrenia and 16 normal comparison (NC) subjects were randomly assigned to either a web-media aided or a routine consent procedure for a hypothetical clinical drug trial. Participant comprehension was measured using the UCSD Brief Assessment of Capacity to Consent (UBACC) and the MacArthur Competence Assessment Tool for Clinical Research (MacCAT-CR). Participants also rated their satisfaction with the simulated consent procedure. **Results:** Relative to patients receiving the routine consent procedure, patients receiving web-media consent had significantly better performance on the UBACC with an effect size in the "large effect size" range ( $d=0.94$ ). Although power to detect significant differences was limited by the sample size, the overall pattern for patients on the MacCAT-CR was consistently toward better performance among those receiving the web-media consent (Understanding subscale  $d=0.81$ , Appreciation  $d=0.33$ , Reasoning  $d=0.45$ ). Further, 60% of the NC and 44% of the patients with schizophrenia rated the quality of the web-media aided procedure as "better" than prior experiences, and no subjects reported the current experience as worse. There were no significant effects of consent condition among NC subjects, but both NC groups evidenced near ceiling performances. **Conclusions:** Findings suggest that a web-based multimedia consent aid is feasible and at least as effective, and perhaps more effective than use of printed consent forms in schizophrenia research.

## SESSION 2170 (POSTER)

### OLDER WORKERS AND RETIREMENT

#### ORGANIZATIONS' VIEWS ON EMPLOYEES WITH CARE RESPONSIBILITIES FOR OLDER FAMILY MEMBERS IN EUROPE

A. Principi<sup>1</sup>, M. Di Rosa<sup>1</sup>, J. Perek-Bialas<sup>2</sup>, G. Lamura<sup>1</sup>, 1. *Centre of Socio-economic Gerontological Research, National Institute of Health and Science on Aging (INRCA), Ancona, Italy*, 2. *Institute of Statistics and Demography, Warsaw School of Economics, Warsaw, Poland*

**Purpose:** Due to the growth in the number of older people with high support needs, to the trend to a later retirement age and to a larger female labour force participation, the issue of reconciling paid work with family elder care is becoming crucial in Europe. Notwithstanding, little is known on how European organizations perceive this topic, e.g. whether employers think that elder care responsibilities may affect employees' daily work and productivity. **Methods:** The comparative ASPA survey addressed a total of 4,919 organizations in 6 EU-countries: Denmark, Germany, Italy, the Netherlands, Poland and Sweden. Data collection took place from March to November 2009. Four main ways of coping with the combination of work and family elder care responsibilities were investigated: reducing working hours; giving up working; taking up sick leaves; early retirement. **Findings:** Especially Italian and Dutch employers (about one in two) perceive that elder care responsibilities disrupt the daily work of (both male and female) middle aged employees. Overall, employers indicated the reduction of working time (40% of employers) and absenteeism (39% of them) as the strategies mostly used by their employees to reconcile work and family duties, while only 26% and 19% of them stated that employees deal with this by respectively retiring early and giving up working. Public employees are reported to

use the four coping strategies more frequently, as do those working in organizations with higher shares of female workers. Interpretation. Employers perceive reconciliation issues differently across countries and sectors, and according to their workforce structure.

#### HEALTH, PRODUCTIVITY AND SAFETY IN THE WORKFORCE: DOES AGE MAKE A DIFFERENCE?

A. Cohen-Callow, J. Jacobson, P. Osteen, J. Ko, *University of Maryland The Founding Campus, School of Social Work, Baltimore, Maryland*

Older workers benefit workplaces with their knowledge, experience, advanced skills, engagement and commitment; yet, they are at greater risk for chronic health conditions compared to their younger counterparts contributing to decreased productivity. Productivity drives decisions about support programs for employees; however, employers have become more responsive to programs and policies related to the changing employee demographics, especially those focused on the needs of an aging workforce. This study compared three age groups ( $\leq 34$ , 35–49 and  $\geq 50$ ) of workers at two Department of Energy national laboratories on the prevalence of chronic health conditions, productivity, and safety. Anonymous surveys were administered to 4000 randomly selected employees; 1854 surveys were returned (46% response rate) and 1147 surveys were used for this study. The researchers used the HPQ-Select (Kessler et al., 2003), to measure employees' health conditions, productivity [Relative Hours Worked (RHW), Self-Reported Job Performance] and safety. Workers varied on 29 health conditions. Results for those with one or more chronic condition were not different on RHW [ $F(2,12)=1.587, p=.205$ ]; however, differences in Self-reported Job Performance was significant [ $F(2,1018)=7.320, p=.001$ ], with lower scores for those  $\leq 34$  than those  $\geq 50$  ( $p=.001$ ). There were no differences on safety questions by age groups. Older workers with at least one health condition were just as productive and safe as compared to younger workers in the study. Results to be discussed relate to an aging workforce, health related productivity improvement opportunities and accident prevention strategies. Strengths and limitations of this research will be reviewed along with future research opportunities.

#### PRODUCTIVE ENGAGEMENT AND LONGEVITY IN TRANSITION TO RETIREMENT

E. Choi<sup>1</sup>, F. Tang<sup>2</sup>, 1. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *School of Social Work, University of Pittsburgh, Pittsburgh, Pennsylvania*

Currently, an increasing number of older adults simultaneously engage in productive activities, such as paid work and unpaid volunteer work. For older adults volunteering is linked with a wide array of mental and physical health benefits. Existing studies, however, provide inconsistent evidence for the positive association between working and health and fail to consider varied work statuses in transition to retirement. Moreover, our knowledge of the effect of concurrent engagement in paid work and volunteering on longevity is fragmentary. Based on the role enhancement perspective, which postulates that taking multiple roles may promote older adults' well-being, we examined the relationship between productive engagement and longevity using five waves of Health and Retirement Study data. First, we identified four latent statuses in the dynamic latent structure of work-retirement transition: full-time worker, part-time worker, fully-retired, and partly-retired. Then we assessed the effects of engagement in volunteer work, paid work, and both activities on self-rated health and mortality using growth curve modeling and logistic regression. The results indicated that volunteering had independent protective effects against decline in self-rated health over time and that volunteering at baseline was related to a lower risk of mortality. Concurrent engagement in both activities was not significantly associated with longevity. This study implies that meaningful engagement in volunteering is contributive to longevity and that stable employment status promotes perceived health among older adults. Policies and practices are needed to facilitate older adults in productive

engagement, which in turn benefit society as well as the older participants.

### **FALLING BETWEEN THE CRACKS: THE INTERSECTION OF AGE AND GENDER IN ORGANIZATIONAL POLICY-MAKING**

P. Taylor<sup>1</sup>, E. Lynn<sup>1</sup>, R. Williams<sup>1</sup>, E. Brooke<sup>2</sup>, *1. Monash University, Churchill, Victoria, Australia, 2. Swinburne University of Technology, Melbourne, Victoria, Australia*

Older women form a significant proportion of the paid workforce, but understanding of their place in organizational policy-making is lacking. This paper will consider the intersection of age and gender within three Australian industry sectors: Financial services, state and emergency services and higher education. It is based on analysis of qualitative data collected in an Australian Research Council research project, Retiring Women: Understanding Older Female Work-life Transitions. In-depth interviews were conducted with 56 Human Resource Managers and 39 key external stakeholders, including trade unions, advocacy groups and industry bodies. These revealed a significant disjunction between the two sets of interviewees in terms of understanding of the specific needs of older women. The former, in contrast to the latter, were generally unable to articulate how different equity agendas could be combined or even to recognize the potential efficacy of an integrated approach. Instead, age and gender were treated by HR managers as two operationally distinct categories and seldom integrated in their application. It is concluded that older women are misunderstood as an entity at the workplace level, generally falling between the cracks of current HR policy and practice.

### **THE IMPACT OF AGE AND GENDER ON THE PROMOTION DECISIONS OF OLDER WORKERS IN THE IRISH CIVIL SERVICE**

A. Ni Leime, *Irish Centre for Social Gerontology, NUI, Galway, Galway, Ireland*

Demographic aging means that there is an increase in the proportion of older workers in many European countries. This suggests a need for research into the experiences of older workers in order to inform policy at government and employer level. This paper is based on a qualitative study of older workers in the Irish civil service. It explores the impact of age, gender and age discrimination on their promotion decision-making. The methodology employed involved conducting semi-structured interviews with 105 older men and women aged 50–64 working at various grades in the Irish civil service. A lifecourse approach was adopted which enabled an exploration of how the previous work-life biographies of individuals impacts on their current employment decisions. This paper focuses on promotion decision-making and found that gender, age, age discrimination and previous work-life history impact on current decision-making. This suggests that political economy of ageing approaches to analysis are useful in accounting for the socio-economic context; however this needs to be supplemented by a life course approach which can account for the impact of agency, gender norms, and previous work life-history on the individual's promotion decision. These findings help uncover the processes which affect older workers – they clearly illustrate cumulative disadvantage/advantage, show that structural inequalities still exist and that gendered norms in relation to caring remain strong and suggests that employment policy needs to take this into account.

### **A UNIVERSAL SOCIAL SECURITY RETIREMENT SYSTEM: THE EXPERIENCE OF ARGENTINA POST 2008**

R. Eleta-De Filippis, *Sociologie, Université du Havre, Le Raincy, France*

: Under the new system of public pensions in Argentina the role of contributions by the employer and employee is no longer closely linked to the receipt of benefits. Now the system is universal. This contrasts

with the period of partial privatization from 1994 to 2008 where benefit levels were closely linked to contributions. Under the previous system differences in work histories and employment patterns had a strong impact on the level of benefit. Those who had only part-time work, or worked in the non-formal sector were greatly disadvantaged. The difference between the average man's work history and the average woman's work history was reflected in a lower benefit level for the average woman. In addition this partial privatization of retirement benefits left many workers and non-working women with no coverage at all. Today women receive the same minimum benefit as men who have worked in the formal sector at low wages. But the men have made contributions, together with those of their employer. These men are unhappy with the fact that women who have made no contributions receive the same benefit level. This raises the question of how to design a universal system of retirement benefits which can be accepted as equitable by both men and women. How can the unpaid work of women be acknowledged in the retirement years?

## **SESSION 2175 (POSTER)**

### **PRIMARY, CHRONIC, AND REHABILITATION CARE**

#### **RACIAL DIFFERENCES IN MONITORING AND TREATING METABOLIC PARAMETERS AMONG SCHIZOPHRENIA PATIENTS RECEIVING ANTIPSYCHOTIC MEDICATIONS**

K.L. Phillips<sup>1</sup>, L. Copeland<sup>2</sup>, J. Zeber<sup>2</sup>, R. Beswick<sup>2</sup>, *1. Atlantic Philanthropies, Silver Spring, Maryland, 2. Scott & White Healthcare, Temple, Texas*

**BACKGROUND:** Patients with schizophrenia taking antipsychotic medications are at an increased risk for developing metabolic syndrome. There is a lack of research that has examined the development of metabolic parameters specifically in older (50+) diverse populations. The purpose of this study was to examine if there are changes in monitoring metabolic parameters over the period 2002–2005 differ by minority vs non-minority race/ethnic status among older VA patients with schizophrenia. **METHODS:** VA patients with schizophrenia over age 50 with valid metabolic parameters were included (N = 11,418). To approximate the five components of metabolic syndrome, we used body mass index for central obesity, triglycerides, high-density lipoprotein (HDL), blood pressure readings, and A1c/proxy fasting-glucose tests validated in prior work. Data were examined over four years to assess differences by race (black vs white). **RESULTS:** Black veterans comprised 28% of the sample (n=3,166) and were somewhat less likely to have metabolic parameters assessed (29% vs 32% white veterans [n=8,252]). Black veterans were more likely to have high blood pressure readings (76% vs 70% at baseline, 73% vs 67% FY2005). White patients were more likely to have low HDL (48% whites vs 38% blacks FY2002; 51% vs 41% FY2005) and high triglycerides (35% vs 24% FY2002; 30% vs 22% FY2005). **DISCUSSION:** Racial disparity in monitoring and in observed metabolic parameters among older VA patients with schizophrenia was scarcely evident in this retrospective analysis, suggesting care equity.

#### **CHRONIC DISEASES AND PSYCHOLOGICAL OUTCOMES AMONG THE OLDER AFRICAN AMERICANS: THE ROLES OF INTERPERSONAL SUPPORT AND RELIGIOSITY/SPIRITUALITY**

E. Yoon, *Jackson State University, Jackson, Mississippi*

**Purposes:** This study is to examine the complex relationships among chronic diseases and learned helplessness depression development and the mediating role of social support and religiosity and spirituality in older African Americans in the Jackson Heart Study. **Methods:** The parent study is a large, community, population-based cohort study including medical history, physical examination, stress, coping, spirituality, racism and discrimination and socioeconomic position. For



this paper, the secondary analysis included a total of 1303 participants over 55 year older out of total 5,301 participants. The rationale of variable selection for the hierarchical regression analysis is conceptual in nature, addressing the hypothesized effects of daily spiritual experience and religious coping and interpersonal support on helplessness and depressive symptoms after adjusting selected socioeconomic variables and chronic health condition. Results Majority of older participants have multiple chronic health conditions ( $M=1.73$ ,  $SD=1.13$ ) such as Diabetes (25.5%), CVD (10.8%), Hypertension (78.6%), Kidney (17.8%), Asthma (12.2%), Lung (12.3%), Cancer (8.8%), and Stroke (7.1%). Descriptive statistics revealed the relatively higher symptoms of depression ( $M = 10.20$ ,  $SD = 6.84$ ) measured by the CES-D. With cut-off score of 16, 14.6% of respondents might be classified as "depressed". The correlational analyses revealed that lower socio-economic factors, poorer chronic health conditions are all significantly associated with helplessness. Multiple regression analysis identified several significant predictors to the depressive symptoms (20.2% variance explained): The negative associations with education ( $t = -2.94$ ) & Interpersonal support ( $t = -7.600$ ) and positive relations with self-rated health ( $t = 5.499$ ). Further, there is a significant relationship ( $t = -2.155$ ) between the Daily Spiritual Experience Scale (DSES) and the depression (CES-D). Additionally, selected variables such education ( $t=-6.258$ ), DSES ( $t=-2.891$ ), religious coping ( $t = 4.147$ ), and interpersonal support ( $t=-13.297$ ) are significantly related with helplessness( $R^2 = .246$ ) Implications It is found that majority of older African Americans are experiencing multiple chronic disease and a higher level of depression and despair in which immediate diagnosis and treatment is needed. Further, it is supported the significant mediating role of interpersonal support rather than social network to improved mental health condition. This study highlighted the enduring importance of supportive social relationships to psychological well-being among older African Americans.

#### **LINKING RACIAL/ETHNIC DISPARITY TO CORONARY HEART DISEASE THROUGH DEPRESSION AMONG MINORITY OLDER ADULTS**

Y. Kim<sup>1</sup>, H. Kanno<sup>2</sup>, J. Lim<sup>3</sup>, 1. *Univ. of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *Valdosta State University, Valdosta, Georgia*, 3. *Yongin University, College of Public Health & Welfare, GYEONGGI-DO, Republic of Korea*

Coronary heart disease (CHD) is the leading cause of death in the United States, strongly affecting the aging population. A link between discrimination and CHD among African Americans has long been established on the basis of the proposition that perceived discrimination may contribute to the elevated prevalence of hypertension; however, the extant findings have been mixed. Recognizing that psychological well-being may be the path through which discriminatory experience can affect health, the present study hypothesizes a potential mechanism between discriminatory experience and CHD through the pathway of depression. Data came from the National Health Measurement Study 2005-2006 which was comprised of 3844 community-dwelling adults aged 35 to 89 years. The study selected 203 racial/ethnic minority older adults over 65, who reported having discriminatory experiences derived from their race and ethnicity. To build a structural equation model, the EQS 6.1 version was used while adjusting the weights for differential response rates by age, race, and sex. There was a good fit, CFI = .96, GFI = .97, and RMSEA = .02. There was a significant prediction of depression by everyday perceived discrimination,  $\beta = .33$ ,  $z = 5.11$ ,  $p < .01$ , which in turn predicted a CHD diagnosis  $\beta = .21$ ,  $z = 2.98$ ,  $p < .01$ . The study provides a path model through which greater exposure to racial/ethnic discrimination may lead to low socioeconomic status that is directly and indirectly related to increased risk for negative psychological outcome and CHD among minority older adults.

#### **ADHERENCE TO DISCHARGE INSTRUCTIONS POST INPATIENT REHABILITATION FOR STROKE OR ORTHOPEDIC SURGERY**

A. Hunsaker<sup>1</sup>, E. Whyte<sup>2</sup>, D. Rosen<sup>1</sup>, 1. *University of Pittsburgh School of Social Work, Pittsburgh, Pennsylvania*, 2. *University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania*

Adherence to discharge instructions following inpatient rehabilitation is critical for continued recovery, yet the discharge process is complex, particularly for older adults with comorbid conditions. This quality assurance study examines adherence to discharge instructions three months post discharge from inpatient rehabilitation. Semi-structured interviews were completed with stroke survivors and orthopedic patients or their family members to explore barriers to discharge plan adherence. Participants were contacted in random order within groupings of 15-day blocks according to discharge date, with the final sample representing 13% of all discharges over a 14-week period. Discharge instructions were abstracted from medical records in order to compare it to patient and family report of care. The sample ( $n=36$ ) was predominantly white (89%), 53% female and had a mean age of 73 (range, 45 - 92). Adherence was higher for services that were ordered prior to discharge, including therapy (87%) and in-home nursing (76%). Regarding physician follow-up, adherence for primary care was highest (84%), while just roughly half of patients reported follow-up with specialists. Patient and family-identified barriers to adherence included transportation, difficulty scheduling appointments or a belief that the service was unnecessary. Sixty-five percent of patients and 80% of caregivers felt involved in decision-making about discharge planning, and the majority (100% of orthopedic respondents and 81% of stroke respondents) reported confidence in managing their care at home. These findings point to the need to improve patient understanding of the importance of specialist follow-up following discharge and for increased assistance in transportation to appointments.

#### **EFFECT OF HOME-BASED NURSE CARE COORDINATION WITH MEDICATION MANAGEMENT ON COSTS TO THE MEDICARE PROGRAM**

K. Marek<sup>1</sup>, S.J. Adams<sup>2</sup>, F. Stetzer<sup>2</sup>, 1. *College of Nursing & Health Innovation, Arizona State University, Phoenix, Arizona*, 2. *University of Wisconsin-Milwaukee, Milwaukee, Wisconsin*

Purpose: The primary aim of this study was to determine whether a home-based nurse care coordination program with medication management for frail older adults would affect Medicare costs. Methods: A randomized controlled three-arm longitudinal design was used. A total of 414 older adults identified as having difficulty managing their medications were recruited at discharge from three Medicare-certified home health care agencies in a large Midwestern urban area and followed for 12 months. Intervention: A team of both Advance Practice Nurses and Registered Nurses delivered care to two intervention groups: one that received the MD.2 medication dispensing machine and nurse care coordination (Group 1) and one that received nurse care coordination with no machine (Group 2). The control group received no intervention, except a pharmacy screen, which was provided to all three groups. Measurement: Total costs to the Medicare program were examined using Medicare claims data from 2006 through 2010. Results: Controlling for Medicare costs in the six months prior, fixed effects and multiple regression models were used to estimate the relationship of both nurse care coordination and the medication-dispensing machine on Medicare costs. Total Medicare quarterly costs were lower in the 12 months during the intervention ( $p < .10$ ) in both group 1 and 2, when compared to the control group. Conclusion: Participants who received the nurse care coordination intervention had lower Medicare costs when compared to the Control Group, but the addition of the MD.2 machine to nurse care coordination did not result in lower Medicare costs.

## OLDER HISPANICS' PERCEPTIONS OF THEIR PROVIDERS AND THE IMPACT ON CANCER SCREENING BEHAVIORS

T. Cadet<sup>1</sup>, P. Maramaldi<sup>1,2</sup>, *I. Simmons College, Boston, Massachusetts, 2. Harvard School of Dental Medicine, Boston, Massachusetts*

The elimination of cancer screening barriers among low-income and minority populations is an important aspect of the national priority to eliminate health disparities among racial, ethnic, and income groups. Empirical studies indicate that provider-patient connectedness is increasingly associated with improved health outcomes. Specifically, patients without a close relationship with a provider are less likely to complete recommended testing for preventive care, such as cancer screenings. Higher cancer mortality among older Hispanics may be attributed to lower participation in cancer screenings. This may be associated with a lack of connectedness to their health care providers. We conducted a secondary analysis of focus group data collected from older Hispanics and Caucasians, aged 65 and older living in the Mountain West, regarding their attitudes toward colorectal cancer screening. The original study sample (N=24) included 11 Hispanic and 13 Caucasian participants, with a mean age of 75.2 (SD 7.38). The purpose of our secondary analysis was to explore approaches to health promotion using cultural communication theory among older Hispanics. Our analysis focused on the role of connectedness between providers and patients as a potential mediator influencing older Hispanics' colorectal cancer screening behaviors. Constructs from cross-cultural communication theory—power distance, collectivism, and high and low context communication—underscore the importance of older Hispanics' need for connectedness with their healthcare providers. Our findings evidence the importance of these theoretically supported factors in providers' communication with older Hispanics.

## SESSION 2180 (POSTER)

### SERVICE INTERVENTIONS, POLICY, AND FINANCING

#### THE INFLUENCE OF BENEFITS FOR NURSE AIDES

N. Castle, J.C. Ferguson-Rome, *University of Pittsburgh, Pittsburgh, Pennsylvania*

In this research, we focus on the influence of benefits for Nurse Aides (NAs) in nursing homes. We focus on both job satisfaction and turnover. Surveys were sent to nursing home administrators (NHAs) in all unionized nursing homes in New York City (i.e., 263) and to 10 NAs working in each of these facilities. These facilities tend to have high benefits. In addition, surveys were sent to NHAs in 131 up-state NY nursing homes and to 10 NAs working in each of these facilities. NAs were randomly selected from the complete roster. We used a job satisfaction instrument specifically developed for use with nursing homes and NAs. In addition, questions were included specifically to address health insurance, pay, training, and benefits. Turnover of NAs was lower in high-benefit facilities (7.2%) compared to low-benefit nursing homes (31.6%). Lower use of agency staff was found in high-benefit facilities compared to low-benefit nursing homes. The threshold pay for leaving the current facility was much higher in high-benefit facilities at \$5.57 per hour compared to low-benefit nursing homes (\$2.98 per hour). Of the 31 questions asked in the job satisfaction section, NAs working in high-benefit nursing homes were more satisfied in 20 areas compared to low-benefit NAs. In the multivariate analyses examining 9 job satisfaction domains, NAs in high-benefit nursing homes were significantly more satisfied in 6 of these areas than NAs working in low-benefit nursing homes. The findings show that high-benefits have a pervasive influence on nursing homes and staff.

## HUMAN RESOURCE MANAGEMENT IN NURSING HOMES IN XIAN CHINA: AN INITIAL APPLICATION OF HIGH COMMITMENT WORK SYSTEM CHINESE VERSION SCALE

X. Zhong, V. Lou, *Social Work and Social Administration, University of Hong Kong, Hong Kong, Hong Kong*

Introduction: The increasing number of nursing homes in China calls for scientific and efficient human resource management (HRM) practices to ensure a healthy development of nursing homes. High Commitment Work System (HCWS) refers to a system of HRM practice aiming to maximize employee's work commitment, and thus improve organization performance. While HCWS has been widely adopted in many sectors such as manufacturing, retailing, and hotel industries, little is known about whether or not HCWS is suitable to elderly service organizations. Moreover, a Chinese context is even less discussed in the literature. This study aims to explore how HCWS has been applied to China's nursing homes. Method: A survey was conducted in all 34 nursing homes in the urban area of Xi'an, a provincial capital in Western China. 345 participants including front-line care workers, professionals and managers replied a structured questionnaire which includes 15-item HCWS Chinese scale. Result: Exploratory factor analysis (EFA) of original 15 items showed 4 factors, with 10 items whose factor loading values were over 0.5 in one factor, and  $\alpha$  value is 0.798. EFA has been done within 10 items illustrated 35% of the total variance and  $\alpha$  value is 0.785. All the correlations between 10 items were significant at 0.01 level. 5 items including 1) promotion from within; 2) job security; 3) enlarged job; 4) ownership; 5) Egalitarianism were excluded. Conclusion: To a large extent, HCWS is suitable to China's nursing homes. Contents of 10 items should be enhanced in HRM to achieve employees' high working commitment.

## THE OLMSTEAD ACT AND AGING PARENTS OF ADULT CHILDREN WITH DISABILITIES: IMPORTANT CONSIDERATIONS FOR PLANNERS AND POLICY MAKERS

N. Kelley-Gillespie, K. Rolf, *Grace Abbott School of Social Work, University of Nebraska at Omaha, Omaha, Nebraska*

The prevalence of aging parents caring for their adult children with disabilities is increasing at an unprecedented rate. This study examines the changing characteristics of these households and looks at the effects of the 1999 Olmstead Act. Data from the U.S. Census and American Community Survey were used to examine changes in the prevalence and demographic characteristics of these households over time (1970-2010). Multiple cross sections of the National Health Interview Survey during this time period were used to examine health needs, service utilization, and health care utilization patterns. Findings show the changing demographic, service utilization, and residential characteristics of households with aging parents and disabled adult children. This research has important implications for planners, policy makers, and service providers. Policy-makers and service providers will be better equipped to integrate aging and disability services that will bridge gaps across the continuum of care. Results from this research may help to ensure the 1999 Olmstead Act mandate to provide least-restrictive alternatives to institutionalization.

## STATE SOCIAL WORK SCOPE OF PRACTICE GUIDELINES AND FEDERAL REGULATION: A POLICY ANALYSIS

C.L. Barragan, C.N. Marsack, F.P. Hopp, *Wayne State University, Detroit, Michigan*

Background: The Nursing Home Reform Act (NHRA) outlines minimum standards for staff who work in long-term care facilities including social services. However, in many states, social service positions are often filled by non-social workers (Bern-Klug, 2008). While the NHRA gives clear guidelines regarding qualifications of other profes-

sions, responsibilities and expectations of social services lacks connection with social work values, ethics, skills, and licensure. Methods: We use qualitative content analysis to examine the NHRA in comparison with social work scope of practice guidelines in 5 mid-western states. Findings: The skills needed to satisfactorily perform as a nursing home social worker are minimally at a Bachelor's in Social Work (BSW) level scope of practice. Keywords that indicate level of practice and necessary skills, such as intervention and identify - are present in both state level scope of practice guidelines for a BSW practitioner and the NHRA. Implications: Medical professionals are fully aware of their professional limitations and would never jeopardize their license based on the requests of an employer, yet nursing home social workers are expected to do this every day. The results of this study support Department of Human Services (2003) recommendations, which call for revisiting of social work credentials given the needs of residents and observed inconsistencies across states. This also further supports the urgent need for licensed and degreed social workers in long-term care to ensure the psychosocial needs of residents are being met.

#### **NURSING HOME TRANSITION AND DIVERSION: 2010 AGING NETWORK SURVEY OF AREA AGENCIES ON AGING RESULTS**

E. Robbins<sup>1</sup>, E. Carpio<sup>2</sup>, S. Kunkel<sup>2</sup>, M. Kaschack<sup>3</sup>, *1. Mather LifeWays Institute on Aging, Evanston, Illinois, 2. Scripps Gerontology Center, Miami University, Oxford, Ohio, 3. National Association of Area Agencies on Aging (n4a), Washington, District of Columbia*

With a grant from the Administration on Aging (AoA), the National Association of Area Agencies on Aging (n4a) partnered with Scripps Gerontology Center of Excellence to conduct the 2010 Aging Network Survey of Area Agencies on Aging (AAAs). The survey, launched in September of 2010 to all AAAs, concluded data collection in February 2011 with over 71% of AAAs responding. Results show that AAAs provide a number of services that aid individuals at risk for institutional care remain in the community or transition back to the community when long-term care facility placement is no longer necessary. AAAs use several strategies to maintain or transition individuals back to a community setting: working with the care recipient's family, options counseling and developing partnerships with hospitals. Empowering individuals, nearly three-quarters of AAAs have plans in place or have made progress towards encouraging individuals to take responsibility for their long-term care needs and nearly two-thirds have plans in place to assist consumers in planning in advance for long-term care. Additionally, AAAs were involved in a number of activities related to livable communities. More than half have developed projects to promote aging in place, met with other entities to address housing or transportation needs and established coalitions to promote coordination across service sectors. There is, however, considerable room for growth in AAAs' involvement in developing initiatives to plan for livable communities including designating staff within the organization to develop/work on livable community projects and obtaining funding for livable community planning/work.

#### **AVOIDING FINANCIAL EXPLOITATION: PROMISING PRACTICES TO PROTECT ELDERLY AND VULNERABLE ADULTS**

S.Y. Jones, *Department of Human Services, Adult Protective Services, Washington, DC, District of Columbia*

Financial exploitation seemingly is emerging as one of the most prevalent form of elder mistreatment. Elder financial abuse has grown to epidemic proportions. This session will address the striking but real increase in Financial Exploitation across the country with focused discussion on the positive outcomes that have resulted from implementing prevention practices that assisted in the abatement of further exploitation. Examples of case studies are being offered in the District of Columbia, which according to Adult Protective Services

has seen a significant increase in these cases. Cases include Medicaid recipients, persons with disabilities, and persons of some financial stature. The increased life expectancy, rising numbers of older persons, loss revenue and the complexity of financial exploitation have forced local and state jurisdictions to look more carefully at this issue. However, this persistent challenge lacks a national reporting repository and the ability to track cases often breaks down across state lines. Proving financial abuse or neglect is an arduous and tedious task. In a downturned economy regulators and elected officials often believe they see equally pressing issues. Many financial exploitation cases come with family, social and cultural baggage. The result is shame, humiliation and failure to report how pervasive the problems are and what solutions are needed. This session will offer research, policy and practical guidance needed to address this emerging challenge.

#### **DELAWARE'S SENIOR CENTER GRANT-IN-AID FUNDING FORMULA: AN ASSESSMENT TOOL FOR LEGISLATIVE DECISION-MAKING**

J. O'Hanlon, R. Linstead Goldsmith, *Institute for Public Administration, University of Delaware, Newark, Delaware*

The Senior Center Grant-in-Aid Funding Formula uses geographic, demographic, and programmatic factors to provide the state legislature with an objective and comprehensive assessment for funding Delaware's senior centers. The formula was designed to incentivize senior centers to offer a full array of services and better engage older adults. It is applied to new funding and does not affect the base funds historically apportioned to centers. The formula consists of two tiers. The first tier allocates funding across the state's four regions based on demographic determinants. The second tier allots funding according to a center's average attendance and service offerings. Categories for each variable have been determined, and in the case of the service level categories, they are based upon national recommendations for nutrition, transportation, health and wellness, social interaction, physical fitness, education and outreach. The formula also facilitates continuous adjustment of funding according to demographic shifts. The number of Delawareans 65+ is expected to double by 2030 from 2000 levels. In one county, adults age 85+ will increase by nearly 7-fold in this period. Thus, the formula supports aging in place by ensuring funding reaches the communities where seniors live. Federal aging programs, such as Home and Community-Based Supportive Services, use population-based formulas, yet Delaware is unique in its utilization of a multi-tier formula at the state-level. This poster will contribute to GSA poster sessions by demonstrating the value of formula-based service assessment in quantitative and qualitative terms, as well as how such a formula has been implemented in Delaware.

#### **SOCIAL WORK DECISION-MAKING PROCESSES AND OUTCOMES FOR HOME AND COMMUNITY-BASED SERVICES TO MEET THE PSYCHOSOCIAL/PHYSICAL NEEDS AND PREFERENCES OF OLDER ADULTS WITH FUNCTIONAL HEALTH LIMITATIONS TRANSITIONED FROM ACUTE CARE TO URBAN COMMUNITY SETTINGS**

D. Joosten, *School of Social Work, University of Southern California, Los Angeles, California*

The number of adults 65 and older will increase from 12.4 percent of the total population in 2004 to 20 percent in 2030 (Administration on Aging, 2005). Among older adults chronic illnesses such as heart disease, arthritis, dementia, and diabetes are associated with increased difficulties with daily activities (Ferrini & Ferrini, 2008). The 2007 National Health Interview Study reveals limitations in daily activities among 43% of older adults age 75+ with one or more chronic illness

(Adams, Barnes, & Vickerie, 2008). As the proportion of older adults increase the number of older adults with chronic conditions in need of ADL and/or IADL assistance will also increase. This growing population of older adults will likely present social workers and case managers with larger caseloads and challenges to identify appropriate services to meet specific IADL and ADL needs. Efficiency in matching older adult clients' needs with appropriate Home and Community-based Services (HCBS) referrals in a timely manner will become essential in efforts to provide coordination of care for older adults discharged from acute care to community settings. Such efficiency will be vital to the well-being of homebound older adult clients with physical limitations in preventing costly rehospitalizations and/or premature institutionalization. The Affordable Care Act (ACA) (P.L. 111-148) enacted March 23, 2010 includes several provisions aimed at improving care for community dwelling older adults with chronic diseases with functional limitations through demonstration projects such as the Medicaid Community First Choice effective October 1, 2011 that requires states provide a person-centered plan for supportive and HCBS services to assist with physical and health related activities (U.S. Department of Health & Human Services, 2010). In an effort to inform care coordination this study identifies: specific HCBS provided to 249 homebound older adults transitioned from acute care to community settings in the South Bay of Los Angeles County, the patients preferences for implementing such HCBS at the time of a social work home visit, specific sets of HCBS homebound older adults transitioned from acute care need, and the decision-making processes clinical social workers use when making referrals for sets of HCBS to homebound older adults after acute care discharge.

#### **PREDICTIVE VALIDITY OF AN ONLINE ASSESSMENT TO MEASURE AGENCY READINESS TO IMPLEMENT HEALTHY IDEAS**

L. Hasche<sup>1</sup>, N.L. Wilson<sup>2</sup>, E. Dessem<sup>3</sup>, 1. *Graduate School of Social Work, University of Denver, Denver, Colorado*, 2. *Baylor College of Medicine, Houston, Texas*, 3. *National Council on Aging, Washington, District of Columbia*

The gap between knowledge of effective interventions and usual care is problematic—especially, for late life depression care. A 30-minute, online assessment of organizational readiness may help improve adoption of effective depression care practices. Based on Rogers' diffusion of innovations theory, the National Council on Aging developed the Innovative Readiness Assessment (IRA). The IRA examined organizational capacity (staffing, current practice, etc.) and willingness to implement core components for Healthy IDEAS, an evidence-based depression care intervention. This study aimed to test how accurately the IRA predicts adoption of Healthy IDEAS. Methods: Analysis was conducted of the measurement properties of the Healthy IDEAS' 47 IRA items and of the second-order factors for capacity and willingness (rated as high, medium, or low). Then, by abstracting data from Healthy IDEAS' tracking database of agencies' implementation activities (e.g., technical assistance calls, customization of procedures, establishment of coaches, trainings completed, and use of Healthy IDEAS), regression analysis tested how capacity and willingness predicted agency case managers' use of Healthy IDEAS. Results: Since September 2009, 86 agencies from 16 states have completed the IRA and have engaged in implementation of Healthy IDEAS, of which 57% had high willingness, 16% had high capacity, and 45% have used Healthy IDEAS. Regression results indicate a trend toward capacity and willingness being associated with the percent of agency case managers using Healthy IDEAS (capacity  $p=0.073$ ; willingness  $p=0.066$ ). Implications: Accurately measuring organizational readiness can inform the customization of implementation activities to agency context and help maximize the successful adoption of Healthy IDEAS.

#### **AN INTERDISCIPLINARY APPROACH TO ASSESSING THE SERVICE NEEDS OF VULNERABLE SENIORS LIVING IN POVERTY**

K. Blumenfeld<sup>1</sup>, M. Hong<sup>2</sup>, M. Piwowarski<sup>4</sup>, A. Harbert<sup>3</sup>, A. Brychta<sup>3</sup>, T. Love-Geffen<sup>1</sup>, J. Min<sup>3</sup>, 1. *San Diego State University, School of Speech, Language, & Hearing Sciences, San Diego, California*, 2. *San Diego State University, School of Exercise & Nutritional Sciences, San Diego, California*, 3. *San Diego State University, School of Social Work, San Diego, California*, 4. *Senior Community Center of San Diego, San Diego, California*

**Background and Purpose** An interdisciplinary approach to assessing the needs of vulnerable seniors living in poverty (VSLP) is essential as both linguistic abilities and nutritional habits have significant impacts on successful aging and quality of life. In this study, linguistic and nutritional information was collected to evaluate service needs of diverse VSLP's. Study Methods 45 seniors (mean age=73, SD=7) from the West Senior Wellness Center in San Diego completed face-to-face questionnaires, health evaluations, and were asked to identify perceived barriers to services. Results Language: 70% of participants reported proficiency in non-English languages. Among bilinguals, native Spanish speakers used English most (65%) while native Mandarin speakers used it least (23%),  $p < .01$ . As expected, participants reported more frequent use of languages with higher self-rated proficiency (native language:  $r=.5$ ; second language:  $r=-.7$ ). Interestingly, increased age was associated with lower perceived proficiency in the second language ( $r=-.4$ ). Nutrition: 22 individuals completed a nutrition survey. Data showed an average BMI=28 with a calculated ideal body weight=135%. 50% were considered clinically overweight or obese, and 10% underweight. Seniors reporting light physical activity showed a higher BMI value ( $p=0.06$ ) with higher body fat being strongly correlated with high BMI ( $r2=0.918$ ,  $p<0.01$ ). Conclusions Findings suggest that: (1) Older bilinguals show increasing vulnerabilities in second-language (English) communication; and (2) raising awareness of nutritional status may motivate at-risk seniors to initiate steps toward improving their health. Further efforts are needed to ameliorate the nutritional/health status of VLSPs and we believe a multilingual approach may provide this vehicle.

#### **SESSION 2185 (POSTER)**

#### **STUDY OF GERONTOLOGY, PUBLIC INFORMATION, AND EDUCATION**

#### **GERONTOLOGY IN WIKIPEDIA: IS A WIKIPROJECT NEEDED?**

D.L. Infeld, W.C. Adams, *Trachtenberg School of Public Policy & Public Administration, The George Washington University, Washington, District of Columbia*

The public, including seniors and professions, increasingly turns to the Internet for important information and Wikipedia is a widely used site. Wikipedia is an open-source online encyclopedia that allows individuals and groups, formed as WikiProjects and Task Forces, to contribute content and to edit and assess the quality of its content. Among Wikipedia's nearly 4 million English-version articles, how well are important aging-related topics covered? A total of 317 aging-related terms were identified using Bettelheim's Aging A-Z (2002) as a starting point. Eighty-five of these terms did not have Wikipedia pages. Further analysis suggests that 18 are noteworthy and rather surprising omissions including a few leading organizations (ASA, NCOA, and the Leadership Council of Aging Organizations) and basic concepts (functional assessment, IADLs, successful aging). Not all of the pages on topics of relevance to aging actually mention aging, however. Among these age-relevant articles, four out of ten do not specifically address aging. While not strikingly different, age-specific pages tend to be longer, have many more citations, more hotlinks, more page visits, have been updated more recently, have more WikiProjects reviewing them, and

to have a slightly higher scores on quality and importance. Having a WikiProject attending to an article does not guarantee good scores but does correlate with higher quality. Thus, gerontologists at this session will gain understanding about the potential contribution of forming an aging/gerontological WikiProject to ensure the accuracy of aging-content read by a large and growing share of the population.

### REFLECTIONS ON SERVICE LEARNING: THE STUDENT PERSPECTIVE

M. Claver, L. Lares, *Gerontology Program, Calif State Univ Long Beach, Long Beach, California*

Providing students in a gerontology course with meaningful, real-life interaction with older adults has been shown to improve attitudes about aging and increase interest in working with this population. Students from a variety of majors took an upper-division gerontology course that required a 21-hour service-learning component and record their experiences (i.e., What did you do? How did you feel about it? Make connections between service learning and course materials). The goal of this study was to explore three research questions: How did students feel about the service learning experience?; What did students gain from classroom debriefing sessions?; What did students gain/learn from reflective journaling about their service learning experiences? Qualitative analysis of students' written responses showed that students felt that service-learning gave them better insight into how to be advocates for the elderly. They also gained a sense of respect for the elderly and learned how to communicate better with the older population. In-class debriefing sessions throughout the semester allowed students to feel a connection with other students in the course and encouraged them to feel that they were working as a team to serve the elderly. Classroom discussions also allowed them to learn from each other's experiences, since students were placed in one of four agencies serving older adults with a range of functional ability. Reflection journals gave students the opportunity to review their entries and see their personal growth, especially about stereotypes, expectations and preconceived notions of the older population.

### GERONTOLOGY AS GENERAL EDUCATION: THE UCLA FRONTIERS IN HUMAN AGING CLUSTER

D. Gans, P. Hsu, R. Effros, E. Richardson, J. Damron-Rodriguez, *UCLA, Los Angeles, California*

The longevity revolution and the recognition that lifelong health behaviors are associated with healthy aging make gerontology a compelling content area for undergraduate general education (GE). However, given the complexity and interdisciplinary nature of the field, it cannot be effectively taught in a traditional one quarter/semester GE course. The UCLA "Frontiers in Human Aging" Cluster is an exemplary innovation representing a didactic movement from the conventional GE approach of taking a little of "this and that" to a series of year-long Cluster courses revolving around compelling issues of our time. Using a community of learners modality, UCLA Clusters aim to (1) increase understanding of the interdisciplinary nature of complex phenomena, in this case, aging; (2) strengthen writing and communication skills; and (3) develop critical, interpretive, and analytical skills. The Aging Cluster further aims to introduce students to career opportunities in geriatrics and gerontology. Students are taught evidence-based knowledge in bio-psycho-social aspects of aging and related public health policy by the core interdisciplinary faculty team, and fulfill 15 hours of service learning in community organizations serving older adults in Los Angeles. Averaging 160 students a year since its inception in 2000, approximately 1,500 students have completed the Cluster, and can now enroll in the newly developed UCLA Gerontology Interdisciplinary Minor. Additionally, 30 doctoral teaching fellows were trained in this innovative teaching method and are now entering positions in the field of aging. The Cluster has increased students' undergraduate academic

success while preparing them to live and work in an intergenerational society.

### LTC DEDICATED EDUCATION UNIT: EVALUATION OF AN INNOVATIVE CLINICAL EDUCATION MODEL

L.M. Abdallah<sup>1,2</sup>, L. Dodge<sup>1,2</sup>, J. Dowling<sup>1,2</sup>, N. Prendergast<sup>2,1</sup>, A. Rathbone<sup>2,1</sup>, R. Remington<sup>1,2</sup>, C. Thornton<sup>2,1</sup>, K. Melillo<sup>1,2</sup>, *1. Nursing, University of Massachusetts Lowell, Lowell, Massachusetts, 2. DYouville Center for Advanced Therapy, Lowell, Massachusetts*

Nursing education and healthcare institutions must adapt to meet the needs of adults 55 and older with multiple chronic illnesses and post-acute care needs as they transition from shorter hospital stays to home or long term care facilities. Providing innovative, cost-effective, patient-centered clinical experiences that include comprehensive education in the care of older adults for nursing students and staff is imperative. The purpose of this project was to improve education of nursing students, nursing staff, and faculty in gerontological nursing. Using a university-community partnership model approach, a Transitional Care Dedicated Education Unit (TCDEU) was developed. Partnership activities included development of preceptor training manuals, conducting joint training sessions for faculty and staff, implementing student summer internships to foster long-term care as a primary career option for new BSN graduates, development of clinical placements for junior nursing students, and hosting a workshop for long-term care facilities and Massachusetts institutions of higher education to provide hands-on training materials. A quasi-experimental pre-/post-test design was utilized to determine the effectiveness of the program on BS students' eldercare cultural self-efficacy using the Shellman (2006) Elder Care Cultural Self Efficacy Scale. Contextual data were collected via focus groups to evaluate program satisfaction and learning outcomes. Data show increases in students' confidence in caring for older adults. Students, clinical teachers and partners report high satisfaction with the program. Results indicate this TCDEU is an innovative nursing education model that integrates long-term care into nursing education and promotes long-term care as a primary career option for nursing students. Implications for gerontological nursing education and practice will be discussed.

### COMPETENCY-BASED POST-GRADUATE EDUCATION: MEASUREMENT DEVELOPMENT

J. Damron-Rodriguez<sup>2</sup>, J. Frank<sup>1</sup>, J. Fassbinder<sup>3,1</sup>, B. Kramer<sup>4,1</sup>, *1. David Geffen School of Medicine at UCLA, Los Angeles, CA, United States, Los Angeles, California, 2. Luskin School of Public Affairs at UCLA, Los Angeles, CA, United States, Los Angeles, California, 3. California Council on Gerontology and Geriatrics, Los Angeles, California, 4. VA Greater Los Angeles Healthcare System, Los Angeles, California*

Background: The IOM Report: Retooling for an Aging America asserted the need for increased competence in geriatrics for all health professionals including currently practicing care providers. Competency-based education and evaluation (CBE) emphasizes the role of outcome measurements. Aims: The Geriatric Social Work (GSW) Competency Scale II developed within the Hartford Partnership in Aging Education (HPPAE) for graduate education was used, in combination with other methods to measure and compare social work graduate school outcomes to post-graduate geriatric outcomes from the Geriatric Scholars Program (GSP) Social Work Track (2009-2012). Methods: The GSW Competency Scale II was used to identify competency content for all 45 lectures delivered during a 4-day intensive geriatrics post-graduate course, noting the "dose" or intensity of coverage. Social workers (n = 35) completed pre, post training GSW Competency surveys and a 3 month follow-up. Qualitative data was garnered through learner journals noting anticipated application of knowledge and skill to practice. Outcomes: Significant gains pre to post training (p=.000 to p=.04) were reported in 5 of 6 domains of competence. On a scale of 1-10, the mean

competency gain ranged from 5.4 to 7.9. Journals and follow-up provided rich descriptions of skill application to practice. Post-graduate GSW scores were on average higher than graduate student comparisons. The content “dose” produced variation in some competency outcomes. Implications: Advancing CBE measurement requires the need to consider level of training as well as intensity of competence coverage in post-graduate education.

### THE “COST & BENEFIT” OF LIVING AT HOME FOR 65 & OLDER ADULTS

H. Koduri, *Gerontology, School of Nursing, University of Utah, SALT LAKE CITY, Utah*

Aging in place is gaining popularity among senior American citizens. This research paper provides unknown information about service options available to 65 and older adults who can afford to stay at home through Home Health Agencies in Utah. Most of the people are unaware of a fact that they can approach Home Health Agencies for services even before hospitalization of their loved ones. For people who take care of their aged parents (who are willing to stay at home), this research paper might be a quick guide to analyze the price ranges of different types of HHA agencies in Utah and decide which is the best option for their parents. Secondary goal of this paper is to relieve sandwich generation, a generation of people who take care of their own children and also their aging parents from stress by educating them on when is the right time to consult a HH Agency and why is it important. Final yet the most alluring goal of this paper is to provide a new option for seniors who are 65 and older to stay home and stay health as long as possible. This paper further provides suggestions to the clients who approach Home Health Agencies to ask few questions which might be considered as important and beneficial for clients. Again, the options mentioned in this article are for seniors who can afford to stay at home as it is bit expensive but serves the purpose of 65 and older American citizens who prefer and who can afford to stay at home by avoiding unnecessary pre-mature hospital admissions. Coming up with a policy proposal to extend the Medicare or other insurance coverage period for 65 and older adults who obtain Home Health services.

### EDUCATIONAL BACKGROUND AND REASONS FOR SEEKING CONTINUING EDUCATION AMONG OHIO'S PROFESSIONALS IN AGING

S.M. Leson<sup>1</sup>, D.J. Van Dussen<sup>1</sup>, H. Ewen<sup>2</sup>, 1. *Department of Human Ecology, Youngstown State University, Youngstown, Ohio*, 2. *Miami University of Ohio, Oxford, Ohio*

The current research examines the educational background, continuing education needs and reasons for seeking gerontological education among professionals working with older adults in Ohio. The sample consists of healthcare practitioners, mental health professionals, health care administrators and long term care administrators. The purpose of the study is to better understand how higher education can serve existing professionals in aging (n=760). Within the sample population 24.9% of professionals working with older adults have had no formal training in aging related education, and 15.7% have learned on the job. The most requested topics of further education involve dementia (27.6%), medications (14.1%) and mental health issues (7.8%). Professionals reported that they prefer continuing education, certificate programs, and master's degree programs. The three most reported reasons for seeking further gerontology education were to do a better job, increased job satisfaction, and higher pay. The biggest barriers to receiving further aging related education were time, cost and distance to Youngstown State University or Miami University. Significant correlations between these barriers are explored in the current research. Future efforts should seek to reduce barriers and increase our outreach to current professionals so they may receive the education they need to better serve the older adult populations. Future research should examine urban and rural differences in reasons for seeking aging education and barriers to seeking future

education particularly since Ohio's proportion of rural dwelling older adults have unique challenges and face depopulation of younger adults.

## SESSION 2190 (POSTER)

### SUCCESSFUL AGING

#### DO SUCCESSFUL AGING TRAJECTORIES PREDICT LATER HEALTH CARE UTILIZATION

H. Hsu, *Department of Health Care Administration, Asia University, Taichung, Taiwan*

Objectives: The aim of this study was to examine trajectories of successful aging indicators in predicting later health care utilization by a longitudinal panel data of the older adults. Methods: A 5-wave panel sample of elderly during year 1993 to 2007 was used (n=1232). Trajectories of six successful aging indicators 1993 to 2007 were identified by group-based trajectory analysis, then the successful aging trajectories were used to predict whether the respondents use acute and long-term care or not and the amount of utilization in 2007. Successful aging indicators were defined by chronic diseases, physical function disabilities, depressive symptoms, social support, social participation, and economic satisfaction. Results: Four successful aging trajectories were identified: Successful Aging (27.1%), Usual Aging (36.0%), Health Declining (24.5%), and Care Demanding (12.4%). Compared with Successful Aging group, Usual Aging and Health Declining elders were more likely to use hospital admission (OR=1.69 & 2.06), emergency room (OR=2.15 & 2.52), and care attendants (OR=7.35 & 19.70). Usual Aging elders more likely went to physician clinic (OR=1.58) and Health Declining elders more likely to use nursing homes (OR=29.21). Care Demanding elders were more likely to use nursing home (OR=8.31) and care attendants (OR=20.06) but no difference in acute care. Usual Aging elders used more physician visits and care attendant days; Health Declining elders used more hospital days, nursing home and care attendant days; Care Demanding elders used more nursing home and care attendant days. Conclusion: Past successful aging trajectories predict the later health care utilization.

#### THE CHALLENGE AND THE PROMISE OF AUTISM SPECTRUM DISORDERS IN ADULTHOOD AND AGING: A SYSTEMATIC REVIEW OF THE LITERATURE (1990-2012)

S.D. Wright<sup>1</sup>, V. D'Astous<sup>1</sup>, T. Grandin<sup>2</sup>, 1. *Gerontology Program, University of Utah, Salt Lake City, Utah*, 2. *Colorado State University, Ft. Collins, Colorado*

There has been a noticeable increase in the past ten years in the number of publications that address the issues of autism spectrum disorders (ASD) into the domain of adulthood and aging, and yet, this still represents an extremely small proportion of the overall literature that is predominantly focused on childhood and adolescence. This presentation presents the results of a systematic review of the literature (though August, 2012) based on the results of search activities in five electronic databases using selected key words for the extant literature on autism in adulthood and aging. This review of the literature is different than previous examples in that it emphasizes: 1) intergenerational factors; 2) multidisciplinary perspectives; 3) is life-course oriented, and 4) reviews the strength-based research that has indicated the abilities, strengths, and talents of ASD. A heuristic framework is then used to organize the literature, highlight major emergent themes, and interconnected threads among the publications that have examined autism in the context of adulthood and aging thus far. We also propose the top-five exemplar publications per emergent theme. This presentation will also indicate the critical educational and clinical services and program implications for what is examined thus far, and will propose several recommendations for future research, educational interventions, and policy implications. This presentation will also review the promise and poten-

tial of neurodiversity and underscore the abilities and capabilities that are possible into adulthood and aging.

### ACTIVITY DOMAINS AND ENGAGEMENT PATTERNS: AN EMPIRICAL EXPLORATION

M. Putnam<sup>1</sup>, N. Morrow-Howell<sup>2</sup>, Y. Lee<sup>2</sup>, M. Inoue<sup>3</sup>, J.C. Greenfield<sup>2</sup>, 1. School of Social Work, Simmons College, Boston, Massachusetts, 2. Washington University, Saint Louis, Missouri, 3. Boston College, Boston, Massachusetts

**Aims.** The aims are: 1) To explore ways to conceptually and empirically consolidate discrete activities into domains or patterns; 2) To explore statistical models with activity domains/patterns as dependent and independent variables, and 3) To compare two data sets on activity items, domains, and patterns. **Methods.** For each of two public and nationally representative data sets, the Panel Study of Income Dynamics and the Health and Retirement Study Activity Supplement, we identify survey items regarding activity engagement. We used exploratory and confirmatory factor analysis to identify activity domains, and latent-class analysis to identify activity patterns. We then used structural equation modeling to identify demographic factors that affect these patterns and the effects of these factors on well-being outcomes in subsequent waves of data. We compared results between the two data sets. **Findings.** There was nine activity items in the PSID and no factors were identified to support the concept of activity domain. Three activity groups were identified, differentiated only in terms of amount of activity, not type of activity. There were 46 activity items in the HRS. Seven activity domains and four activity patterns were identified. In both data sets, the activity patterns were associated with some demographic factors and with well-being outcomes. **Implications.** The empirical issue of how to analyze multiple activities is a challenge to advancing knowledge about activity engagement. These findings demonstrate that discrete activity items can be consolidated and used in statistical models, and publically available national data sets offer different potential for studying activity engagement.

### “THIS IS NOT GOD’S WAITING ROOM”: PERCEPTIONS OF HEALTH IN AN ACTIVE ADULT COMMUNITY

C. VandeWeerd, J. Corvin, D. Petersen, A.R. Williams, E. Sussman, University of South Florida, Tampa, Florida

By 2030, older adults will comprise more than 20% of the US population. This unprecedented rise in the aging population will be met with a dramatic increase in health care expenditures. To reduce this burden and advance public health’s mission to achieve longer, healthier and more productive lives across the lifespan, models of healthy aging must be promoted. In an effort to meet this challenge, USF Health, in partnership with The Villages, a 55 and older active adult retirement community, completed a formative health assessment to understand barriers and facilitators to successful, healthy aging. Specifically, this exploratory study aimed to identify prominent definitions of health; assess perceptions of the importance of good health; and recognize factors perceived to enhance overall quality of life. Fifty nine focus groups, stratified by age, gender, and health status, were conducted between September and December of 2011 with a convenience sample of residents (n=451) in three phases: general inquiry, in-depth exploration of emergent themes, and member validation. Results indicate a shared definition of ‘good health’ focused on one’s ability to conduct daily activities consistently, while maintaining physical fitness and mental acuity; and reveal an emphasis on health and wellness among residents. Results also suggest the importance of positive community engagement and social support in promoting successful aging. The emergence of key health concerns suggest barriers (i.e. access to services, chronic conditions) and facilitators (i.e. community services and support, social capital) that impact models of healthy aging. Implications of findings for policy and practice are discussed.

### COMMUNITY-DWELLING OLDER ADULTS’ PERCEPTIONS OF DIGNITY IN THE COURSE OF EVERYDAY LIVING: MEANING, SUPPORTS, CHALLENGES, AND OPPORTUNITIES

K. Black<sup>1</sup>, D.J. Dobbs<sup>2</sup>, T.L. Young<sup>2</sup>, 1. College of Arts and Sciences, University of South Florida at Sarasota-Manatee, Sarasota, Florida, 2. University of South Florida, Tampa, Florida

Dignity is a universally important concept to all persons, yet little attention has focused on how community-dwelling older adults view dignity in the course of their everyday life and interactions. This study employed multiple methods of qualitative inquiry to explore the meaning of dignity as well as supports and challenges to dignity from the perspectives of older adults residing in one of the United States most populous communities of older residents. Focus groups and surveys were used to collect data from 268 older adults representing a wide range of socio-demographic characteristics. Data was analyzed by a research team using a grounded theory approach. The meaning of dignity was described as three key themes including: autonomy, interactions with others, and self-identity. Challenges to dignity included: health problems, ageism, life course situations, family, economic insecurity, key settings, and ageing. Supports to dignity included: informal supports, family, personal behaviors and attitudes, activities, organizations, and ageing. Practical suggestions to enhance dignity in the course of daily life interactions are suggested.

## SESSION 2195 (SYMPOSIUM)

### FUTURE LEADERS/FUTURE DIRECTIONS IN AGING RESEARCH: NOVEL METHODS/NOVEL APPROACHES TO UNDERSTANDING AGING

Chair: D.A. Sinclair, Harvard University, Boston, Massachusetts  
Co-Chair: D.A. Sinclair, Harvard University, Boston, Massachusetts  
Co-Chair: T. Vasilopoulos, University of Chicago, Chicago, Illinois

This symposium is designed to bring young, talented investigators to the attention of members of the gerontological community and provide a forum to showcase their research efforts. Each of the individuals selected for this honor has been awarded a K99 award funded through NIA. For 2012, the topic title will be “New Methods / Novel approaches to understanding aging.

### MONITORING MOLECULAR AGING WITH $P16^{INK4A}$ -LUCIFERASE MICE

C. Burd, K.S. Clark, N.E. Sharpless, Genetics, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

The  $p16^{INK4a}$  tumor suppressor is a robust and dynamic biomarker of aging in humans and mice. Exploiting these properties, we generated a new mouse model ( $p16^{LUC}$ ) to visualize aging *in vivo*. In this model, expression of firefly luciferase is driven by the endogenous  $p16^{INK4a}$  promoter and can be monitored and quantified using whole-animal luminescent imaging. Serial assessment of  $p16^{LUC/+}$  mice over a period of 2 years revealed a direct correlation between log<sub>2</sub>-transformed luminescence and chronological age. Comparing the age-related increase in mouse luminescence to the expression of  $p16^{INK4a}$  in human T-cells, we found that  $p16^{INK4a}$  induction occurs faster in mice than in humans. Notably, the human/mouse ratio of  $p16^{INK4a}$ -doubling times correlated with the ratio of human/mouse lifespan. Following this seminar, viewers will understand the role of  $p16^{INK4a}$  as an aging biomarker and be able to explain how the  $p16^{LUC}$  mouse may contribute to the assessment environmental and therapeutic aging interventions.

## AGING MAKES HUMAN MAMMARY GLAND MORE VULNERABLE TO CANCER

M.A. LaBarge, *Life Science Division, Lawrence Berkeley National Laboratory, Berkeley, California*

Women over 50 years of age account for 75% of new breast cancer diagnoses, and the majority of those tumors are of a luminal subtype. Acquired mutations are probably factors in all cancers; however, breast cancers are genetically heterogeneous, and specific mutations do not correlate with the prevalence of age-related onset. Women share age-associated systemic body changes, such as endocrine profiles, and alterations to the breast microenvironments, such as density and stromal composition. These age-associated changes can cause intrinsic changes to cells that may increase cancer risk. Yet the cohorts to study the underlying mechanisms are lacking. A large collection of normal human mammary epithelial cell strains from women aged 16 to 91 years was generated from primary tissues to enable functional and molecular interrogation of aging. We demonstrate fundamental changes in the composition and function of the mammary epithelium with age, which increases the potential for malignant transformation.

## HYPOXIA RESPONSES INFLUENCE PROTEOSTASIS MECHANISMS

E.M. Fawcett<sup>1,2</sup>, N.N. Iranon<sup>1,2</sup>, D.L. Miller<sup>1</sup>, *1. Biochemistry, University of Washington, Seattle, Washington, 2. Graduate program in Molecular and Cellular Biology, Seattle, Washington*

The ability to maintain homeostasis is critical for survival and maximum longevity. The progressive decline in physiological function associated with aging results in a decreased ability to maintain homeostasis. We are using *C. elegans* to investigate homeostatic mechanisms that allow for survival in low O<sub>2</sub> (hypoxia). *C. elegans* has a remarkable ability to survive exposure to a wide range of O<sub>2</sub> concentrations. We have found that the response to specific low concentrations of O<sub>2</sub> leads to a perturbation of protein homeostasis. Both aggregation and toxicity of polyglutamine proteins are enhanced when animals are exposed to hypoxia. The hypoxia-induced perturbation of proteostasis can be modulated by both genetic and environmental factors, suggesting that it is not simply a passive consequence of decreased energy production. The same hypoxic O<sub>2</sub> concentrations that disrupt proteostasis also induce a developmental and reproductive diapause. We hypothesize that hypoxia activates a physiological switch that allows animals to conserve limited energy for essential survival mechanisms at the expense of proteostasis.

## SESSION 2200 (PAPER)

### EXERCISE, PHYSICAL ACTIVITY AND PHYSICAL FUNCTION

#### POWER TRAINING IN OLDER ADULTS: MUSCLE MECHANICAL, MORPHOLOGICAL AND FUNCTIONAL CHANGES

P. Caserotti<sup>1,2</sup>, T.B. Harris<sup>2</sup>, L. Puggaard<sup>1</sup>, C. Rasmussen<sup>3</sup>, P. Aagaard<sup>1</sup>, *1. Institute of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark, 2. Laboratory of Epidemiology, Demography and Biometry, National Institute on Aging, Bethesda, Maryland, 3. Institute of Public Health, University of Aarhus, Aarhus, Denmark*

Emerging evidence suggests that the age-related decline in maximal muscle power (the product of contractile force and movement velocity) and rate of force development (RFD) are associated with risk of falls, motor impairments and disability. Despite recent exercise guidelines for older adults recommend targeting muscle power, it is still unclear whether power training is associated with morphological and functional improvements along with the gain in mechanical muscle function. The effect of 12-week power training was investigated in 60-65

(mean age 62.8±2.2, n=34) and 80-85 yr older women (mean age 81.8±2.2, n=24) who were randomized into training (TG60 and TG80) or controls (CG60 and CG80). Measurements included: i) maximal muscle power, RFD, strength; ii) quadriceps and hamstring muscle and fat volumes (MRI); iii) function (gait, chair-rise, physical performance battery test (PPT)). Total muscle and quadriceps volume increased post training in TG with no changes in the hamstrings, and no changes in CG. Strength and specific strength (normalized by muscle volume) increased by 28% and 24% (TG80) and 22% and 15% (TG60). RFD increased in TG80 (42-59%) and TG60 (12-19%) whereas specific RFD increased in TG80 only (31-43%). Muscle power increased 28% (TG80) and 14% (TG60). Chair-rise increased in TG80 (12%) and TG60 (12%) while PPT increased in TG80 only (7%). No changes in gait speed occurred. These findings suggest that power training leads to substantial gains in muscle power, RFD, strength and functional capacity in old and very old women that are partially mediated by increases in muscle mass.

#### ROLE OF INTERLEUKIN-15 IN EXERCISE ENDURANCE, ENERGY METABOLISM, AND BODY COMPOSITION

L.S. Quinn<sup>1,2</sup>, T. Wolden-Hanson<sup>1</sup>, *1. GRECC S-182, VA Puget Sound Health Care System, Seattle, Washington, 2. University of Washington, Seattle, Washington*

Interleukin-15 (IL-15) is a cytokine that is upregulated in skeletal muscle following exercise and correlates with leanness and insulin sensitivity; however, IL-15 levels decrease during aging. Transgenic mice with elevated IL-15 levels (IL-15 Tg mice) and mice that lack IL-15 (IL-15 KO mice) were compared with controls. Untrained IL-15 Tg mice were lean, insulin sensitive, and could run twice as far as controls, whereas IL-15 KO mice ran half as far as controls. IL-15 Tg mice preferentially utilized fat for energy metabolism, while IL-15 KO mice preferentially utilized carbohydrates and exhibited increased adiposity. Muscles in IL-15 Tg mice exhibited high expression of pro-oxidative mRNA species, including SIRT1, PPAR $\delta$ , and PGC-1 $\beta$ , and had increased oxidative myofibrillar isoform expression patterns. These findings support a role for IL-15 in the favorable metabolic adaptations induced by exercise, and suggest declining IL-15 levels in aging may play a role in frailty and insulin resistance.

#### TESTOSTERONE AND RESISTANCE EXERCISE EFFECTS ON FUNCTION, STRENGTH AND BODY COMPOSITION IN OLDER MEN

K. Hildreth<sup>1</sup>, D. Barry<sup>2</sup>, K. Moreau<sup>1</sup>, T. Nakamura<sup>1</sup>, J. Vande Griend<sup>4</sup>, P. Wolfe<sup>3</sup>, R. Schwartz<sup>1</sup>, *1. Department of Medicine, Division of Geriatrics, University of Colorado Anschutz Medical Campus, Aurora, Colorado, 2. Kaiser Permanente, Denver, Colorado, 3. Colorado Biostatistical Consortium, Colorado School of Public Health, University of Colorado, Denver, Aurora, Colorado, 4. University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, Colorado*

Background: Gonadal aging in men is associated with physiologic changes that can result in frailty and increased mortality. However, the benefits of testosterone (T) supplementation in older men are inconclusive. It is also unclear whether T supplementation augments exercise-induced improvements in strength or function. Methods: We randomized 167 generally healthy older men (66 ± 5 yrs) with baseline [T] of 200-350 ng/dL to placebo or T gel targeting a lower [400-550] or higher [600-1000] [T] range, and to either progressive resistance training (PRT) or no exercise for 12 months. Primary outcomes were function, strength and body composition. Results: 143 men completed the study. Baseline [T] was 296 ± 41. At 12 months [T] was 287 ± 65, 457 ± 278 and 598 ± 385 with placebo, lower- (5.0 ± 2.0 g/d) and higher-dose (8.7 ± 1.8 g/d) T, respectively (p = 0.001 for lower- vs. higher-dose [T]). In the PRT group, any-T treatment was associated with greater improvements in fat mass (FM; p=.04) and fat-free mass (FFM; p=.01)



but not strength or function compared to placebo gel. In non-exercising subjects, any-T treatment was associated with greater improvements in FM ( $p=.005$ ), FFM ( $p=.03$ ) and upper body strength ( $p=.03$ ) compared to placebo gel. Any-T produced dose-related increases in hematoctrit but no increase in cardiovascular events. Conclusions: T supplementation was well tolerated in this population and associated with improvements in body composition. Although T improved upper body strength in non-exercisers, it did not augment strength or function beyond that achieved with PRT alone.

### PHYSICAL ACTIVITY, OBESITY, AND INCIDENT DIABETES IN MIDDLE-AGED AND OLDER ADULTS – A POPULATION-BASED STUDY

P. Lee, C. Blaum, C. Cigolle, *Internal Medicine, Univ Michigan, Ann Arbor, Michigan*

Population-based estimate of incidence of diabetes based on glycosylated hemoglobin A1c (A1c) has not been established; controversy remains on whether female and male equally benefit from physical activity in prevention of diabetes. Our study aims to establish a population-based estimate of incidence of diabetes among middle-aged and older adults using A1c measurement, and compare the effect of physical activity on incidence of diabetes by gender. We analyzed data from waves 2006-2010 of the Health and Retirement Study, a longitudinal, nationally representative survey of adults aged  $\geq 51$  years. Respondents reported to have no diabetes in 2006 were classified as having prediabetes (A1c 5.7%-6.4%) or no dysglycemia (A1c  $< 6.4\%$ ). Physical activity was based on self-reported participation in low, moderate, and vigorous level activities in a week. New diabetes cases were self-reported diabetes in 2008 and 2010. Descriptive analyses and Wald proportion estimation were performed. In 2006, 3,239 adults had no diabetes, 1,803 had prediabetes. By 2010, 162 of the prediabetes respondents developed diabetes (incidence rate 2.2% per year), 68 of no-dysglycemia respondents developed diabetes (incidence rate 0.6% per year). Respondents who developed diabetes were more likely to be obese, female, and poor. Female, not male, who were obese were significantly less likely to develop diabetes if they were physically active ( $p=0.02$ ). Our findings support the use of A1c to screen for middle-aged and older adults with prediabetes. Future studies should aim to elucidate the underlying reason for the gender difference in the protective effect of physical activity on the development of diabetes.

## SESSION 2205 (SYMPOSIUM)

### BEYOND CONTROL: SELF-REGULATION AT THE END OF LIFE AND WITH SEVERE DISABILITY

Chair: *J. Heckhausen, Psych & Soc. Beh., UC Irvine, Irvine, California*

Co-Chair: *D. Gerstorf, Humboldt University, Berlin, Berlin, Germany*

Symposium addresses the unique challenges to the regulation of motivation and emotion that emerge at the end of life and under conditions of severe disability. The Motivational Theory of Life-Span Development guiding empirical presentations in this symposium proposes that primary control striving has functional primacy across the life span, but that under conditions of constrained control opportunities individuals benefit if they disengage from unattainable primary-control goals. The unique challenges at the end of life and with severe disability result from extreme restrictions of primary control capacity and force individuals to utilize strategies that reach beyond primary control. Heckhausen, Wrosch, and Schulz propose a Lines of Defense model of motivational regulation that reflects a step-by-step adjustment of health and functioning goals to progressive disease and disability. Schulz, Monin, Matire, and Connelly show that patients with spinal cord injury who downwardly adjust the personal importance of carrying out activities of daily living independently report less depressive symptoms and better physical health. Nina Vogel reports that affective changes in advanced

old age is following an accelerated downward trend to the end of life. Gerstorf, Heckhausen, Ram, Infurna, Schupp, and Wagner show that individuals who report effective developmental control strivings subsequently experience higher late-life well-being, as well as less steep and later onset of end-of-life declines in well-being.

### TIME-TO-DEATH RELATED ANALYSES OF CHANGE IN POSITIVE AND NEGATIVE AFFECT IN OLDER ADULTS APPROACHING THE END OF LIFE

N. Vogel<sup>1,2</sup>, O.K. Schilling<sup>3</sup>, H. Wahl<sup>3</sup>, B. Penninx<sup>4</sup>, A. Beekman<sup>4,5</sup>, *1. Humboldt University, Berlin, Germany, 2. German Institute for Economic Research (DIW), Berlin, Germany, 3. University of Heidelberg, Heidelberg, Germany, 4. VU University Medical Center, Amsterdam, Netherlands, 5. GGZ inGeest, Amsterdam, Netherlands*

Late-life development may imply terminal processes related with time-to-death, rather than with chronological age. Expecting that affective well-being might be particularly sensitive to degradation processes preceding death, we used a 15-year observational interval including 5 measurement occasions with deceased participants ( $N = 1671$ ) from the Longitudinal Aging Study Amsterdam (LASA) to examine (1) whether intraindividual trajectories in positive (PA) and negative affect (NA) can be better described in terms of time-to-death as compared to chronological age; and (2) whether possible time-to-death-related change in PA and NA follows a terminal decline (linear change) versus terminal drop (non-linear, accelerating change) pattern. For both PA and NA, multilevel mixed models confirmed that time-to-death accounts for more intra-individual variance and reveals a better fit to the data than chronological age, following a terminal drop pattern. In conclusion, late-life development of affect may be better understood as death-related, rather than age-graded process.

### PERCEIVED EFFECTIVE CONTROL OF DEVELOPMENT BUFFERS TERMINAL DROP IN WELL-BEING

D. Gerstorf<sup>1,2,3</sup>, J. Heckhausen<sup>5</sup>, N. Ram<sup>2,3,4</sup>, F.J. Infurna<sup>1,2,3</sup>, J. Schupp<sup>3</sup>, G.G. Wagner<sup>3,4</sup>, *1. Institute of Psychology, Humboldt University Berlin, Berlin, Germany, 2. Pennsylvania State University, University Park, Pennsylvania, 3. DIW Berlin, Berlin, Germany, 4. Max Planck Institute for Human Development, Berlin, Germany, 5. University of California, Irvine, Irvine, California*

Recent research has repeatedly demonstrated that well-being typically evinces precipitous deterioration close to the end of life. Yet, individual differences in these terminal declines in well-being are very substantial and to-date poorly understood. In this study, we examine the role of effective developmental control strivings as potential buffers against such terminal declines in well-being. We applied single- and multi-phase growth models to 25-year longitudinal data from 1,641 now deceased participants of the national German Socio-Economic Panel (SOEP; age at death:  $M = 74$ ;  $SD = 14$ ; 19 to 101 years; 49% women). Results revealed that self-reports of effective developmental control strivings were related to subsequent higher late-life well-being, shallower rates of late-life declines, and a later onset of terminal decline. These findings suggest that perceptions of being engaged in effective control striving may serve a protective role against end-of-life terminal decline in well-being. We also discuss scenarios for when and how giving up control and goal disengagement may become beneficial.

### LINES OF DEFENSE WHEN FACING PROGRESSIVE DISEASE, DISABILITY, AND THE END OF LIFE: AN APPLICATION OF THE MOTIVATIONAL THEORY OF LIFE-SPAN DEVELOPMENT

J. Heckhausen<sup>1</sup>, C. Wrosch<sup>2</sup>, R. Schulz<sup>3</sup>, *1. Psych & Soc Beh, UC Irvine, Irvine, California, 2. Concordia University, Montreal, Quebec, Canada, 3. University of Pittsburgh, Pittsburgh, Pennsylvania*

As older individuals face challenges of progressive disease and increasing disability and approach the end of their lives, their capacity

for controlling the environment and their own health and functioning declines precipitously. The Lines of Defense Model is based on the Motivational Theory of Life-Span Development and proposes that individuals organize their adjustments of control striving to the progressive physical decline in distinctly organized cycles of goal engagement and goal disengagement and adjustment that reflect sequentially organized lines of defense. This organized pattern of adjustment allows individuals to hold onto and defend still feasible levels of functioning in activities of daily living, while adjusting to increasing impairments. As physical constraints become more severe towards the end of life, avoiding psychological suffering becomes the focus of individuals' strivings for control. The lines of defense model can also be applied to the inverse process of growth in functioning during recovery and rehabilitation.

#### **ADAPTATION TO DECLINING FUNCTIONAL ABILITY AMONG THE SEVERELY DISABLED**

R. Schulz<sup>1</sup>, J. Monin<sup>2</sup>, L. Martire<sup>3</sup>, S. Czaja<sup>4</sup>, D. Connelly<sup>2</sup>, 1. *U. of Pittsburgh, Pittsburgh, Pennsylvania*, 2. *Yale U., New Haven, Connecticut*, 3. *Penn State U., State College, Pennsylvania*, 4. *U. Miami, Miami, Florida*

This study examined how independence centrality – the personal importance of carrying out activities of daily living independently – related to depressive symptoms among older persons with spinal cord injury (SCI). Drawing from the life-span theory of control, it was hypothesized that downgrading independence centrality protects people from experiencing greater depressive symptomatology when they become more disabled. Using data from a randomized controlled trial (Schulz, Czaja, Lustig, Zdaniuk, Martire, & Perdomo, 2009), we focused on 173 SCI survivors who completed baseline and 12-month follow-up measures of independence centrality, disability, and psychological and physical health. Results revealed that a higher level of independence centrality was associated with more depressive symptoms and poorer perceived physical health at baseline, and more depressive symptoms over time for survivors who became more disabled. Declines in independence centrality among persons who experienced declining physical functioning was associated with lower levels of depression. This study demonstrates the psychological benefits of shifting priorities in the face of functional declines.

### **SESSION 2210 (SYMPOSIUM)**

#### **HOW LIFE COURSE PATTERNS OF EMPLOYMENT, SOCIOECONOMIC POSITION, AND FAMILY SHAPE PHYSICAL AND MENTAL HEALTH IN LATE LIFE**

Chair: P. Herd, *UW-Madison, Madison, Connecticut*

This symposium explores how education, work, and family experiences across the life course shape physical and psychological health in late life. All of these papers utilize a unique longitudinal study of aging, the Wisconsin Longitudinal Study, which has following a cohort of high school graduates (and a selected sibling) since 1957. Two papers focus on the links between socioeconomic position and health behaviors and mortality in later life. One of these papers focuses on the links between socioeconomic position, obesity, and mortality. The other paper specifically focuses on how education, including academic performance, links to smoking and obesity in late life. The other two papers focus on how employment and expectations surrounding employment ultimately shape mental health and mortality in late life. One of these papers specifically focuses on employment patterns—including unemployment spells—across the entire life course of these participants. The other paper focuses on an intense caregiving experience—raising children with significant disabilities—and how that experience helps pattern employment experiences and expectations and ultimately mental health in late life.

#### **EMPLOYMENT HISTORIES AND LATE MID-LIFE MORTALITY**

J. Raymo<sup>1</sup>, J. Warren<sup>2</sup>, A. Halpern-Manners<sup>2</sup>, 1. *Sociology, Univ of Wisconsin, Madison, Wisconsin*, 2. *Univ of Minnesota, Minneapolis, Minnesota*

We examine relationships between mid-career employment trajectories and mortality prior to age 70 for the large cohort of men and women in the Wisconsin Longitudinal Study. We begin by summarizing yearly measures of employment circumstances as latent trajectories of employment status and exposure to “bad jobs” across mid career (ages 35-54). We then estimate parametric models for mortality between ages 54-70 as a function of the latent employment trajectories and posited mediators measured at age 54. Intermittent employment and loss of health insurance and pension coverage in mid-career are associated with a higher risk of mortality for men and these relationships disappear when we control for job characteristics and health status at age 54. Higher mortality among women with limited employment across the life course and lower mortality among women who worked part-time and those who retired early from stable employment remain significant net of a wide range of controls.

#### **EDUCATION AND HEALTH BEHAVIORS: UNDERSTANDING THE ROLE OF COGNITIVE AND PSYCHOLOGICAL HUMAN CAPITAL**

A. Karraker, P. Herd, *University of Wisconsin-Madison, Madison, Wisconsin*

Unhealthy behaviors are strongly patterned by educational attainment, but the mechanisms underlying this relationship are unclear. One potential explanation is that education fosters and reflects human capital accumulation. Human capital can impact health behaviors via cognitive means (which may, for example, increase individual responsiveness to public health messages about the risks of certain behaviors) and psychological means (such as personality traits such as environmental mastery that facilitate maintaining health behaviors). Using data from the Wisconsin Longitudinal Study (WLS), we examine the extent to which the association between education and health behaviors (smoking, obesity) is explained by measures of cognitive (academic performance) and psychological human capital (traits such as mastery and conscientiousness). We find that cognitive human capital measures—particularly high school rank—substantially mediate the association between education and health behaviors. However, analyses also reveal substantial variations by gender and highlight the importance of life course processes in health behavior formation and maintenance.

#### **FAMILY CAREGIVING AND TRANSITION TO RETIREMENT AMONG PARENTS OF CHILDREN WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES**

J. Hong<sup>1</sup>, J.D. Wong<sup>1</sup>, M. Mailick Seltzer<sup>1</sup>, J. Greenberg<sup>1</sup>, C.G. Mandic<sup>2</sup>, J. Song<sup>1</sup>, 1. *Waisman Center, Univ. of Wisconsin-Madison, Madison, Wisconsin*, 2. *San Francisco State University, San Francisco, California*

Caregiving responsibilities of parents of adult children with intellectual and developmental disabilities (IDD) often begin early in the parents' adulthood and continue into old age. Yet, less is known about the retirement processes of individuals who have engaged in family caregiving for many decades. Using data from the Wisconsin Longitudinal Study, this study examines whether retirement-age employment status, realization of employment preferences, and depressive symptoms associated with employment status differ between parents of children with IDD (n=284) and parents in the general population (n=2840). Results showed that fathers of adult children with IDD were less likely to retire at their later stage of life. Being retired was associated with lower level of depression for fathers, regardless of their child's IDD status. Mothers of adult children with IDD were more likely to work less

than they preferred a decade earlier, and they showed higher level of depression than comparison mothers.

### **EARLY-LIFE SOCIOECONOMIC STATUS, OBESITY IN ADULTHOOD, AND LATER-LIFE CARDIOVASCULAR MORTALITY**

T. Pudrovska, *Pennsylvania State University, University Park, Pennsylvania*

From a life course perspective, mortality in later life cannot be understood without considering exposures in childhood and adolescence. This study examines how early-life socioeconomic status affects cardiovascular mortality in later life, and whether obesity in adulthood moderates this effect. Results from continuous-time parametric survival models indicate that higher levels of parents' education were associated with a reduced risk of cardiovascular mortality, but only among persons who were not obese at midlife. Among obese individuals, higher parental education did not protect against cardiovascular mortality. On the other hand, children of low-educated parents did not have a significantly elevated risk of cardiovascular mortality if they maintained healthy weight in adulthood. After attending this activity, participants will be able to discuss the life-course accumulation of risks and resources that affect mortality, and to explain how healthy lifestyle in adulthood can compensate for early-life social disadvantage.

## **SESSION 2215 (SYMPOSIUM)**

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### **INTEGRATING A FAMILY-FOCUS INTO HEALTH & HEALTH CARE: IMPLICATIONS OF RESEARCH FOR POLICY & PRACTICE**

Chair: *D. Carr, Institute for Health, Health Care Policy, and Aging Research, Rutgers University, New Brunswick, New Jersey*  
Discussant: *S. Qualls, University of Colorado-Colorado Springs, Colorado Springs, Colorado*

A vast body of research reveals that health, health behaviors, and access to care are shaped by family roles and relations. Despite this evidence, however, health care is still delivered in a patient-focused rather than family-focused manner. The four papers in this symposium use a range of research methods and samples to reveal the ways that families can foster (or in some cases, impede) health, health behaviors, and disease management among older adults. Robles and colleagues conducted a meta-analytic review of studies on marital satisfaction and physical health outcomes published over the past 50 years, with particular attention to how these associations differ over the life course. Umberson examined how committed relationships affect health-related behavior and health care, and how those processes vary across gay, lesbian, and heterosexual unions. By comparing cohabiting and married couples, she shows how legal marriage differs from cohabitation in shaping relationship and health dynamics. Rook and colleagues explored the ways that interpersonal processes in couples both enhance and undermine disease management, and identified forms of involvement that are helpful versus unhelpful. Boerner & Carr found that both supportive and critical relationships with spouse and children affect one's advance care planning, including the appointment of a specific durable power of attorney for health care (DPAHC). The authors and discussant will highlight the implications of their work for developing family-focused interventions and practices, and discuss the ways that current debates over health care reform may be informed by a family- rather than individual patient focus.

### **MARITAL QUALITY AND HEALTH: A META-ANALYTIC REVIEW**

T. Robles<sup>1</sup>, R. Slatcher<sup>2</sup>, J.M. Trombello<sup>1</sup>, M. McGinn<sup>1</sup>, *1. Psychology, UCLA, Los Angeles, California, 2. Wayne State University, Detroit, Michigan*

This meta-analysis reviews all the published empirical articles describing relationships between marital relationship quality and health outcomes over the past 50 years. Health outcomes included objective assessments of participant or patient function, disease severity, and survival; subjective assessments of health, particularly self-rated health and pain; and biomarkers that are established substitutes for clinical endpoints, such as blood pressure. Greater marital quality was related to better health, with effect sizes ranging from  $r = .04$  -  $.21$ , similar in magnitude to health behaviors like diet and physical activity, even after accounting for demographic covariates and other potential confounding factors. Notably, there were no differences between younger and older samples. We highlight the need to test potential explanatory mechanisms in future research and propose that future research primarily focus on moderating factors, particularly age, gender, and contextual factors including socioeconomic status and stressful life events.

### **MARRIAGE AND HEALTH CARE: POLICY IMPLICATIONS FOR SAME-SEX COUPLES**

D. Umberson, *Population Research Center, University of Texas at Austin, Austin, Texas*

Since same-sex couples cannot legally marry in most parts of the United States, we know very little about the health implications of marriage for aging gay and lesbian couples. I consider how committed long-term relationships affect the utilization of health care and how these processes vary across gay, lesbian, and heterosexual unions. By comparing cohabiting and married couples, I explore how legal marriage differs from cohabitation in shaping these processes. I discuss how partner dynamics around the use of health care vary for different union types, and the implications of these dynamics for health policy. Policy strategies that result in more effective partner participation in health care and more efficient use of health care systems have the potential to reduce health care costs, while improving the health and well-being of aging individuals and couples.

### **THE SOCIAL CONTEXT OF CHRONIC ILLNESS MANAGEMENT: HELPFUL VS. UNHELPFUL FORMS OF FAMILY INVOLVEMENT**

K.S. Rook<sup>1</sup>, M. Franks<sup>2</sup>, M.P. Stephens<sup>3</sup>, *1. University of California, Irvine, California, 2. Purdue University, West Lafayette, Indiana, 3. Kent State University, Kent, Ohio*

The day-to-day management of chronic illness often occurs in a social context, in which family members observe, seek to influence, or participate in patients' efforts to adhere to a treatment regimen. Some, though not all, forms of family involvement may benefit patients' adherence and, in turn, their illness outcomes. Well-intentioned actions by family members, such as persistent efforts to foster improved adherence, may be ineffective or may succeed with unwanted side effects. Other actions may inadvertently undermine patients' efforts to adhere to a treatment regimen. The purpose of this presentation is to survey the literature on family members' involvement in older adults' chronic illness management, to distill what is known about forms of involvement that are helpful versus unhelpful. Our review emphasizes spousal involvement because spouses are involved more often than are other family members in older adults' disease management. Implications for research and interventions will be discussed.

## THE ROLE OF FAMILY RELATIONSHIPS IN ADVANCE CARE PLANNING: HOW DO THEY ENCOURAGE OR HINDER PLANNING?

K. Boerner<sup>1,2</sup>, D. Carr<sup>3</sup>, 1. *Jewish Home Lifecare/Mount Sinai School of Medicine, New York, New York*, 2. *Mount Sinai School of Medicine, New York, New York*, 3. *Rutgers University, New Brunswick, New Jersey*

Little is known about the association between family dynamics and advance care planning (ACP). ACP encompasses formal planning (i.e., living will and durable power of attorney, DPAHC) and informal discussions. We evaluated the effects of family relationship attributes on ACP in 305 elders. Better overall family functioning increased the odds of having discussions and engaging in formal ACP. Greater spousal support and criticism increased the odds of having discussions, yet spousal criticism reduced the odds that spouse was named as DPAHC. Criticism from children increased the odds of relying on formal ACP only; emotional support increased the odds that a child was named as DPAHC. In an effort to reduce potential unnecessary cost and burden at the end of life, we recommend that patient-provider discussions of end-of-life care consider how family dynamics may affect ACP, so that potential barriers related to family relationships can be addressed and overcome.

## SESSION 2220 (SYMPOSIUM)

### NEW FRONTIERS IN GEROPSYCHIATRIC NURSING RESEARCH: DIVERSE ISSUES WITH COMMON GOALS

Chair: M. Eckfield, *UCSF School of Nursing, San Francisco, California*

The field of Geropsychiatric Nursing Research is expanding to address the complex ways mental and physical health issues affect older adults. While geropsychiatric nurses have traditionally been involved in research on psychiatric issues related to dementia, nursing researchers are now leading efforts on new frontiers in the study of cognition, well-being, mood and behavioral disorders, and aggression in older adults. In this symposium, geropsychiatric nurses who are a part of the John A. Hartford Foundation's Building Academic Geriatric Nursing Capacity program discuss their common goal to improve our understanding of and response to psychiatric-related issues in older adults, as well as the common challenges faced when working with this vulnerable population. The presentation of four current research studies highlights the breadth and range of geropsychiatric nursing research. Studies include the challenges of decision-making among older adults with mild cognitive impairment; the overlooked issue of male-oriented activities for men living in nursing homes; the strategies used by those with hoarding disorder to maintain their perception of control; and new evidence on elder perpetrated violence in long-term care and geropsychiatric units. This collection of studies illustrates the complexity of mental health issues in older adults and focuses fresh attention on the role of geropsychiatric nursing research to guide clinical practice and inform interdisciplinary interventions.

### HEALTH CARE DECISION-MAKING AMONG OLDER ADULTS WITH MILD COGNITIVE IMPAIRMENT

A.M. Mayo<sup>1</sup>, M.I. Wallhagen<sup>2</sup>, J. Johnson<sup>2</sup>, B. Miller<sup>2</sup>, 1. *Hahn School of Nursing & Health Science, University of San Diego, San Diego, California*, 2. *University of California, San Francisco, San Francisco, California*

Background: Management of chronic illnesses that increase with age often necessitates complex health care decision-making. Yet, little is known about decision-making in persons with mild cognitive impairment (MCI), an abnormal condition affecting 20-30% of older adults. Methods: A cross-sectional, comparative design was utilized to measure functional decision-making abilities (reasoning, understanding, appreciation, and expressing a choice) among older adults with normal cognition and MCI. Results: Participants (n=51) had a mean age of 69.6

years; 22 with MCI and 29 normal cognition. Normal cognition participants scored higher in understanding (p<0.01) and appreciation (p<0.05) of health care decisions. There were no significant differences between the two groups in reasoning or expressing a choice involved in health care decisions. Conclusions: Older adults with MCI may need additional support to ensure they understand and appreciate their choices when making health care decisions. Study findings can be used to design decision supports for this vulnerable population.

### LINKING CHARACTERISTICS OF ACTIVITIES AND MALE RESIDENT ENGAGEMENT: IMPROVING THE VITALITY OF MEN IN NURSING HOMES

B. Buron<sup>1</sup>, T. Killian<sup>2</sup>, 1. *University of Arkansas for Medical Sciences Northwest Campus, Fayetteville, Arkansas*, 2. *University of Arkansas, Fayetteville, Arkansas*

Activity Directors (ADs), predominantly female, are instrumental in promoting the vitality and well being of residents living in nursing homes (NHs). A recent study found a disconnect between the types of activities ADs actually provided and the types of activities they perceived that men would most enjoy. The purpose of this qualitative study was to identify characteristics of activities most likely to engage male residents. Forty ADs working in Arkansas NHs described a total of ninety-six popular activities and rated the activities on how likely male and female residents engaged in them. Researchers, using qualitative content analysis, coded open-ended descriptions of activities, seeking to identify and describe activity characteristics likely to result in higher levels of male resident engagement. The implications of this research provide guidelines for improving the vitality of men in NH facilities. More studies are needed to develop AD training materials to expand this approach to care.

### STRATEGIES USED BY OLDER ADULTS WITH HOARDING DISORDER TO MAINTAIN A SENSE OF CONTROL

M. Eckfield, M.I. Wallhagen, *UCSF School of Nursing, San Francisco, California*

Individuals often use a variety of strategies to maintain a sense of control, especially after major life events such as retirement, changes in types of social support, and loss of a spouse. The current paper focuses on how older adults with Hoarding Disorder (HD) attempted to maintain a sense of control. Using Grounded Theory methodology, 22 adults (age 65-91, M=74) with HD were interviewed. Verbatim transcripts were analyzed using Atlas TI. Three categories of strategies emerged: clinging to items from the past to maintain their identity; redefining themselves in roles that included hoarding behaviors; and applying successful survival strategies from the past to the present. Several of these contributed to the worsening of hoarding behaviors. By understanding these responses to late-life changes, clinicians and researchers can develop new strategies to help of older adults with HD cope with transitions in more effective ways.

### VICTIM OR PERPETRATOR? PERCEPTIONS OF RESIDENT-TO-RESIDENT VIOLENCE IN NURSING HOMES

S. Snellgrove, *Arkansas State University, State University (Jonesboro), Arkansas*

Violence between residents is a threat to the safety and quality of life of people residing in nursing homes. To date, little evidence regarding resident-to-resident violence (RRV) or strategies for managing and preventing it exists. This qualitative study explored nursing home violence from the perspective of residents who considered themselves "victims." Using a semi-structured interview guide, a demographic form, and medical records, seven participants were asked about their perceptions of RRV and factors surrounding the events in which they were involved. Data were analyzed using content analysis and constant comparison. Three factors that contributed to episodes of RRV were "feel-

ing frustrated,” “feeling threatened,” and “taking it personally.” These sub-themes were combined into the over-riding theme “perceptions.” The results of this study provide new insights into the perceptions of violence among residents in nursing homes and may provide an important foundation for the development of interventions to prevent RRV.

## SESSION 2225 (SYMPOSIUM)

### PREDICTORS OF MORTALITY IN THE OLDEST-OLD - CROSS-COUNTRY PERSPECTIVES AND ANALYTIC CHALLENGES

Chair: *M. Jylhä, University of Tampere, Tampere, Finland*  
Co-Chair: *E. Crimmins, University of Southern California, Los Angeles, California*  
Discussant: *J.M. Guralnik, University of Maryland, Baltimore, Maryland*

Predictors of mortality in the oldest-old may differ from the predictors in middle-aged or aging populations, due to high overall mortality, selective survival and high level of many risk factors, but also to the changing biological role of many commonly used predictors. Our understanding of predictors of mortality and survival in this age group is poor, since studies are often limited by selected study populations, exclusion of institutionalized individuals, and low participation rates, as well as short follow-up times. In this symposium we will present findings from four representative population-based studies of the oldest-old in three European countries and the US. The presentations focus on (1) the association of several health-related and psychosocial factors with mortality and survival, (2) the gender differences in indicators that predict mortality, and (3) methodological challenges in study design and analysis. The data presented include the Danish 1905 Cohort Study and the Longitudinal Study of Danish Twins, the Newcastle 85+ Study in the UK, the Vitality 90+ Study in Tampere, Finland, and the Third National Health and Nutrition Examination Survey (NHANES III) in the US. The discussant will bring the results together, focusing on the similarities and differences across the studies and addressing the methodological challenges in predicting mortality at very old age.

### GENDER DIFFERENCES IN THE ASSOCIATION BETWEEN SELF-RATED HEALTH AND MORTALITY: RESULTS FROM THE NEWCASTLE 85+ STUDY

C. Jagger<sup>1</sup>, J. Bond<sup>2</sup>, L. Robinson<sup>2</sup>, A. Kingston<sup>1</sup>, J. Collerton<sup>1</sup>, K. Davies<sup>1</sup>, T. von Zglinicki<sup>1</sup>, T. Kirkwood<sup>1</sup>, *1. Institute for Ageing and Health, Newcastle University, Newcastle upon Tyne, United Kingdom, 2. Institute of Health & Society, Newcastle University, Newcastle upon Tyne, United Kingdom*

We explore the association between self-rated health (age-comparative) and 4-yr mortality in an unselected cohort of 85-year olds (1921 birth cohort). Cox regression models were fitted to the 828 individuals (98%; 316 men, 512 women) with complete information on self-rated health (SRH). In unadjusted models men and women reporting fair/poor SRH had increased risks of death (HR(95%CI): men=2.2(1.4-3.3), women=1.7(1.2-2.5)), compared to those reporting excellent/very good SRH. Effects were attenuated but remained significant for men after adjustment for socio-demographic and lifestyle confounders (education, marital status, smoking, physical activity, BMI) and then disease and functioning (MMSE, disease from medical records, disability, pain, falls) (men=2.1(1.3-3.4); women=1.3(0.8-2.0)). After adjustment for biomarkers (TNF- $\alpha$ , IL-6, albumin, white blood cell count, haemoglobin, HDL cholesterol, creatinine) SRH was no longer significant overall. However men reporting fair/poor health still had an increased risk of death (men=1.9(1.1-3.3); women=1.2(0.8-2.0)), providing some evidence that men may incorporate interoceptive information in their SRH.

### DECLINING ASSOCIATION BETWEEN PHYSICAL ABILITIES AND MORTALITY AT AGE 70-95 - ANALYTICAL CHALLENGES

M. Thinggaard<sup>1</sup>, M. McGue<sup>1,2</sup>, B. Jeune<sup>1</sup>, K. Christensen<sup>1,3</sup>, *1. Danish Aging Research Center, Epidemiology, Institute of Public Health, University of Southern Denmark, Odense C, Denmark, 2. Department of Psychology, University of Minnesota, Minneapolis, Minnesota, 3. Department of Clinical Genetics and Department of Clinical Biochemistry and Pharmacology, Odense University Hospital, Odense C, Denmark*

Phenotypes that predict mortality in middle-aged and young elderly usually show weaker associations among the oldest old. For non-fixed phenotypes, this poses an analytical challenge. We analyzed the association between physical ability and mortality in a population-based sample of 5,415 Danes aged 70-95 years, with up to four longitudinal measures and complete follow-up for at least 8 years. A traditional Cox regression showed that baseline measure of ADL and grip strength was significantly stronger associated with mortality among people aged 70-85 than among people aged 85-95 (P-value<0.001). However, proportional hazard was not fulfilled for baseline measures and the results from longitudinal measurements in a multiple-record survival analysis showed that there was only a change in strength of association with age for ADL. Evaluation of declining association between non-fixed phenotypes and mortality with age requires either that the proportional hazard assumption is fulfilled for baseline measures or multiple-record survival analysis.

### PREDICTING MORTALITY AMONG THE OLD AND OLDEST-OLD IN THE UNITED STATES

E. Crimmins, M.E. Levine, J.A. Ailshire, *University of Southern California, Los Angeles, California*

Numerous studies have sought to construct models to predict survival outcomes using measures of frailty, psychosocial, biological markers, and indicators of physical and social functioning. However, what predicts mortality among the oldest-old may be different from the predictors in an aging but not yet very old population. In this presentation, we examine a diverse set of factors encompassing frailty, anthropometric measures, cognitive and physical functioning, physiological state, psychosocial well-being, and behavior, to develop predictive models of mortality. We use two data sources to investigate subsequent mortality among persons aged 70-89 at baseline. Subjects include persons from the U.S. Third National Health and Nutrition Examination Survey (NHANES III) and the longitudinal Health and Retirement Study (HRS). The research demonstrates that the factors predicting mortality vary between younger and older groups. The identification of constructs that predict mortality among very old cohorts may facilitate the development of preventative interventions to impact longevity.

### PREDICTORS OF MORTALITY IN NONAGENARIAN WOMEN AND MEN - THE VITALITY 90+ STUDY

M. Jylhä, K. Tiainen, L. Enroth, A. Hervonen, *University of Tampere, Tampere, Finland*

In nonagenarians, predictors of mortality may differ from those in younger old age. However, in many studies the reliability is limited due to small and biased study samples. In Vitality 90+ Study we investigated mortality during 9 years in a total cohort of individuals aged 90 and older in the area of Tampere in Finland, including also institutionalized people. Baseline data was collected using mailed surveys (N=888, response rate 79%). Several socio-economic and health indicators were used as potential predictors. Older age, male gender, and institutionalization increased risk of mortality in the total study group. In men, difficulties in ADL and mobility were strong predictors, while in women, comorbidity and poor self-rated health were more important. Occupational class did not predict mortality, but individuals in lower classes seemed to live more years with disability than the upper classes. The

findings suggest that predictors of mortality in very old groups may differ between the genders.

## SESSION 2230 (SYMPOSIUM)

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### RECRUITING STUDENTS TO SOCIAL WORK WITH OLDER ADULTS THROUGH EXPERIENTIAL LEARNING

Chair: *N. Hooyman, University of Washington, Seattle, Washington*  
Discussant: *N. Hooyman, University of Washington, Seattle, Washington*

The job market for baccalaureate social workers in the aging network and long-term care settings is strong and growing. Yet, relatively few Bachelors of Social Work (BSW) programs offer learning experiences where students directly interact with older adults. BSW students often gravitate toward careers with younger populations. The gap between the growing employment opportunities and the limited number of gerontologically-competent BSW graduates was the impetus for the Council on Social Work Education's BSW Experiential Learning (BEL) Program, which has funded 30 grantees over two funding cycles (2008-2010 and 2010-2012). Grantees embed and sustain experiential learning activities with older adults into one or more required generalist courses as a recruitment strategy for gerontological social work. Approximately 3,200 students have participated in the BEL program thus far. Quantitative data from the Cycle 1 grantees (Cycle 2 data is not yet available) indicate significant improvements in students' self-reported likelihood to pursue field placements, course work, graduate study, and a career in gerontological social work as a result of the BEL Program. The cost of the program per student is relatively low, ranging from approximately \$24 to \$70 per student over the course of the two years. This session will describe the BEL program's rationale, implementation, outcomes, and lessons learned. Grantees will describe their programs' outcomes and provide specific action steps for those who may want to implement such a program. While the BEL Program focused on BSW students, this session has applicability for Master's level students and students in different degree fields.

### ENGAGING UNDERGRADUATE STUDENTS IN GERONTOLOGICAL SOCIAL WORK: CHALLENGES AND SUCCESSES

A. Rogers, *University of Portland, Portland, Oregon*

This paper will describe the aims, outcomes, and lessons learned of a project that examined the extent to which exposing undergraduate students to gerontological-related curriculum and experiences could increase their interest and engagement in aging-related social work. Students in a research methods course and a senior practicum course participated in gero-specific activities over the course of an academic year. Students were assessed before and after their course experiences on their exposure to older adults; comfort level in working with older adults; knowledge about working with older adults; likelihood of working with older adults in the future; and perceived gerontological competencies in working with older adults. At the end of the symposium, participants will be able to 1.) Identify specific strategies to engage undergraduate students in gerontological social work, and 2.) Identify challenges to employing strategies to their undergraduate curriculum.

### RECRUITING STUDENTS TO SOCIAL WORK WITH OLDER ADULTS THROUGH EXPERIENTIAL LEARNING

E.T. Mazza, *School of Social Work, Monmouth University, West Long Branch, New Jersey*

Students preparing to enter the helping professions rarely express an initial aspiration to work with older people. Meanwhile, the growing population of older people and the shortage of social workers and other human service professionals who are prepared and competent to meet the needs of this vulnerable population offer both challenges and opportunities for educators in professional education programs. Though

curriculum change is almost always daunting, by partnering with community agencies and making adjustments to experiential activities in entry level core social work curriculum, one Northeast school of social work appreciated a 300% increase in the number of undergraduate social work students pursuing senior field internships with older people. Designed to encourage students to assess and evaluate their own values and judgments regarding aging and older people, curriculum changes included: 1) sensitivity training, 2) volunteer work with older people, and 3) journaling and classroom facilitated discussions regarding the experiential activities.

### BSW STUDENTS AND AGING POPULATIONS: RECOGNIZING AND VALUING IN RURAL SETTINGS

B. Jeffrey, *California University of Pennsylvania, California, Pennsylvania*

This presentation focuses on lessons learned during a multi-semester CSWE Gero-Ed Cycle 2 BEL Program in rural southwestern Pennsylvania. Over 200 BSW students and 100 healthy adults age 65 years and older completed over 300 hours of interviewing and shared a common interest in continuing relationships that will benefit senior populations. Through intergenerational programming students recognized the value of volunteerism of older adults in rural communities; gained knowledge that allowed them to understand, capture, and celebrate the contributions of the aging; and created possible bridges for intergenerational relationships. Healthy older adults, celebrated and illustrated self-determination, dignity, values, and rich diversity through sharing their seminal life experiences that began in the 20th century and continued into 21st century. Results from student ratings on Subscale I. Values, Ethics, and Theoretical Perspectives of the Geriatric Social Work Competency Scale II with Life-Long Leadership Skills will be discussed.

## SESSION 2235 (SYMPOSIUM)

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### THE MULTIDIMENSIONAL NATURE OF THE TRAJECTORIES OF SUBJECTIVE WELL-BEING (SWB) IN LATER LIFE

Chair: *V. Ryser, FORS- Swiss Centre of Expertise in the Social Sciences, Lausanne, Switzerland*

Despite the increase in frailty with the aging process, SWB remains quite stable in old and very old age. The stability of SWB is explained through both personal resources and processes of regulation. However, regardless of the effectiveness of personal resources and processes of regulation it has been shown that SWB deterioration at the end of life reflects a combination of age, mortality and pathology-related processes. In this symposium we highlight end-of-life trajectories of SWB taking into account three aspects: personal resources, processes of regulation and mortality related processes. The aim of the first contribution by Brandt et al. is to demonstrate that apart from individual and network features, social cohesion is of great importance to enhance self-rated health and more generally quality of life in older age. The second contribution by Borrat-Besson et al. shows how processes of regulation, such as the capacity to fulfill personal needs, mediates the negative impact of frailty deterioration on different dimensions of SWB at the end of life. The third contribution by Berg et al. will demonstrate how time-to-death-related processes impact each one of the dimensions of the Life Satisfaction Index-Z using specifically satisfaction with the present and satisfaction with the past. The fourth contribution by Schilling et al. shows how time-to-death impacts on positive and negative affect in the approach of end of life. We expect that the findings of these different works will improve our understanding of the mechanisms underlying the effect of impending death on SWB in later life.

## **SOCIAL COHESION, SOCIAL NETWORKS, AND LATER LIFE HEALTH**

M. Brandt<sup>1</sup>, C. Deindl<sup>2</sup>, K. Hank<sup>2</sup>, 1. *MEA, Max Planck Institute for Social Law and Social Policy, Munich, Germany*, 2. *University of Cologne, Cologne, Germany*

Following a multilevel approach we examine the associations between social network characteristics, social cohesion and self-rated health of older populations in 15 European countries based on SHARE. The aim of the paper is to contribute to the discourse on healthy and active ageing in ageing societies by assessing the relation between (a) the composition of social networks, (b) social support and (c) activities and self-rated health in older age on the individual level. The societal embeddedness of healthy ageing is considered by introducing (d) contextual factors such as social cohesion on a country level.

## **TRANSITION BETWEEN FRAILTY STATES, SUBJECTIVE WELL-BEING AND PSYCHOLOGICAL REGULATION PROCESSES**

C. Borrat-Besson, V. Ryser, B. Wernli, *FORS, Lausanne, Switzerland*

Frailty research has documented the negative effect of frailty on subjective well-being (SWB) and has shown that psychological regulation processes attenuate this negative effect. But it has often ignored the dynamic aspect of frailty state changes. Indeed, little is known on the natural course of frailty and the impact of frailty state transitions on SWB. Adapted from the work of Girardin Kecior and Spini (2006) and using the longitudinal data from participants of the SHARE study (individuals aged 50+, measured 2004, 2006 and 2011, N 2004-2006=16'617, N 2006-2011=14'440), this paper examines how changes in frailty states (i.e. non-frail, prefrail, frail) between two consecutive waves influence life satisfaction and negative affects. Further, it investigates the role played by psychological regulation processes, and particularly the capacity to fulfill personal needs, in mediating or moderating this relationship.

## **PREDICTORS OF LATE LIFE CHANGES IN THE LIFE SATISFACTION INDEX-Z (LSI-Z) FACTORS OF CONGRUENCE, MOOD AND ZEST OVER A 6 YEAR PERIOD**

A. Berg, B. Johansson, *Department of Psychology, University of Gothenburg, Gothenburg, Sweden*

Life Satisfaction Index (LSI-Z) is widely used in well-being research on older adults, but most analyses of level and change has used a total-sum-of-score, disregarding the subscales. Confirmatory factor analysis of the scale, however, provides support for a three-factor-solution of the LSI-Z, reflecting satisfaction with the past (Congruence), present (Mood) and future (Zest). This study investigates changes in Congruence, Mood, and Zest, and effects of health-related and psychosocial resources on level and change, across four measurement occasions over six years. Participants were 453 cognitively healthy individuals aged 80-98 years old at baseline. Separate analyses of the subscales generated contradictory results. Mood and Zest decreased over time, but Congruence remained unchanged. Health and psychosocial resources had unique effects on level and change across the factors. Research on well-being in older adults needs to attend to the unique contexts and conditions of late life, and incorporate the temporal position that individuals take.

## **AGE-GRADED VERSUS TERMINAL CHANGES IN POSITIVE AND NEGATIVE AFFECT IN VERY OLD AGE**

O.K. Schilling, H. Wahl, *Department of Psychological Ageing Research, University of Heidelberg, Heidelberg, Germany*

Late-life development of affect may unfold in terms of time-to-death-related terminal changes, reflecting end-of-life degradation processes. This study analyzes terminal change in Negative (NA) and Positive Affect (PA), using 2-wave longitudinal data from a sample of very old (projects ENABLE-AGE and LateLine, N=140, born 1911-1921, meas-

ured 2002 and 2003, up to 9 years to death). Nonlinear time-to-death and age effects on PA and NA were analyzed by means of Latent Change Score Models. No time-to-death-related effects, but linear age-related decline of PA was found. For NA, results indicate a terminal increase, turning around to a drop close to death. Thus, NA may follow a twofold time-to-death dynamic. First, increase of NA across a larger period preceding death may mirror basic processes of degradation of the human system. Second, approaching the end, these processes may exhaust negative activation and prompt a terminal drop of NA close to death.

## **SESSION 2240 (SYMPOSIUM)**

### **THEORIZING CROSS-CULTURAL COMPARISON IN AGING RESEARCH**

Chair: *R. Schrauf, Applied Linguistics, Pennsylvania State University, University Park, Pennsylvania*

Discussant: *A. Glicksman, Philadelphia Corporation on Aging, Philadelphia, Pennsylvania*

Comparative or cross-cultural gerontology involves the systematic comparison of data collected in two or more cultural contexts. Such comparisons make it possible to document the inherent variability in human aging and to challenge the normativity of dominant assumptions. Cross-cultural studies also provide 'natural experiments' in which social variables are found in different combinations and configurations. However, as in other areas of gerontology, the field is often 'data-rich but theory-poor.' In this panel, we develop theoretical frames and conceptual tools for cross-cultural research from several disciplinary fields: anthropology, psychology, sociology, and political science. Dilworth-Anderson argues that attention to cultural values and a critical look at existing theories of diversity are essential to fresh theorizing about diversity and aging. Her abundant research in sociology concerns minority aging, dementia among minority populations (2008), and family caregiving (2000, 2005, 2011). From anthropology, Schrauf theorizes the interrelation of four kinds of cultural variation: intercultural variation, intracultural variation, distributed cognition, and contextual variation. These are illustrated from work on older ethnic adults' knowledge of illness domains (2002, 2008, 2010, 2011). In sociological research, Torres shows how an overarching theory of cultural values can illumine cultural variation in values orientations both before and after immigration among Iranian immigrants in Sweden (1999, 2001, 2003). Reflecting on recent, large-scale, cross-national databases on aging in Europe, von Kondratowitz (political science and sociology) and Tesch-Roemer (psychology) articulate basic principles of cross-cultural research generally and specify testable, candidate theories from social gerontology (2004, 2005, 2006).

### **CULTURE, THEORY AND AGING RESEARCH**

P. Dilworth-Anderson, *UNC Chapel Hill, Chapel Hill, North Carolina*

This theoretical presentation focuses on using conceptual and theoretical ideas to inform, shape, and direct culturally competent aging and gerontological research. As the American society becomes increasingly diverse, especially in later life, with older minorities growing at a faster rate than their white counterparts, and coupled with increasing number of older immigrants, researchers and theorists need to understand diversity beyond racial/ethnic categories. This presentation provides information to address this concern by discussing: 1) Importance of values and beliefs of cultural groups under study in the context of research to inform conceptual views for culturally relevant research; 2) Awareness of the boundaries and limitations of existing theories regarding diverse cultures to inform conceptual views for culturally relevant research; and, 3) Usefulness of reframing existing conceptual and theoretical ideas

to inform and provide guidance to designing new ways to theorize about diverse cultures to inform culturally relevant research.

#### **FOUR KEY CONCEPTS OF CULTURAL VARIATION IN SOCIAL GERONTOLOGY**

R. Schrauf, *Applied Linguistics, Pennsylvania State University, University Park, Pennsylvania*

This paper examines four key sources of variation in cross-cultural research, where the emphasis is on cultural knowledge, beliefs, and attitudes: intercultural variation, intracultural variation, distributed cognition, and contextual variation. Between-group differences are captured as inter-cultural variation, and within-group differences as intra-cultural differentiation. However, in gerontology the temporal dynamics of cultural variation are paramount, so that when and where people acquire or apply their cultural knowledge becomes a critical consideration. First, some knowledge and expertise may be available in a group without necessarily implying that every member know it at all times (i.e. individuals 'acquire' it only when necessary). This is the concept of distributed cognition. Second, culture-members can accurately articulate group beliefs yet differentially apply those beliefs from context to context. This is contextual variation. These notions are exemplified using data on Alzheimer's disease from three US ethnic groups (African Americans, Mexican Americans, refugees/immigrants from the Former Soviet Union).

#### **THEORY IN CROSS-CULTURAL GERONTOLOGY: A MODEL FOR THE STUDY OF SUCCESSFUL AGING AS AN EXAMPLE**

S. Torres, *Uppsala University, Uppsala, Sweden*

The gerontological sub-discipline concerned with cross-cultural studies of aging was denounced to be atheoretical in the late 90's. Although some attempts have been made to address this predicament, we have yet to seriously engage in theory development in our field. Lack of theoretical frameworks that address the role that culture play in relation to the research questions we pose as cross-cultural gerontologists has meant that we often confuse culture-specificity for culture-relevance. This presentation departs from a theoretical framework developed in the late 90's for studies of cultural values' influence on understandings of successful aging. Preliminary findings based on this framework will also be presented in order to show one way in which we could engage on the theory formulation and testing in cross-cultural gerontology.

#### **BEING AWARE OF DIFFERENT APPROACHES TO COMPARATIVE AGING RESEARCH**

H. von Kondratowitz, C. Tesch-Roemer, *DZA, Berlin, Germany*

Due to the diversity of European societies, comparative aging research is important and gets more support today than ever. To study the impact of different societies and cultures in a comparative vein is important for the analysis of societal and cultural factors in development over the life course. Two perspectives are usually discussed: a nomothetic perspective looks for similarities and communalities in different societies and cultures; an idiographic perspective wants to emphasize societal and cultural specificity and distinctiveness. However, comparative work in aging needs more reasoning and reflections. The contribution will therefore discuss aims and ambitions of comparative aging research. Comparative theories and aging theories are mutually referred to each other in order to test their abilities to serve as a basis for comparative aging research. The rationale of comparative aging research is described and illustrated by empirical examples. Also some epistemological and methodological pitfalls are critically discussed in order to qualify comparative aging research.

## **SESSION 2245 (SYMPOSIUM)**

### **UNDERSTANDING RETIREMENT DECISION-MAKING AND QUALITY OF LIFE IN RETIREMENT: RECENT RESEARCH ADVANCES**

Chair: *M. Wang, Management, University of Florida, Gainesville, Florida*

Co-Chair: *K. Henkens, Netherlands Interdisciplinary Demographic Institute, Hague, Netherlands*

Discussant: *W. Gallo, City University of New York, Hunter College, New York City, New York*

Applying the life course perspective, recent theoretical development has suggested that retirement decision-making and quality of life in retirement are influenced by (a) the specific contextual factors of retirement (e.g., individual attributes, work and life history, and past work experience), (b) the expected and actual characteristics of the retirement transition, and (c) the impact from other life spheres such as family life. The general purpose of this proposed symposium is to introduce to session attendees the recent advances made in testing these theoretical premises and identifying previously unexamined individual attributes as well as work and family factors that are associated with retirement decision and quality of life in retirement. Specifically, we plan to present four studies. Using data from a three-wave longitudinal panel study, Damman et al. examined the roles of family and work history in determining Dutch women's retirement timing. The longitudinal study by Wang and Zhan examined the roles of expected transition difficulty and work attitudes in predicting Chinese workers' retirement and bridge employment decisions making and in turn, these decisions' effects on retirement satisfaction and life satisfaction. Hershey and Henkens examined the impact of different types of retirement transitions, including voluntariness of retirement, health changes, and marital status changes, on Dutch retirees' post-retirement life satisfaction. Finally, Xie et al. investigated how American retirees' attitudes and behaviors regarding technology use (e.g., perceptions and use of iPads) are associated with their health information seeking and health care quality in retirement.

### **THE CRITICAL ROLE OF RETIREMENT DECISION IN LINKING PRE-RETIREMENT ATTITUDES TO POST-RETIREMENT LIFE QUALITY**

M. Wang<sup>1</sup>, Y. Zhan<sup>2</sup>, *1. Management, University of Florida, Gainesville, Florida, 2. Wilfrid Laurier University, Waterloo, Ontario, Canada*

This study applied the life course perspective to examine the effects of expected transition difficulty and pre-retirement work attitudes on retirees' post-retirement life quality (i.e., retirement satisfaction and life satisfaction). Specifically, retirees' retirement decisions (i.e., full-time retirement vs. different types of bridge employment), were examined as mediators of these effects. Three-wave longitudinal data from a sample of 377 Chinese workers were used to test this mediation model. The results revealed that retirees who expected higher levels of transition difficulty were more likely to choose career bridge employment and bridge employment with the pre-retirement employer than full-time retirement. Retirees who had better attitudes toward work were in general more likely to choose bridge employment than full-time retirement. In turn, retirees who chose bridge employment options fared better in terms of their retirement satisfaction and life satisfaction than those who engaged in full-time retirement.

### **EXPLAINING WOMEN'S RETIREMENT TIMING: DO FAMILY AND WORK HISTORY MATTER?**

M. Damman<sup>1</sup>, K. Henkens<sup>1,2</sup>, M. Kalmijn<sup>2</sup>, *1. Netherlands Interdisciplinary Demographic Institute (NIDI), The Hague, Netherlands, 2. Tilburg University, Tilburg, Netherlands*

Labor force participation of older women has increased considerably during the last decades in many industrialized countries. This study



aims to improve our understanding of women's retirement, by studying the impact of family and work histories on both women's retirement timing intentions and behavior, and by examining the mediating role of various aspects of the preretirement opportunity structure in these relationships. Three-wave panel data collected in 2001, 2006, and 2011 among Dutch older women (all employed in 2001; N=412) are analyzed to reach this aim. Generally, our results show that women's family (timing of first birth, timing of divorce) and work (years in the labor market, part-time work) histories are relevant for understanding retirement timing intentions. Some of the relationships between mid-life experiences and retirement are (partly) mediated by the preretirement family, work, or financial situation, whereas other effects remain significant when controlling for these proximal precursors of retirement.

### **IMPACT OF DIFFERENT TYPES OF RETIREMENT TRANSITIONS ON SATISFACTION WITH LIFE**

D.A. Hershey<sup>1</sup>, K. Henkens<sup>2,3</sup>, 1. *Psychology, Oklahoma State University, Stillwater, Oklahoma*, 2. *Netherlands Interdisciplinary Demographic Institute, The Hague, Netherlands*, 3. *Tilburg University, Tilburg, Netherlands*

Although numerous studies have examined life satisfaction and how it changes upon entering retirement, no published investigations have appeared that focus on how the nature of the retirement transition affects satisfaction with one's life. In this investigation a modified version of the Diener et al. (1985) Satisfaction with Life Scale was administered to 1,595 older Dutch workers on two occasions, separated by six years. During that time more than half of participants (57%) entered retirement. Analyses revealed that members of the reference group (i.e., those who continued working across the six-year period) showed significant declines in satisfaction with life, as did those whose workforce departures were involuntary (e.g., health reasons, organizational pressures). Individuals whose departure from the workforce was voluntary, however, showed no decline in satisfaction with life. These findings have implications for the understanding of factors that shape individuals' perceptions of how they view the quality of their lives.

### **RETIRES' PERCEPTIONS AND USE OF IPADS FOR EHEALTH**

I. Watkins, B. Xie, *University of Maryland, College Park, Maryland*

Life course theory suggests that psychological, contextual, and experiential factors influence wellbeing during retirement. iPads offer retirees new ways to interact with the world around them (e.g., improved access to health information and social support), and such new experience may affect retirees' wellbeing in various ways. However, to date retirees' perception and use of iPads remains largely unclear, likely due to the newness of the technology. This exploratory study investigated retirees' perception and use of iPads for health-related purposes through focus group interviews and observation with 12 older adults in spring 2012. Data were analyzed using the techniques of inductive thematic analysis. Major findings include: retirees perceived iPad's touch screen as more usable than traditional computer input devices, and as useful for accessing electronic health information. However, retirees lacked sufficient literacy with iPads' functionality and encountered usability issues such as small text. Implications for design and educational interventions are discussed.

## **SESSION 2250 (PAPER)**

### **CORRELATES OF SLEEP QUALITY**

#### **SLEEP DISTURBANCE IN OSTEOARTHRITIS: ASSOCIATIONS WITH PAIN, DISABILITY, AND DEPRESSION**

R. Zamora<sup>1</sup>, P.A. Parmelee<sup>1</sup>, T.L. Harralson<sup>2</sup>, 1. *Center for Mental Health & Aging, The University of Alabama, Tuscaloosa, Alabama*, 2. *Polaris Health Directions, Philadelphia, Pennsylvania*

Osteoarthritis pain is known clinically to be associated with sleep disturbance; however, there has been little empirical exploration of how

sleep problems interact with physical function and emotional well-being of older adults with osteoarthritis. Therefore, the present study examines the relationships of self-reported insomnia with pain, disability, and depressive symptoms in a sample of 369 older adults with physician-diagnosed osteoarthritis of the knee. Regression analyses explicated cross-sectional and longitudinal linkages of insomnia (captured on a 4-point scale during a clinical diagnostic interview) with pain (PGC Pain Scale), functional disability (AIMS-2) and depressive symptoms (CESD). Demographic characteristics and general health were controlled in all analyses. Cross-sectionally, sleep disturbance was uniquely associated with depression and pain, but not functional disability. The effect for depression was robust even after controlling pain and functional disability; in contrast, the association with pain washed out after covarying depression and functional status. Longitudinal analyses displayed a different pattern. Insomnia significantly predicted one-year increase in both depression and functional disability, even after control for covariates. In contrast, change in pain over one year was not affected by baseline sleep problems. Exploratory analysis of subtypes of sleep disturbance (initial, middle and terminal insomnia) revealed that initial insomnia was the strongest cross-sectional predictor of depression, and also of change in function over the one-year interval. Middle insomnia also predicted depression cross-sectionally, and was a marginal longitudinal predictor. Results are discussed in terms of clinical implications and future research directions. (Supported by R01-MH51800, P. Parmelee, PI).

#### **SLEEP MEDICATIONS AND MORTALITY: DOES SOCIOECONOMIC POSITION, INTELLIGENCE, COHABITATION AND PSYCHIATRIC DISEASE EXPLAIN THE ASSOCIATION?**

M. Kriegbaum, *University of Copenhagen, Copenhagen, Denmark*

Background: The prevalence of use of sleep medications increase with age and a large proportion of the general population use sleep medications. However, there is concern about the possible hazards of sleep medications. Previous studies have reported an excess mortality among users of sleep medications, but the excess risk depends on measure of sleep medication and included covariates. Hence, it is important to study possible confounders of the association between sleep medication and mortality. Aim: To study if the association between use of hypnotics and mortality is confounded by socioeconomic position, intelligence, cohabitation and psychiatric disease. Methods: Cohort study of 10 571 Danish men born in 1953. Exposure was 'low use': (30 or less DDD (defined daily dose) per year) or 'high use': (more than 30 DDD per year) from The Danish National Prescription Registry purchased by outpatients in 1995. Follow-up was from 1st Jan 1996 to Jun 2010. Intelligence was derived from draft-board data, information on socioeconomic position and cohabitations was derived from Statistics Denmark and psychiatric disease was defined as any admission to a psychiatric ward between 1968 and 1995. Results: The crude HR was 'low use': HR 2.71 95% CI (1.91-3.84); 'high use': HR 4.43 95% CI (3.53-5.55). These estimates were reduced to low use: HR 1.87 95% CI (1.32-2.66); high use: HR 1.79 95% CI (1.41-2.27) after control for all covariates. Conclusions: Socioeconomic position, intelligence, cohabitation and psychiatric disease substantially reduced the association between hypnotics and all-cause mortality, but a significant association remained.

#### **AGE GROUP DIFFERENCES IN THE AMOUNT OF DYSREGULATION OF BEHAVIORAL RHYTHMS REQUIRED TO PREDICT SLEEP OUTCOMES**

N.D. Dautovich<sup>1</sup>, C.S. McCrae<sup>2</sup>, 1. *Psychology, University of Alabama, Tuscaloosa, Alabama*, 2. *University of Florida, Gainesville, Florida*

Introduction: Behavioral circadian rhythms (timing of daily activities) are shown to affect underlying biological circadian rhythms (e.g., sleep/wake cycle). Older adults exhibit less robust biological rhythms suggesting that more potent zeitgebers, or environmental cues, are

required to entrain these rhythms. The present study compared two levels of potency of behavior rhythms (daily versus weekly) to determine what level of regularity/dysregulation is required for sleep disruption. Methods: 50 younger ( $M=19.88$ ,  $SD=2.76$ ) and 50 older ( $M=67.81$ ,  $SD=6.73$ ) community-dwelling adults completed 14 consecutive days of daily diaries assessing daily activity regularity (Social Rhythm Metric-17) and sleep. Multilevel modeling analyses compared the ability of dysregulation on a daily (level 1) versus weekly (level 2) level to predict sleep disruption (sleep onset latency and sleep efficiency). Results: The sleep of both age groups was highly variable night-to-night (63-85% of total variability in sleep was attributed to within-person fluctuations). Dysregulation of activities on a weekly (not daily) level interacted with age to significantly predict sleep onset latency ( $b=0.22$ ,  $SE=0.10$ ) and sleep efficiency ( $b=-0.09$ ,  $SE=0.04$ ). Younger adults with more disruption in activities on a weekly basis took longer to fall asleep and spent less time asleep while in bed. Conclusions: Dysregulation of behavioral rhythms on a weekly scale best predicted poorer sleep for younger adults, suggesting a cumulative effect of activity dysregulation is required to see associated sleep deficits. Nonetheless, dysregulation on a weekly scale was insufficient for predicting older adult sleep outcomes. Explanations for age-differences are discussed (e.g., health, lifestyle, and affect).

## SESSION 2255 (PAPER)

### DISCOVERY EXCHANGE: CONTRIBUTIONS TO COGNITIVE FUNCTIONING

#### IS ANEMIA ASSOCIATED WITH COGNITIVE PERFORMANCE AND BRAIN VOLUME IN THE ELDERLY?

C. Jonassaint, G. Harris, V.R. Varma, Y. Chuang, M. Carlson, Johns Hopkins, Baltimore, Maryland

Individuals suffering from chronic anemia are at increased risk of cognitive impairment and dementia. This may in part be due to lower hemoglobin availability and reduced oxygen delivery to the brain. No studies have examined the effect of low hemoglobin on brain volume in the general population. Therefore, the current study aimed to test the association of hemoglobin level with cognitive performance and brain volume. Methods: Blood, cognitive and MRI measures were collected at baseline in 88 older adults (85% female) from the Brain Health Study, a substudy within the Baltimore Experience Corps Trial. Hemoglobin was modeled as a continuous independent variables in multivariate linear regressions predicting performance on measures of executive function, processing speed, and working memory, and measures of brain volume [total intracranial (ICV), white and gray matter, hippocampus and amygdala volumes]. Results: Higher hemoglobin was associated with better performance on measures of processing speed (Trails A, Pattern Comparison) and working memory (Digit Span Backward;  $p's < .05$ ). Hemoglobin was also positively associated with ICV ( $p < .001$ ) even when controlling for BMI. Hemoglobin was not associated with total brain or structural volumes after adjustment for ICV. Conclusion: Consistent with prior studies, we found an association between lower hemoglobin and poorer cognitive performance, particularly on tests of processing speed. Hemoglobin was associated with total ICV; however, no associations were detected with brain or structural volumes adjusted for ICV. This suggests that the chronic effect of anemia may be evident in both brain and behavior.

#### PRELIMINARY FINDINGS FROM THE PROSPECTIVE MEMORY INTERVENTION TO IMPROVE MEDICATION ADHERENCE

K. Insel<sup>1</sup>, G.O. Einstein<sup>2</sup>, D. Morrow<sup>3</sup>, K.M. Koerner<sup>1</sup>, 1. University of Arizona, Tucson, Arizona, 2. Furman University, Greenville, Arizona, 3. University of Illinois, Champaign Urbana, Champaign Urbana, Illinois

Estimated medication adherence rates are less than 50%. While non-adherence reflects many factors, a common problem is prospective memory failure (forgetting to take medications). This paper reports preliminary findings of a randomized clinical trial testing the effect of an intervention that supports prospective memory among community dwelling older adults who are self-managing medication. After 4 weeks of baseline adherence monitoring, participants were assigned to the study if adherence was  $\leq 90\%$  to the interdose interval (using an electronic medication monitoring system). Currently, 56 participants have completed the education-only control and 51 participants completed the education plus intervention (mean age of 76.62 years with 26 males and 81 females participating). Nurses made weekly home visits for 4 weeks. At the completion of the weekly visits, the intervention group showed a significant improvement in adherence using difference scores from baseline adherence ( $t(105) = -4.02$ ,  $p < .01$ ). Significant differences in overall adherence at the end of the 6 month monitoring were found ( $t(105) = -2.08$ ,  $p < .05$ ). This study is ongoing with plans for subgroup analysis to examine who benefits from the intervention.

#### AGE AND DEPRESSION EFFECTS ON RUMINATION ABOUT MEMORY PERFORMANCE

A. Pearman, 1. Georgia State University, Atlanta, Georgia, 2. Aging and Geropsychology Institute of Georgia, Atlanta, Georgia

Memory complaints are often unrelated to actual memory performance in older adults. Research has shown, however, that depression is an important predictor of memory complaints. Depressive rumination about performance has been suggested as a possible mechanism for this relationship. The current study was designed to explore individuals' ruminative thoughts about cognitive testing 3-weeks after a laboratory testing session. One hundred and eleven participants took part in this study (52 young adults and 59 older adults). The participants took a series of cognitive tests and answered a series of questionnaires (including a depression scale) over a one-hour testing session. Three weeks later, a follow-up phone call was made, and participants answered a series of questions about their experience with the testing. The specific outcome variable for this report is "How much have you thought about the testing over the past three weeks with 1 = not at all and 5 = every day" with age and depression as the independent variables. Older adults reported spending significantly more time thinking about the testing. In addition, there was also a significant interaction (age x depression), such that older adults with higher depression scores reported thinking more about the testing than older adults with lower depression scores but the reverse pattern was true for younger adults. This suggests that depression in older adults may actually cause older adults to spend more time thinking or ruminating about their memory performance.

#### LONG-TERM DEPRESSIVE SYMPTOM BURDEN AND RISK OF COGNITIVE DECLINE AND DEMENTIA AMONG VERY OLD WOMEN

A. Zeki Al Hazzouri<sup>1</sup>, E. Vittinghoff<sup>1</sup>, A.L. Byers<sup>1</sup>, K. Covinsky<sup>1</sup>, D.G. Blazer<sup>2</sup>, S. Diem<sup>3</sup>, K. Ensrud<sup>3</sup>, K. Yaffe<sup>1</sup>, 1. University of California San Francisco, San Francisco, California, 2. Duke University School of Medicine, Durham, North Carolina, 3. University of Minnesota, Minneapolis, Minnesota

Objective: Little is known about the impact of long-term depressive symptom burden on cognitive decline and dementia. Most prior studies assessed one time point, while we used 20 years of data to examine cumulative burden of depressive symptomatology. Methods: We

studied 7,240 older women from an ongoing prospective study. We assessed depressive symptoms at years 2, 6, 10, 16 and 20 using the Geriatric Depression Scale (GDS). We used a poisson model with random slopes to determine GDS trajectories and then estimated depressive symptom burden based on the area under the curve and corresponding quartiles (quartile 1 to 4=minimal to high burden). We lagged values of GDS burden by 3 years. Cognitive outcomes included adjudicated dementia/MCI status at year 20 and repeated measures of the Mini Mental State Exam (MMSE) and Trails-B scores. Lower MMSE or higher Trails-B scores denote worse cognitive function. Results: After adjusting for age, education, living status, smoking, alcohol, BMI, exercise, history of hypertension, heart attack, stroke, diabetes, and antidepressants use, the odds of dementia/MCI was 2 times greater in quartile 4 (OR=2.0; 95%CI=1.38, 2.90), compared to quartile 1. On average, MMSE scores were 19% lower in quartile 4 (95%CI=-14%, -23%) and Trails-B scores were 19% higher in quartile 4 (95%CI=16%, 22%), compared to quartile 1. These associations denote average change in cognitive scores as a function of change in GDS quartiles. Conclusions: Long-term depressive symptom burden was associated with cognitive decline and greater odds of dementia/MCI. Early intervention and careful monitoring may delay cognitive decline and dementia.

### **COGNITIVE FUNCTIONING AMONG OLDER AFRICAN AMERICAN ADULTS: THE ROLES OF PROVIDING AND RECEIVING SOCIAL SUPPORT**

B.J. Ayotte<sup>1</sup>, J.C. Allaire<sup>2</sup>, K.E. Whitfield<sup>3</sup>, 1. *Psychology, University of Massachusetts Dartmouth, North Dartmouth, Massachusetts*, 2. *North Carolina State University, Raleigh, North Carolina*, 3. *Duke University, Durham, North Carolina*

Social support is related to a number of outcomes in later life among African Americans, including cognitive performance. This study examined how providing and receiving social support was related to fluid and crystallized cognitive abilities among aging African American adults after accounting for functional limitations, age, education, sex, income, and self-reported health. Participants completed a battery of cognitive tests assessing fluid and crystallized abilities. Data from 602 African American adults (M = 69.08, SD = 9.74; 25% male) were analyzed using latent variable modeling. Fluid ability was a second-order factor indicated by verbal memory, working memory, perceptual speed, and inductive reasoning. Crystallized ability was a first-order factor indicated by three measures that assessed vocabulary (Shipley Verbal Meaning Test and parts A and B of the ETS Vocabulary Test). Results indicated that the receipt of social support was negatively related to both fluid and crystallized abilities, while the provision of support was positively related to fluid and crystallized abilities. Follow-up tests found that the receipt of support was more strongly related to fluid ability than crystallized ability. There was no difference regarding the relationship of provision of support with fluid ability compared to the relationship of provision of support with crystallized ability. Results discuss the importance of considering the health and social context of older adults when examining cognitive ability.

### **PATHWAYS THROUGH WHICH PERCEIVED SOCIOECONOMIC STATUS IS ASSOCIATED WITH COGNITION IN THREE LONGITUDINAL STUDIES OF AGING TWINS**

C. Zavala<sup>1</sup>, M. Gatz<sup>2,3</sup>, B. Johansson<sup>4</sup>, B. Malmberg<sup>5</sup>, N.L. Pedersen<sup>3,2</sup>, C.A. Reynolds<sup>1</sup>, 1. *Psychology, University of California, Riverside, Riverside, California*, 2. *University of Southern California, Los Angeles, California*, 3. *Karolinska Institutet, Stockholm, Sweden*, 4. *University of Gothenburg, Gothenburg, Sweden*, 5. *Jönköping University, Jönköping, Sweden*

Lower socioeconomic status (SES) is a risk factor for late-life cognitive decline, however, the pathways between SES and cognitive aging have yet to be fully elucidated. Subjective social status and financial

disability have been linked to increased risk for infection and mortality, and we have recently shown that higher perceived socioeconomic status predicted better maintenance of cognitive performance above and beyond the effect of objective SES. The current study examined twin pair similarities and differences in perceived SES and cognitive performance to address etiological factors that underlie the observed associations. Three longitudinal studies of aging originating from the Swedish Twin Registry included 4 identical cognitive tasks (verbal, spatial, episodic memory, processing speed) with up to 6 waves of testing and harmonized measures of objective and perceived socioeconomic status (SES) (N = 1850 individuals). Twin similarity for perceived SES corresponded with genetic similarities in twin pairs, such that identical twins had a higher correlation ( $r = .32, p < .01, N = 240$  pairs) compared to same-sex fraternal ( $r = .21, p < .01, N = 353$  pairs) and opposite-sex fraternal twins ( $r = .11, p = .09, N = 243$  pairs). Initial analyses of pair similarities and differences, including biometrical modeling, suggested that perceived SES and cognitive trajectories may be associated largely via common genetic factors after adjusting for sex, education and cohort. Overall, current patterns suggest complex genetic and environmental pathways through which perceived environments (such as perceived SES) are associated with cognitive aging.

### **SESSION 2260 (PAPER)**

#### **HOUSING: THE POWER OF PLACE**

##### **CONTINUING CARE RETIREMENT COMMUNITIES: AMERICAN AND ISRAELI ATTITUDES AND RESIDENCE SATISFACTION**

A. Gum<sup>1</sup>, L. Ayalon<sup>2</sup>, J. Greene<sup>1</sup>, 1. *Mental Health Law & Policy, University of South Florida, Tampa, Florida*, 2. *Bar Ilan University, Ramat-Gan, Israel*

**BACKGROUND:** Growing numbers of American and Israeli older adults are moving to continuing care retirement communities (CCRCs). Limited information is available regarding attitudes and satisfaction with residence. **AIMS:** This study aims to examine attitudes about CCRCs and satisfaction with residence by country (Israel, US) and residence (new CCRC resident, community dwelling). **METHODS:** New CCRC residents (104 Israeli, 52 American) and individuals who contacted CCRCs but decided to remain in their homes (50 Israeli, 49 American) completed interviews about attitudes regarding CCRCs and satisfaction with residence. **RESULTS:** Americans had more positive attitudes about CCRCs than Israelis ( $p < 0.001$ ), and CCRC residents had more positive attitudes than non-residents ( $p < 0.001$ ). Both American residents (100%) and Israeli residents (91%) were more likely than their non-resident counterparts to endorse that CCRCs are “right for people like me” (53% and 43%, respectively). Israeli non-residents were most likely to agree that “you lose control over your life” upon moving to a CCRC (37% vs. 4-18% for other three groups). Americans were more satisfied with residence than Israelis ( $p < 0.001$ ), and CCRC residents were more satisfied than non-residents ( $p = 0.01$ ). Israeli non-residents were least satisfied ( $p = 0.03$ ), particularly with recreational activities (46% vs 84-96%) and social support (27% vs. 70-96%) at their residence. **CONCLUSIONS:** American and Israeli CCRC residents have positive attitudes and are satisfied. Community-dwelling Israeli older adults have less positive attitudes about CCRCs but are less satisfied with their residence, possibly because of limited services and social support.

##### **MOVING IN OLD AGE: ‘ROOTED IN PLACE’ AND ‘NOMADS’**

O.H. Jolanki, *Dept. of Social Sciences and Philosophy, University of Jyväskylä, Jyväskylä, Finland*

This study focuses on housing and moving decisions of older people and identities constructed in moving narratives. The theoretical

framework of 'housing pathways' (Clapham 2005, 2010) emphasizes the need to study individual and family biographies and subjective meaning of housing and moving. The data come from face-to-face interviews of Finnish people aged 75 or older. The analysis employed discursive-narrative approach. According to the results narratives of moving can be divided into two main pathways and identities i.e. 'rooted in place' and 'nomads'. 'Rooted in place' narratives picture people firmly rooted in their current homes and to a living area which gives a chance to maintain lifelong interests and social networks. In these narratives home and the place of living offer sense of belonging and being part of the community and moving takes place or is considered only out of necessity. In the 'nomad narratives' moving and relocation has been and is an essential part of the entire life-course and identity. 'Nomad' narratives picture people who are accustomed of making a new home and setting up new social networks and consider 'staying put' out of necessity. Nomadic identity is less attached to a particular physical place but to an idea of a place. The results show that older people differ not just in their resources and needs but in their moving wishes and aims. The image of older people reluctant to move and consequently the ideal of 'ageing-in-place' adopted in service planning do not apply to all older people.

### HOUSING ADJUSTMENT IN LATER LIFE: THE IMPACT OF PERSON-ENVIRONMENT FIT

K. Stoeckel, *Hebrew University, Jerusalem, Israel*

The intersection between individual competency and environmental contexts, theoretically defined as environmental press (Lawton & Nahemow, 1973) becomes increasingly relevant as people advance in age and experience decreased physical health, mobility or cognitive functionality. The analysis considered the influence of the built environment on the likelihood of making a subsequent housing adjustment using a non-institutionalized sample selected from the 1998 – 2006 waves of the Health and Retirement Study. The model controlled for individual levels of competency, home environment characteristics, environmental press and various background variables. An innovative measure of person-environment misfit was developed to sensitize the results to the impact of environmental press on housing adjustment outcomes. The analysis provides empirical evidence of the theoretical assertion of the Ecological Theory of Aging (Lawton & Nahemow, 1973) that individuals and environments are interconnected. The results revealed that each additional misfit between individual and home environment, indicative of experiences of heightened environmental demand, increased the relative risk of making a housing adjustment by 18 percent. In addition, the results also suggested that supportive housing features of a structural nature may reduce or offset the need for housing adjustments in later life. Wheelchair accessibility lowered the relative risk of making a housing adjustment by 34 percent.

### THE BUILT ENVIRONMENT AND NEIGHBORLY SOCIAL RELATIONS

K.E. King, *Center for the Study of Aging and Human Development, Duke University, Durham, North Carolina*

Neighborhood social relations are considered to be particularly important for the well-being of older adults, who may be very invested in their homes and for whom social support is particularly crucial. Older adults also tend to live in certain types of neighborhoods, particularly in single-family houses. Physical features of urban neighborhoods including housing and walkable urban form, along with social composition and residential stability, have been hypothesized to influence neighborhood social relations (cohesion, control, intergenerational closure, and reciprocal exchange) previously linked with downstream health, social, and behavioral risks. Analyses of the Chicago Community Adult Health Survey are used to evaluate three potential mechanisms: (1) influence of urban form on walking patterns leading to social interaction, (2) associations of housing characteristics with residential

stability, and (3) stability in the underlying built environment itself. Evidence supports all three mechanisms. Housing building types, especially detached houses and high-rise apartments, significantly predict social relations, both independently and through their association with residential stability. Housing and urban form also have differential associations with social relations outcomes according to the neighborhood socioeconomic status. A gradual pace of redevelopment resulting in historical diversity of housing significantly predicts social relations. Walkable urban form (residential density, mixed land use, and street connectivity) appears less important but shows promise in predicting reciprocal exchange. The finding that physical conditions like housing and urban form have implications for social relations should encourage efforts to develop urban planning policies designed to foster neighborly social relations along with other related beneficial outcomes.

### RETIRING TO THE DORMS: UNIVERSITY BASED RETIREMENT COMMUNITIES AND SOCIAL-PHYSICAL PLACE OVER TIME THEORY

E. Rozek, E.K. Smith, K. Diaz Moore, *Gerontology, University of Kansas, Lawrence, Kansas*

A case study was conducted to examine Lawrence, Kansas' potential as a University Based Retirement Community (UBRC). Lawrence, a college town, is home to the University of Kansas, which has a number of significant features necessary for supporting a UBRC. UBRCs can take a number of forms including: Leisure Oriented Retirement Communities, Continuing Care Retirement Communities, and Naturally Occurring Retirement Communities. Carle(2006) identifies CCRCs as the best model for a UBRC. He outlines five key principles for a UBRC's success: proximity to the university, two directional programming, continuing care, financial link to the university, and a minimum 10% resident connection to the university. After defining these principles we examined how each component was applied in existing UBRCs, and then made comparisons to the University of Kansas. These comparisons fit within the broader framework of Social-Physical Place Over Time(SPOT)(Wahl & Lang, 2003). SPOT focuses on the interactions between social and physical places something UBRCs commit to within Carle's five principles. UBRCs are valuable because they provide the social and physical place where older adults can live when they retire allowing an effortless shift from individual agency to belongingness, a key tenet of SPOT. Integrating UBRCs' criteria into the SPOT framework builds on this relatively new meta-theory in environmental gerontology. SPOT effectively highlights how UBRCs benefit older adults and the broader community by bringing together the physical places and social environments in a deliberate way.

### SESSION 2265 (PAPER)

#### LONG TERM CARE

#### RESIDENT CHARACTERISTICS RELATED TO THE LACK OF MORNING CARE PROVISION IN LONG TERM CARE

S.F. Simmons<sup>1,2</sup>, D.W. Durkin<sup>1</sup>, A. Rahman<sup>5</sup>, L. Choi<sup>3</sup>, L. Beuscher<sup>1,4</sup>, J. Schnelle<sup>1,2</sup>, 1. *Division of General Internal Medicine & Public Health, Vanderbilt University, Center for Quality Aging, Nashville, Tennessee, 2. VA Medical Center, Nashville, Tennessee, 3. Vanderbilt University Department of Biostatistics, Nashville, Tennessee, 4. Vanderbilt University School of Nursing, Nashville, Tennessee, 5. University of Southern California, Los Angeles, California*

Purpose: The purpose of this study was to examine usual long-term care (LTC) practices related to morning care and determine if there were resident characteristics related to the lack of care. Design and Methods: Participants were 169 long-stay residents in four community LTC facilities who required staff assistance with either transfer out of bed, dressing, and/or incontinence care and were able to respond to structured interview questions about their morning care preferences. Trained

research staff conducted standardized observations during four consecutive morning hours once per week per participant for three consecutive months during usual LTC conditions and interviewed participants about their morning care preferences using a structured interview protocol once per month during this same time period. Results: Overall, 40% of the observations showed a lack of any morning care provision, including any staff-resident communication about care, during the 4-hour observation period. Participants rated by staff as more physically dependent and requiring two staff for transfer were more likely to not receive morning care. Even when care in a particular area was absent, the majority of participants expressed a stable preference for care to remain the “same” (range of proportions was 0.75 to 0.87 for this study’s three care areas) and infrequently made requests for care. Implications: Efforts to promote resident-directed care should consider staffing issues related to missed care occurrences and resident issues related to level of dependency on staff as well as reduced expectations for care, which can lead to resident acceptance of low care frequencies.

#### **DIFFERENCES IN FUNCTIONAL STATUS AMONG ELDERS LIVING IN RESIDENTIAL CARE SETTINGS AND IN PRIVATE HOMES IN THE COMMUNITY: FINDINGS FROM TWO NATIONAL SURVEYS**

M. Sengupta, E. Park-Lee, L. Harris-Kojetin, *CDC/NCHS, Hyattsville, Maryland*

Long-term care needs of older Americans are met through a spectrum of services and living options, based on the needs, preferences, and circumstances of the recipient. Residential care, such as assisted living, an important part of this spectrum, provides assistance to elders not capable of living independently in their homes but generally not requiring skilled nursing care. While some believe that residential care may be a downward step from living at home and perhaps moving closer to nursing home placement, there is little empirical evidence that compares functional ability of residential care and community-dwelling elders. Using the 2010 National Survey of Residential Care Facilities, a first-time national survey of residential care facilities and their residents and the 2010 National Health Interview Survey, a survey of the U.S. civilian non-institutionalized population, this paper compared the functional status (measured by limitations in activities of daily living and Nagi items) of older adults (people aged 65 and older) living in residential care settings to those living in private homes in the community. Differences were tested using chi square and t-tests. Results suggest over three-fourths of older residential care residents had at least some difficulty walking a quarter of a mile and walking up 10 steps without resting. In contrast, about 35% and 25% of elders in the community had some difficulty walking a quarter of a mile and walking up 10 steps, respectively. Overall, preliminary results suggest that older residential care residents are more likely to be functionally impaired compared to older community residents.

#### **FACILITY AND RESIDENT-LEVEL PREDICTORS OF QUALITY OF LIFE IN LONG-TERM CARE**

T.P. Shippee<sup>1</sup>, S. Alang<sup>1</sup>, C. Henning-Smith<sup>1</sup>, R. Kane<sup>1</sup>, T. Lewis<sup>2</sup>, *1. Health Policy and Management, University of Minnesota, 420 Delaware St. SE, MMC 729, Minnesota, 2. MN Department of Human Services, St. Paul, Minnesota*

Objective: Despite its policy relevance, quality of life (QOL) for nursing home (NH) residents has not been sufficiently explored. Previous research has mainly examined NH residents’ quality of care (reported by staff), with only few items devoted to QOL. We identified facility-level and resident-level characteristics that are significantly associated with the self-reported QOL of Minnesota NH residents in 2010. Methods: Measures of QOL were collected through face-to-face interviews with a representative sample of Minnesota NH residents. Clinical data were obtained from the Minimum Data Set (MDS). Facility characteristics were obtained from reports to the

Department of Human Services. The combined data set consisted of 11,621 residents in 376 Minnesota nursing facilities. Factor analyses were used to identify seven QOL domains: activity, autonomy, privacy, food, security, satisfaction and positive mood. We controlled for resident clinical and demographic characteristics. Adjusting for relevant covariates, we applied hierarchical linear models to examine how residents’ medical conditions and facility characteristics affect the resident self-reported QOL. Findings: Overall QOL score was higher for married residents and those residing in smaller, not-for-profit facilities with lower Medicaid reimbursement rates and higher staff retention. In modeling separate QOL domains, resident age, cognitive status, anxiety and mood disorders were consistent predictors. Conclusions: The results illustrate the complex nature of QOL for NH residents. Generally, residents with more chronic mental or physical conditions reported lower QOL, as did residents in larger facilities with a larger Medicaid case-mix. This study can inform quality improvement efforts undertaken by states.

#### **SMALL HOUSE SETTINGS FOR LONG TERM CARE IN NOVA SCOTIA, CANADA: CAREGIVER PERSPECTIVES**

E. Roberts, *Human Environmental Sciences, University of Missouri-Columbia, Columbia, Missouri*

The Province of Nova Scotia, Canada recently implemented a Continuing Care Strategy (CCS) in which issues of home care and long term care were addressed. As a result of the CCS, the provincial government has built 11 new LTC facilities to support the vision of “living well in a place you can call home” (CCS, 2006), with each building built in the model of the small house community, with multiple households (cottages) of 12-14 residents. In addition, implementation of person centered care, in which residents are given choices in their daily activities, is an operational requirement in the new communities. Care staff (CCA’s) are trained to carry out roles in assistance with activities of daily living, as well as food preparation, cleaning and activities in the cottages. A qualitative study took place in two LTC communities in Nova Scotia in early 2012, one which was built prior to the CCS and one after. Observations took place for 8 weeks in both settings and included interviews with staff, residents, and resident family members, focussing on the caregiver perspective of the new model of care. Study results indicate that the government guidelines for the physical environment and care model have had a direct impact on staff perception their jobs, and of their role in resident’s lives.

### **SESSION 2270 (SYMPOSIUM)**

#### **FINDINGS FROM EARLY STAGE INVESTIGATORS AT THE NHLBI CENTERS FOR CARDIOVASCULAR OUTCOMES RESEARCH**

Chair: *J. Saczynski, UMass Medical School; Department of Medicine, Worcester, Massachusetts, Meyers Primary Care Institute, Worcester, Massachusetts*

Co-Chair: *S. Chaudhry, Yale University School of Medicine; Department of Internal Medicine, New Haven, Connecticut*  
Discussant: *H. Krumholz, Yale University School of Medicine; Division of Geriatrics, New Haven, Massachusetts*

Program Overview (Limit 250 Words): Major challenges exist in translating advances in cardiovascular research into clinical practice. The NHLBI sponsored Centers for Cardiovascular Outcomes Research (CCOR) were funded in 2010 and focus on understanding and bridging gaps in knowledge and practice. The papers in this symposium illustrate early findings from Early Stage Investigators at two of the CCORs. Dr. Bonds (NHLBI Program Officer) will provide an overview of the vision of the CCORs and major center activities. The first paper (Chaudhry) will report on physician recognition of cognitive impairment among older patients hospitalized for

heart failure by comparing hospital discharge summaries to objective performance on the Mini-Mental State Examination (MMSE). Cognitive impairment is highly prevalent and frequently unrecognized in this population. The second paper (Dodson) reports on preferences for deactivation of implantable cardioverter defibrillators (ICDs) in the setting of scenarios reflecting hypothetical advanced illness. Nearly three quarters of patients reported that they would want ICD deactivation, most commonly in the setting of incurable disease. The third paper (McManus) examines concordance between patient report and medical record documentation of designation of a health care proxy (HCP). The concordance rate was 67.8% ( $\kappa=0.31$ , indicating "fair" agreement). The fourth paper (Saczynski) examines remediation of cognitive impairment in the month after hospital discharge for an acute coronary syndrome. One quarter of patients were cognitively impaired during hospitalization, but 78% of these patients remediated to a non-impaired score 1-month after hospital discharge. Dr. Krumholz (PI; Yale CCOR) will serve as a discussant. Words=248

#### RECOGNITION OF COGNITIVE IMPAIRMENT IN OLDER ADULTS HOSPITALIZED FOR HEART FAILURE

J.A. Dodson<sup>1</sup>, T. Truong<sup>2</sup>, V. Towle<sup>1</sup>, G.J. Kerins<sup>3</sup>, S. Chaudhry<sup>2</sup>, 1. *Division of Geriatrics, Yale University School of Medicine, New Haven, Connecticut*, 2. *Yale University School of Medicine; Department of Internal Medicine, New Haven, Connecticut*, 3. *The Hospital of Saint Raphael, New Haven, Connecticut*

Background: We evaluated physician recognition of cognitive impairment at time of discharge in older adults hospitalized for heart failure (HF). Methods: A Folstein Mini-Mental State Examination (MMSE) score of 21-24 indicated mild cognitive impairment, and a score of  $\leq 20$  indicated moderate to severe impairment. Physician recognition was assessed through review of hospital discharge summaries. Results: 282 patients were included; their mean age was 80 years, 18.8% were nonwhite, and 53.2% were female. Cognitive impairment was present in 46.8% of patients overall; 25.2% had mild impairment and 21.6% had moderate-severe impairment. Among those with cognitive impairment, 22.7% were recognized as such by physicians. Compared with patients whose impairment was recognized, those unrecognized were younger (81.3 years vs. 85.2 years,  $P<0.05$ ), and had less severe impairment (median MMSE score 22.0 vs. 18.0,  $P<0.01$ ). Conclusions: Cognitive impairment is common in older adults hospitalized for HF, and is frequently unrecognized by physicians.

#### PREFERENCES FOR DEACTIVATION OF IMPLANTABLE CARDIOVERTER DEFIBRILLATORS IN THE SETTING OF ADVANCED ILLNESS

J.A. Dodson<sup>1</sup>, T.R. Fried<sup>1</sup>, P.H. Van Ness<sup>1,2</sup>, N. Goldstein<sup>3</sup>, R. Lampert<sup>2</sup>, 1. *Division of Geriatrics, Yale University School of Medicine, New Haven, Connecticut*, 2. *Yale University School of Medicine; Department of Internal Medicine, New Haven, Connecticut*, 3. *Mount Sinai School of Medicine, New York, New York*

To explore older adults' preferences for ICD deactivation in the setting of hypothetical advanced illness, we conducted a telephone survey of ICD patients age  $\geq 50$ . We obtained demographic and clinical characteristics, and subsequently asked patients whether they would consider ICD deactivation in five scenarios: (1) permanently bedbound, (2) permanent memory problems, (3) burden to family, (4) on breathing machine  $>1$  month, (5) advanced incurable disease. Surveys were completed in 95 patients (mean age 71 years, 28% female). 71% considered ICD deactivation in  $\geq 1$  scenario. Patients considered deactivation most often with advanced incurable disease (61%), and least often if permanently unable to get out of bed (24%). Patients were more likely to consider deactivation if they were white or had instrumental activity of daily living disability. In conclusion, the majority of ICD patients would consider deactivation in at least one scenario reflecting advanced illness, most commonly with incurable disease.

#### CONCORDANCE OF PATIENT REPORT OF HEALTH CARE PROXY DESIGNATION AND DOCUMENTATION IN THE MEDICAL RECORD: PRELIMINARY FINDINGS FROM TRACE-CORE

R. McManus<sup>1</sup>, J. Saczynski<sup>2,3</sup>, R.J. Goldberg<sup>1</sup>, C. Kiefe<sup>1</sup>, 1. *University of Massachusetts Medical School; Department of Quantitative Health Sciences, Worcester, Massachusetts*, 2. *University of Massachusetts Medical School; Department of Medicine, Worcester, Massachusetts*, 3. *Meyers Primary Care Institute, Worcester, Massachusetts*

Individuals with heart disease are at risk for a cardiac event that might limit their ability to effectively communicate. Health care proxies (HCP) offer an option for communicating treatment preferences. Effective use of HCPs, however, requires documentation in the medical record. A subset of adults ( $n=128$  to date) were interviewed 1-week post-hospitalization for an acute coronary syndrome as part of a large longitudinal study (TRACE-CORE) and asked if they had completed a HCP form. Medical records were reviewed for presence of a HCP. Of those with complete data ( $n=115$ ), 86(74.8%) reported designating an HCP. The HCP was documented in the medical record for 65(56.5%). The concordance rate was 67.8% ( $K=0.31$ , indicating "fair" agreement beyond chance). Unadjusted analyses found women's reports/records were more likely to be concordant (81.5%;  $K=0.56$ ) than men's (63.0%;  $K=0.22$ ). Discordance may result in ethical dilemmas; future research should explore predictors of concordance.

#### CHANGE IN COGNITIVE STATUS IN THE MONTH AFTER HOSPITALIZATION FOR AN ACUTE CORONARY SYNDROME: PRELIMINARY FINDINGS FROM TRACE-CORE

J. Saczynski<sup>1,2</sup>, M. Waring<sup>3,3</sup>, D. McManus<sup>1,2</sup>, M. Anatchkova<sup>3</sup>, R. McManus<sup>3</sup>, D.C. Parish<sup>4</sup>, C. Kiefe<sup>3</sup>, 1. *University of Massachusetts Medical School; Department of Medicine, Worcester, Massachusetts*, 2. *Meyers Primary Care Institute, Worcester, Massachusetts*, 3. *University of Massachusetts Medical School; Department of Quantitative Health Sciences, Worcester, Massachusetts*, 4. *Mercer University; Department of Internal Medicine, Macon, Georgia*

Cognitive impairment (CI) during hospitalization is associated with poor long-term outcomes but limited data exist on the resolution of CI soon after discharge. Adults ( $n=505$  to date) without dementia or delirium were interviewed during hospitalization for an Acute Coronary Syndrome (ACS) and at 1-month post-discharge. CI was indicated by a score  $\leq 30$  on the Telephone Interview of Cognitive Status (TICS; range: 0-41). Remediation of CI was defined as TICS  $>30$  at 1 month among those impaired at baseline. Patients reported demographic characteristics and anxiety, depression, and stress. Participants were 66% male, 80% non-Hispanic white, and aged  $63 \pm 11$  years. Of participants with CI at baseline (26%;  $n=131$ ), 78% remediated by 1-month (mean improvement=4.9 points). Patients with high anxiety were less likely to remediate ( $p=0.02$ ). Remediation did not differ by demographics, depression, or stress. CI is prevalent among patients hospitalized for an ACS but many remediate in the early post-discharge period.

#### SESSION 2275 (SYMPOSIUM)

##### INSIGHTS ON THE MAINTENANCE OF FUNCTION AND WELL-BEING: RESULTS FROM THE CARDIOVASCULAR HEALTH STUDY

Chair: M. Odden, *Oregon State University, Corvallis, Oregon*  
Co-Chair: A.B. Newman, *University of Pittsburgh, Pittsburgh, Pennsylvania*

Discussant: E. Crimmins, *University of Southern California, Los Angeles, California*

The paradigm of meaningful clinical research in older adults has shifted towards improving patient-centered outcomes, including the maintenance of physical and cognitive function, the prevention of frailty and disability, the extension of years of active life, and the preservation of well-being. The

first step towards maintenance of these health states is to characterize the transition between these states in older adults. Prior research has identified notable differences across the genders in the development of disability and longevity; therefore, research that better characterizes these health transitions in men and women may help elucidate the important contributing factors. Second, investigations need to identify the factors that promote or inhibit the maintenance of function and well-being, and consider they may differ compared with those associated with the development of disease. Physiologic factors that have a broad impact across multiple organ systems - such as vascular disease and advanced glycation endproducts - are strong candidates for determinants of functional status. This symposium will include recent investigations on the determinants of the preservation of function and well-being in the Cardiovascular Health Study (CHS). The CHS is a community-based study of 5,888 black and white adults aged 65 years and older. The approximately 1,500 survivors of the cohort, now nearing mean age 90 years, continue under active surveillance for health, function, and longevity. The length of follow-up of this well-characterized cohort has afforded a unique opportunity for the CHS to expand into a study of the determinants of healthy aging and longevity.

#### **YEARS OF ACTIVE AND DISABLED LIFE IN THE CARDIOVASCULAR HEALTH STUDY (CHS)**

A.B. Newman<sup>1</sup>, P. Diehr<sup>2</sup>, P. Chaves<sup>3</sup>, C. Hirsch<sup>4</sup>, D. Siscovick<sup>2</sup>, 1. *Epidemiology and Division of Geriatric Medicine, University of Pittsburgh, Graduate School of Public Health and School of Medicine, Pittsburgh, Pennsylvania*, 2. *University of Washington, Seattle, Washington*, 3. *Johns Hopkins School of Public Health, Baltimore, Maryland*, 4. *University of California - Davis, Sacramento, California*

A goal of aging research is to identify factors that promote years of active life (YAL). We examined age, sex and race differences in YAL in the CHS, a contemporary cohort of older adults [5888 US men and women (16% black), well characterized for factors that may influence YAL. YAL was defined as years of follow-up (9 for whites, 6 for blacks) with no difficulty with activities of daily living (ADL); years of disabled life (YDL) was years with difficulty in ADL's. 1641 (30%) were deceased. Large disparities in YAL were noted. White women aged 65-69 lived 9.5 (1.5) more years while white men (same age) lived 9.0 (2.2) years. YDL increased with age in all groups. White women aged 80+ had double the remaining YDL compared to white women aged 65-69 [3 (39%) vs. 1.5 (16%) YDL]. Modifiable risk factors influenced but did not explain these findings.

#### **BURDEN OF MICROVASCULAR AND MACROVASCULAR DISEASE AND FUNCTIONAL STATUS IN COMMUNITY-DWELLING OLDER ADULTS: THE CARDIOVASCULAR HEALTH STUDY**

D.H. Kim<sup>1,2,3</sup>, K. Patel<sup>4</sup>, A.B. Newman<sup>5</sup>, P.H. Chaves<sup>6</sup>, R. Klein<sup>7</sup>, M. Sarnak<sup>8</sup>, L. Lipsitz<sup>1,2</sup>, 1. *Gerontology, Beth Israel Deaconess Medical Center, Boston, Massachusetts*, 2. *Hebrew SeniorLife, Boston, Massachusetts*, 3. *Harvard School of Public Health, Boston, Massachusetts*, 4. *National Institute on Aging, Bethesda, Maryland*, 5. *University of Pittsburgh, Pittsburgh, Pennsylvania*, 6. *Johns Hopkins University, Baltimore, Maryland*, 7. *University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin*, 8. *Tufts Medical Center, Boston, Massachusetts*

The role of microvascular and macrovascular disease in age-related functional loss is poorly understood. In the 9th to 11th years of the Cardiovascular Health Study, microvascular disease as detected by brain magnetic resonance imaging, retinal photography, albuminuria, and Cystatin-C, and macrovascular disease as detected by carotid ultrasonography, ankle-arm index, and electrocardiography were determined. Among 2380 participants (mean age 79) who had at least 3 measures of each disease, the majority had evidence of predominant microvascular (9%), predominant macrovascular (37%), or both diseases (41%). Microvascular index (range: 0-10, per unit increase) was associated with lower mini-mental state examination score

(-0.30; p=0.02), longer time in trail making test B (3.4 sec; p=0.02), slower gait (-0.02 m/sec; p<0.001), and lower grip strength (-0.45 kg; p=0.001), whereas macrovascular index (range: 0-10, per unit increase) was associated with slower gait (-0.01 m/sec; p=0.002). These suggest potentially different implications of microvascular and macrovascular disease in aging.

#### **ASSOCIATION OF N-CARBOXYMETHYL-LISINE (CML) AND FRAILTY IN OLDER MEN AND WOMEN: THE CARDIOVASCULAR HEALTH STUDY**

H.E. Whitson<sup>1,2</sup>, A. Arnold<sup>3</sup>, K. Mukamal<sup>4</sup>, J.R. Kizer<sup>5</sup>, D. Siscovick<sup>3</sup>, S.M. Thielke<sup>3</sup>, C. Hirsch<sup>6</sup>, S. Zeman<sup>7</sup>, 1. *Internal Medicine, Duke, Durham, North Carolina*, 2. *Durham VA, Durham, North Carolina*, 3. *University of Washington, Seattle, Washington*, 4. *Harvard Medical School, Boston, Massachusetts*, 5. *Cornell Weill Medical College, New York, New York*, 6. *UC Davis, Davis, California*, 7. *NIH, Bethesda, Maryland*

Advanced glycation endproducts (AGEs) are biologically active compounds that accumulate in diabetes and normal aging. CML, a ubiquitous human AGE, has been linked to mortality in middle-aged women, but not men, regardless of diabetes status. We investigated the cross-sectional association between CML and phenotypic frailty among older women (n=2,007) and men (n=1,332). Frailty was defined as  $\geq 3$  of 5 criteria: weakness, weight loss, exhaustion, slowness, low physical activity. The association of CML with frailty varied by sex (p=0.04). CML was not associated with frailty in women. In men, the odds ratio for frailty =1.28 (1.12, 1.45) per standard deviation increase in CML and OR=3.69 (1.99, 6.84) for CML >1000ng/ml. In men, the association between CML and exhaustion, weakness, and physical activity remained significant after adjustment for age, race, diabetes, and cardiovascular conditions. The sex-based difference in the CML-frailty relationship may reflect different physiologic effects of CML in men and women.

#### **TRANSITIONS IN HEALTH STATES USING TWELVE MEASURES OF SUCCESSFUL AGING**

S.M. Thielke<sup>1,2</sup>, P. Diehr<sup>1</sup>, 1. *University of Washington, Seattle, Washington*, 2. *Puget Sound VA Medical Center, Seattle, Washington*

Introduction Successful aging has many dimensions which may vary over time. Methods We analyzed twelve health measures in CHS over 10 years: self-rated health, ADLs, IADLs, depression, cognition, timed walk, days spent in bed, blocks walked, extremity strength, recent hospitalizations, feelings about life as a whole, and life satisfaction. We dichotomized responses for each variable into "healthy" or "sick", and estimated the probability of transitioning from one state to another, or dying, during yearly intervals. We compared men and women, and three age groups. Findings All transitions in successful aging showed similar results, except for hospitalizations and cognition. Men had a higher death rate than women, regardless of health status, and were also more likely to be healthy. Conclusion Most participants remained healthy even into advanced ages. Health declined with advancing age for all measures. Men did not simply "age faster" than women.

#### **SESSION 2280 (SYMPOSIUM)**

##### **PRO-ACTIVE APPROACH TOWARDS FRAILTY BY SCREENING AND ASSESSMENT IN CLINICAL PRACTICE - RESULTS FROM THE LONGITUDINAL URBAN COHORT AGEING STUDY (LUCAS) HAMBURG, GERMANY**

Chair: *W. von Renteln-Kruse, Albertinen-Haus, Centre for Geriatrics and Gerontology, Hamburg, Germany*

Discussant: *M. Vass, University of Copenhagen, Institute of Public Health, Copenhagen, Denmark*

The LUCAS research consortium was established to study particular aspects of functional competence, its changes with ageing, to detect pre-clinical signs of functional decline, and to address questions on how to maintain functional competence and to prevent adverse outcome.

Therefore, the LUCAS projects apply the following methodological approaches: a true longitudinal representative cohort of independent urban community-dwelling people 60 years and older, recruited in 2000/2001, as well as cross-sectional comparative studies, and prospective interventional studies. Random subsamples from the participants of the longitudinal cohort underwent further investigation. In particular, screening and assessment instruments for specific target groups were developed and evaluated. The contributions to the symposium present a classification system of elderly persons as fit, pre-frail and frail to be used in clinical practice. The other presentations report results with particular focus on mobility, gait and balance, and on determinants of psychological health. Health related domains and concrete items of screening and assessment considering risks as well as older persons' resources will be presented and discussed in detail. In clinical practice, the challenge is to recognize distinct target groups because of different intervention strategies to be planned and recommended. Implications for practical health promotion and preventive measures, as well as different approaches of health-service delivery for community-dwelling elderly persons will be discussed. Therefore, the Discussant, a Danish general practitioner, will contribute extensive experience from the Danish concept, compared to the German health-care system.

**SCREENING FOR FUNCTIONAL COMPETENCE AND FRAILTY IN COMMUNITY-DWELLING ELDERLY PEOPLE - RESULTS FROM THE SELF-FILLING LUCAS SCREENING TOOL (SYMPOSIUM: PRO-ACTIVE APPROACH TOWARDS FRAILTY BY SCREENING AND ASSESSMENT IN CLINICAL PRACTICE - RESULTS FROM THE LONGITUDINAL URBAN COHORT AGEING STUDY (LUCAS) HAMBURG, GERMANY)**

U. Dapp<sup>1</sup>, J. Anders<sup>1</sup>, C.E. Minder<sup>2</sup>, S. Golgert<sup>1</sup>, W. von Renteln-Kruse<sup>1</sup>, 1. *Scientific Department at the University of Hamburg, Albertinen-Haus, Centre for Geriatrics and Gerontology, Hamburg, Germany*, 2. *University of Zurich, Medical Faculty, Zurich, Switzerland*

Background: The concept of frailty arouses increasing interest despite considerable uncertainty regarding its definition and ways of screening community-dwelling seniors. Methods: We present a new screening tool for assessing the functional and prognostic state of elderly people and for grading function. The indicators used relate to objective facts – including risks and resources – such as activities and ways to do things, not on subjective judgments (e.g. exhaustion). It was developed in the Longitudinal Urban Cohort Ageing Study (LUCAS) with 3.326 initially (year 2000) independently living seniors 60plus in 21 general practices in Hamburg, Germany. Conclusions: The classification is predictive over 7 years of need for nursing care and mortality and proposes operational definitions to the terms robust, pre-frail and frail. It provides a simple, cost-effective way for routinely screening elderly people for early signs of declining function. Responses permit GPs to see immediately where deterioration took place, permitting timely preventative action.

**NEW STRATEGIES OF ASSESSMENT AND PREVENTION IN COMMUNITY-DWELLING ELDERLY POPULATION (SYMPOSIUM: PRO-ACTIVE APPROACH TOWARDS FRAILTY BY SCREENING AND ASSESSMENT IN CLINICAL PRACTICE - RESULTS FROM THE LONGITUDINAL URBAN COHORT AGEING STUDY (LUCAS) HAMBURG, GERMANY)**

J. Anders<sup>1</sup>, F. Pröfener<sup>2</sup>, U. Dapp<sup>1</sup>, C.E. Minder<sup>4</sup>, A. Daubmann<sup>3</sup>, S. Golgert<sup>3</sup>, W. von Renteln-Kruse<sup>1</sup>, 1. *Research, Albertinen-Haus, Hamburg, Germany*, 2. *Hamburgische Pflegegesellschaft, Hamburg, Germany*, 3. *Department of Medical Biometry and Epidemiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany*, 4. *University of Zurich, Faculty of Medicine, Zurich, Switzerland*

It is a challenge to distinct natural ageing from proceeded functional decline. New instruments avoiding ceiling effects and tailoring pre-

ventative measures will be presented. Methods: Robust, pre-frail and frail participants (10% samples of the LUCAS longitudinal cohort) regarding interactions of comorbidity and competence by extended assessments (e.g. stress-tests). Results: While fit or robust persons (n = 102) enjoyed their later years, pre-frail individuals (n = 65) were often suffering from onset of impact diseases. Stress-tests and gait-analyses were applied in a geriatric mobility centre. Underlying problems were covering all fields of medicine. Frail persons (n = 64) show serious restrictions in mobility and needed home visits to conduct geriatric assessments. All patients and their GP get supportive recommendations. Conclusions: Pre-frailty and Frailty are serious problems requiring special attention and geriatric knowledge. Long-term effects (interruption of frailty-cascade) will be evaluated.

**PSYCHOLOGICAL VIEWS ON FRAILTY**

S. Freitag, S. Schmidt, *Health & Prevention, University Greifswald, Greifswald, Germany*

Frailty is a syndrome primarily described by physiological decline and biological factors. The LUCAS project has also taken psychological factors into account like depression or cognitive performance. We will present the state of the art psychological aspects that contribute to frailty (e.g. depression, traumatic stress, cognitive decline) as well as components that prevent frailty in the course of aging (social integration, attitude towards aging, quality of life). In a sub study of the LUCAS project psychological variables and frailty status of former World War II children was investigated. N=313 participants were assigned a robust/pre-frail/frail status. A regression analysis was performed to predict frailty status with psychological indicators. We found that subjective quality of life was a better predictor of frailty status than depression. Research findings of psychological determinants of frailty will be presented and discussed.

**SESSION 2285 (PAPER)**

**DEMENTIA AND DELIRIUM: MORE THAN COGNITION**

**EXPLORING THE UTILITY OF ULTRA-BRIEF DELIRIUM ASSESSMENTS IN NON-INTENSIVE CARE GERIATRIC POPULATION: THE GEM STUDY**

J.S. Powers<sup>1,2</sup>, T. Doering<sup>3</sup>, S. Gordon<sup>2</sup>, S. Eden<sup>1</sup>, A. Shintani<sup>1</sup>, E.W. Ely<sup>1,2</sup>, J. Schnelle<sup>1,2</sup>, 1. *Medicine, Vanderbilt, Nashville, Tennessee*, 2. *Tennessee Valley Geriatric Research Education and Clinical Center (GRECC), Tennessee Valley Healthcare System, Nashville, Tennessee*, 3. *Baptist Hospital, University of Tennessee Internal Medicine Residency Program, Nashville, Tennessee*

Objective: To determine how an ultra-brief structured tool that would require usually less than a minute for delirium assessment compares to an unstructured clinical assessment in a geriatric post-acute care (PAC) rehabilitation unit. Design: Prospective observational cohort study Setting: Post-acute geriatric hospital ward of a Veteran's Affairs (VA) hospital. Participants: Patients 50 to 100 years old admitted for post-acute medical care Measurements: Two teams, blinded to one another's evaluations, performed daily delirium assessments using either the Confusion Assessment Method for the ICU (CAM-ICU) or an unstructured clinical assessment. There was not a formal DSM IV rater involved with this investigation. Results: There were 61 patients enrolled (median 73 years old, IQR 62, 82), who underwent 521 paired observations. Delirium was detected in 18 patients (29.5%) by either of the two screening methods over the course of the study, most of whom (14 patients, 23%) were delirious on the first day of enrollment. Delirium was identified by the CAM-ICU on 12.6% of the observations and by the unstructured clinical assessment on 6% of the observations (kappa = .25, 95% CI .09, .40), and this doubling of delirium detection held regardless of the presence or absence of baseline dementia. Hypoactive delirium



was the predominant motoric subtype identified, accounting for 98% (105/107) of observations. Conclusions: The structured approach using the CAM-ICU detected delirium twice as frequently as did the unstructured approach, which is more commonly used. The fact that most delirium is of the hypoactive form and not highly visible provides one explanation for why a structured approach using defined assessment procedures, even when ultra-brief, may detect more delirium than an unstructured approach based on clinical judgment in sites that are not routinely conducting comprehensive DSM or full CAM-based evaluations.

### SENIORWISE MEMORY TRAINING PLUS YOGA FOR INDEPENDENT OLDER ADULTS WITH POOR MEMORY PERFORMANCE

G.J. McDougall<sup>1</sup>, P.W. Vaughan<sup>2</sup>, V.A. Wells<sup>1</sup>, *1. School of Nursing, University of Texas at Austin, Austin, Texas, 2. Texas State University, San Marcos, Texas*

SeniorWISE Memory Training plus Yoga for Independent Older Adults with Poor Memory Performance Graham J. McDougall Jr., RN, PhD, FAAN, FGSA1, Phillip W. Vaughan, PhD2 Vonnette A. Wells1 1The University of Texas at Austin School of Nursing 2Texas State University Mild cognitive impairment (MCI) is becoming increasingly significant in understanding the cognitive losses in older adults. Many individuals who might have this diagnosis are attempting to maintain their independence by either living at home or in retirement communities. In this study we targeted individuals with "Poor" memory performance. Our hypothesis was that older adults who participated in twelve hours of the SeniorWISE memory training intervention plus Yoga at each session would show significantly better outcomes post intervention. We recruited adults from four retirement communities in Central Texas. One hundred and thirty three participants were assessed at baseline with eighty three who completed the training were tested in five weeks at post intervention. A septuagenarian licensed psychologist taught memory training and Yoga was taught by a certified yoga instructor. Individuals had to complete a minimum nine hours of training. The MMSE was used to screen out impairment. Rivermead SPS and DAFS-Extended scores increased (both  $p < .001$ ), while CES-D scores ( $p = .003$ ) and memory complaints ( $p < .001$ ) decreased. Changes in state and trait anxiety and MMSE scores were not statistically significant. We saw significant improvements in memory self-efficacy (59.77 vs. 71.72), memory performance (14.66 vs. 16.93), instrumental activities of daily living on the DAFS-E (49.26 vs. 51.26), fewer memory complaints (3.22 vs. 3.15), and less depressive symptoms (10.06 vs. 8.26). Those individuals in the intention to treat group who did not complete had significantly lower memory performance and instrumental activity scores at baseline. We acknowledge the St. Davids Community Health foundation for funding this study.

### ACCEPTABILITY OF SCREENING FOR MEMORY PROBLEMS IN PRIMARY CARE VETERANS

L.O. Wray<sup>1,2</sup>, C.L. Vair<sup>1,3</sup>, E. Pikoff<sup>1,4</sup>, D.J. Hutchison<sup>1</sup>, P.R. King<sup>1</sup>, G.P. Beehler<sup>1,2</sup>, *1. VA Center for Integrated Healthcare, Buffalo, New York, 2. University at Buffalo, Buffalo, New York, 3. University at Colorado, Colorado Springs, Colorado, 4. VA Western New York Healthcare System, Buffalo, New York*

Dementia is a common but under-diagnosed condition in older Veteran primary care patients. Current national guidelines state that there is insufficient evidence for or against age-based screening of asymptomatic individuals. One argument against screening is poor acceptability in the patient population but few studies have addressed this issue. As part of a qualitative study on Veterans' perceptions of Primary Care Mental Health Integration (PC-MHI) services, we sought to examine the acceptability of screening for memory problems across focus groups from different combat eras. Participants were randomly selected from all Veterans with a diagnosed mental health condition who attended a

primary care appointment at the Buffalo VA within the prior year. Fifty-seven Veterans (71.4% White; age  $M = 58.5$ ,  $SD = 19.62$ ; 94.7% male) attended one of nine, 90-minute focus groups designed to elicit perceptions of PC-MHI services. Opinions regarding acceptability of screening for memory problems and the use of a telephone screening program were collected. Preliminary qualitative analysis indicated that Veterans in all combat eras were overwhelmingly in favor of screening for memory problems. Reactions to the screening program were positive although several comments indicated preference for non-telephone contact. Most Veterans identified primary care as the first resource they would seek to address concerns about memory. Many reported concern about memory after witnessing peers and family with dementia. Final qualitative results will be presented. Future projects based on these findings will focus on determining the prevalence and distribution of opinions in the full range of Veteran primary care patients.

### TITLE: APATHY IN DEMENTIA METHYLPHENIDATE TRIAL (ADMET) – PRELIMINARY EFFICACY REPORT

J. Mintzer<sup>1,2</sup>, P. Rosenberg<sup>5</sup>, L. Drye<sup>5</sup>, R. Scherer<sup>5</sup>, N. Herrmann<sup>3,4</sup>, K. Lancôt<sup>1,3,4</sup>, *1. Alzheimer's Research & Clinical Programs, Medical University of South Carolina, North Charleston, South Carolina, 2. Ralph H. Johnson VA Medical Center, Charleston, South Carolina, 3. University of Toronto, Toronto, Ontario, Canada, 4. Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada, 5. Johns Hopkins University, Baltimore, Maryland*

Background: Apathy is a distinct syndrome affecting 50 percent of Alzheimer's disease (AD) patients. Its etiology is unknown. Recent studies show an association between dopaminergic disruption and apathy in AD. Preliminary data suggests that methylphenidate, a dopamine stimulant, may be effective on apathy in AD. The goal of ADMET was to explore the efficacy and safety of Methylphenidate in the treatment of apathy in AD. Methods: ADMET was a multi-site, 6 week, randomized placebo-controlled trial of the efficacy and safety of methylphenidate in mild-to-moderate AD. Patients with a major depressive episode (DSM-IV TR criteria) or psychotic symptoms were excluded. Cognition was assessed using the MMSE. Apathy and other behaviours were assessed using the Apathy Evaluation Scale (AES) and the Neuropsychiatric Inventory (NPI). Efficacy was assessed as the change in score of the AES and the Alzheimer's disease Cooperative Study - Clinical Global Impression of Change (CGIC) scale from baseline to 6 weeks. Secondary efficacy was assessed as the change in Digit Span from baseline to 6 weeks. Results: In total, 60 patients were recruited. Retention was excellent (95%). Participants showed apathy on both the AES ( $51 \pm 12$ ), and NPI Apathy subscale ( $7.5 \pm 2.3$ ). Concomitant medications included cholinesterase inhibitors (72%), memantine (62%) and SSRIs (19%) and 13% of participants had a history of mood disorders. Preliminary results of the primary and secondary measures will be unveiled during this presentation. Conclusion: We hope the results of this study will provide relevant information to clinicians managing this difficult group of patients

### RELATIONSHIP BETWEEN OBSERVABLE EMOTIONAL EXPRESSION AND WANDERING BEHAVIOR OF PEOPLE WITH DEMENTIA

K. Lee<sup>1</sup>, D. Algate<sup>2</sup>, E.S. McConnell<sup>1</sup>, *1. Duke University, Durham, North Carolina, 2. University of Toledo, Toledo, Michigan*

Background: Wandering, one of the most common dementia-related behavioral disturbances, has been associated with patient morbidity and mortality due to safety risks including elopements, falls, and injuries. However, few studies have examined to association between emotion and wandering behaviors of people with dementia (PWD). Purpose: This study was to explore the relationship of observable emotional expression to wandering behaviors of PWD. Methods: This study applied a secondary data analysis utilizing a multi-site study that used a cross-sectional design with repeated measure nested within subjects. A total

of 142 PWD in 17 nursing homes and six assisted living facilities in Michigan and Pennsylvania were included. Subjects were randomly assigned to six 20-minute observation periods, conducted on two non-consecutive days; their behaviors were videotaped (n = 1105 observations). Wandering behavior was coded using direct observations; the Observable Displays of Affect Scale (ODAS) was used to capture emotional expression of PWD. Poisson hierarchical linear modeling (HLM) was used to determine factors associated with wandering. Results: An average of 13.4 (SD±12.4) episodes of positive emotional expression (PEE) per observation; only 1.5 (SD±2.2) episodes of negative emotional expression (NEE) were noted per observation. The mean wandering rate was 2.9 (SD±6.9) per hour. PEE was positively related to wandering rates whereas NEE and higher MMSE score were negatively related to wandering rates after controlling for other predictors (age, education, gender, and time of day). Conclusions: A tailored intervention that addresses both emotional and cognitive functioning may be useful to improve wandering behaviors of PWD.

## SESSION 2290 (PAPER)

### EPIDEMIOLOGIC APPROACH TO FUNCTIONAL AGING

#### THE ASSOCIATION BETWEEN MID-LIFE PHYSICAL ACTIVITY AND LOWER EXTREMITY FUNCTION IN OLDER ADULTS: ROLE OF COGNITIVE FUNCTION, AGE GENE/ENVIRONMENT SUSCEPTIBILITY (AGES) - REYKJAVIK STUDY

M. Chang<sup>1</sup>, J. Snaedal<sup>1,2</sup>, B. Einarsson<sup>1,2</sup>, J. Saczynski<sup>3</sup>, V. Gudnason<sup>2,4</sup>, L.J. Launer<sup>5</sup>, T.B. Harris<sup>5</sup>, P.V. Jonsson<sup>1,2</sup>, 1. Geriatric Research Center, Landspítali University Hospital, Reykjavik, Iceland, 2. Faculty of Medicine, University of Iceland, Reykjavik, Iceland, 3. Department of Medicine and Meyers Primary Care Institute, University of Massachusetts Medical School, Worcester, Massachusetts, 4. Icelandic Heart Association, Kopavogur, Iceland, 5. Laboratory of Epidemiology, Demography and Biometry, National Institute on Aging, Bethesda, Maryland

**OBJECTIVES:** To examine the long-term association between mid-life physical activity (PA) and lower extremity function (LEF) in late-life, specifically controlling for the effect of cognitive function. **METHODS:** A large community-based population of 4753 men and women (mean age 76±6 yrs) from the Age Gene/Environment Susceptibility - Reykjavik Study was followed since 1967 as a part of the Reykjavik Study. Based on leisure time PA reported in mid-life examination, participants were classified as active (31%) and inactive (69 %). Measures of LEF in late-life included gait speed from 6m walk (meter per second), Timed Up and Go (TUG, second), and Knee Extension (KE) strength (kg) tests. Linear regression analysis was used to examine the association. **RESULTS:** The Active group had significantly better LEF in late-life compared with inactive group, after adjusting for socio-demographic, and cardiovascular risk factors. After adjustment for cognitive function in late life (speed of processing, memory, and executive function), active group still had significantly faster gait speed ( $\beta = 0.04$ ,  $p \leq 0.001$ ), faster TUG time ( $\beta = -0.34$ ,  $p \leq 0.001$ ), and greater KE strength ( $\beta = 0.87$ ,  $p \leq 0.001$ ) in old age compared with inactive group. The effect of adjusting for various aspects of cognitive function was much larger (up to 41 % attenuation) compared with adjusting only for a global cognition (up to 11 % attenuation). Among three cognitive domains, speed of processing had the strongest effect on the association. **CONCLUSIONS:** Regular PA reported in mid-life is associated with better LEF in later life, even after controlling for various domains of cognitive function.

### LATENT CLASS TRAJECTORIES OF FUNCTIONAL AGING BASED ON ACTIVITIES OF DAILY LIVING

L. Han<sup>1</sup>, H. Allore<sup>1</sup>, T.E. Murphy<sup>1</sup>, T.M. Gill<sup>1</sup>, H. Lin<sup>2</sup>, 1. Internal Medicine, Yale University, New haven, Connecticut, 2. Yale University-Department of Epidemiology & Public Health, New Haven, Connecticut

754 community-living persons 70+ years from the Precipitating Events Project were assessed monthly for activities of daily living (ADL) over seven 18-month intervals. A generalized growth mixture model was used to identify latent classes of functional aging based on longitudinal trajectories of ADL disability. Participants were allowed to switch between trajectories every 18-months when the predictors of trajectory membership, including age, living alone, frailty, depression, cognitive impairment and chronic conditions, were updated. Five distinct trajectories were identified. The predominant trajectory maintained ADL independence (61.6% of person-intervals), while a minority (7.0% of person-intervals) stayed at high level of disability (3 or 4 ADLs). The remaining three either maintained mild disability (1 or 2 ADLs, 13.6% of person-intervals) or worsened from independent or mild disability (11.2% and 6.6% of person-intervals, respectively) towards greater disability. When each participant was tracked through seven intervals or until death or lost to follow-up, only 31% of the cohort remained in the same trajectory. The majority (48%) switched to a more disabled trajectory and 20% had both recovery and worsening. Recovery to a less disabled trajectory without subsequent worsening was rare (2%). These results suggest that the course of functional aging is heterogeneous and dynamic.

### INTAKE OF ANTIOXIDANTS AND SUBSEQUENT DECLINE IN PHYSICAL FUNCTION

B. Bartali, T. Curto, N.N. Maserejian, A.B. Araujo, *Epidemiology, New England Research Institute, Watertown, Massachusetts*

**Background/Objectives:** Oxidative stress is considered a risk factor for physical function (PF) decline with aging. The objective of this study was to examine the relation of antioxidant intake to change in self-reported PF over a 5-year period. **Methods:** The Boston Area Community Health (BACH) Survey is a population-based longitudinal study of a racially/ethnically diverse population. Change in PF from baseline (2002-2005) to follow-up (2006-2010) was assessed using the SF-12 questionnaire. Intake of antioxidants (combining dietary and supplemental) was estimated at baseline using the validated Block FFQ. In total, 2827 persons aged 29-80 years had complete assessments at both baseline and follow-up. General linear models were used to examine the association between energy-adjusted quartiles of vitamins A, C, E and change in PF, after adjustment for age, sex, race/ethnicity, SES, smoking, BMI, physical activity, depression and chronic conditions. **Results:** A low intake (first quartile) of vitamins C and E was associated with a greater decline in PF compared with the highest quartile, with an adjusted mean difference in change in PF of -1.29 (95%CI:-2.34,-0.25) for vitamin C and of -1.21 (95%CI:-2.24,-0.18) for vitamin E. PF decline was not significantly different in the lowest compared with the highest quartile of vitamin A (mean difference=-0.30,95%CI:-1.36,0.76). **Conclusions:** A low intake of vitamins E and C plays a role in PF decline with aging. These results support the idea that oxidative stress contributes to PF decline and may help inform the development of intervention strategies aimed at reducing this important clinical and public health problem.

### ASSOCIATION OF CHRONIC BACK PAIN AND BALANCE IMPAIRMENT WITH MOBILITY LIMITATION AND PHYSICAL ACTIVITY

K. Patel, *National Institute on Aging, Bethesda, Maryland*

**Background:** Chronic back pain and vestibular dysfunction are common, often disabling conditions in older adults; however, their

co-occurrence in the US population and association with functional outcomes are not well characterized. Methods: Cross-sectional data from the 2001-2004 National Health and Nutrition Examination Survey were analyzed. A total of 3,875 participants aged 50 years and older who completed a questionnaire on pain and physical function as well as a modified Romberg balance protocol (standing on a foam pad with eyes closed for 30 seconds) were included in the study. Gait speed was assessed in 2001-02 (n=1,860) and physical activity measured with accelerometers was collected in 2003-04 (n=1,699). Results: Chronic back pain and balance impairment co-occurred in 5.2% of participants, representing 3.4 million US adults. Each condition was independently associated with decreased physical function and activity, but there was also evidence suggesting synergism between these conditions. Compared to participants without either condition, the adjusted odds ratios (95%CI) for self-reported mobility limitation in those with chronic back pain only, balance impairment only, and both conditions were 3.28 (1.71-6.28), 1.83 (1.32-2.55), and 7.60 (5.55-10.42), respectively. The adjusted linear regression coefficients for gait speed in meters/second were  $b=0.01$  ( $p=0.76$ ),  $b=-0.05$  ( $p=0.001$ ),  $b=-0.13$  ( $p<0.001$ ), respectively. The adjusted linear regression coefficients for accelerometry counts/minute were  $b=-23.1$  ( $p=0.14$ ),  $b=-12.6$  ( $p=0.04$ ), and  $b=-49.2$  ( $p=0.003$ ), respectively. Conclusion: Adults aged 50 and older with chronic back pain and impaired balance have substantially reduced physical function and activity. Longitudinal studies are needed to understand risk for adverse outcomes in this vulnerable population.

#### PREDICTING ADL DEPENDENCE IN OLDER ADULTS TO IMPROVE ESTIMATES IN COMPARATIVE EFFECTIVENESS STUDIES

K.R. Faurot<sup>1,2</sup>, M.A. Brookhart<sup>1</sup>, M. Jonsson Funk<sup>1</sup>, V. Pate<sup>1</sup>, W. Camelo Castillo<sup>1</sup>, T. Stuermer<sup>1</sup>, 1. *UNC Gillings School of Global Public Health, Epidemiology, Chapel Hill, North Carolina*, 2. *UNC School of Medicine, Physical Medicine & Rehabilitation, Chapel Hill, North Carolina*

Background: Estimating intervention effectiveness among older adults is difficult: few clinical trials include sufficient numbers of older adults. Non-experimental, population-based studies using claims data may be biased by unmeasured factors, particularly frailty. To improve control for frailty, we sought to identify predictors of ADL dependence (ADL-D), as its proxy, in a representative sample of Medicare beneficiaries. Methods: We included community-dwelling respondents to the 2006 Medicare Current Beneficiary Survey,  $\geq 65$  years old, with Medicare (Parts A, B) claims 8 months prior to the fall interview. ADL-D was defined as needing help with bathing, eating, walking, dressing, toileting, or transferring. We tested as potential predictors demographic variables and high-risk conditions identified in claims (ICD-9 diagnosis codes). Odds ratios (OR) and 95% confidence intervals (CI) were estimated through multivariable logistic regression. Results: Of 6,035 respondents, 58% were female, 88% white, with average age 77 (SD: 7.3) years and ADL-D prevalence of 9.7% (N=590). Strong predictors of ADL-D were amputation (OR=12.8, CI: 4.9-34), aspiration pneumonia (OR=3.4, CI: 1.3-9.2) and paralysis (OR=3.3, CI: 1.7-6.2). Individuals with vertigo (OR=0.61) or screened for cancer (OR=0.45) had a lower likelihood of ADL-D. The final model included dementia, psychiatric illnesses, heart failure, fractures, bladder dysfunction, stroke, serious infection, and weakness/difficulty walking, as well as age and non-white race. The model c-statistic was 0.83, indicating good predictive capacity. Conclusions: We identified obvious and non-obvious variables in claims data that predicted ADL-D. Our finding has important implications for reducing bias in population-based, non-experimental studies of intervention effectiveness in older adults.

#### EMBEDDING BALANCE AND STRENGTH TRAINING IN DAILY LIFE ACTIVITY TO REDUCE FALLS AND IMPROVE FUNCTION: A NOVEL ALTERNATIVE TO TRADITIONAL EXERCISE

L.M. Clemson<sup>1</sup>, M.A. Fiatarone Singh<sup>2</sup>, A. Bundy<sup>2</sup>, R.G. Cumming<sup>3,4</sup>, 1. *Ageing, Health & Work Research Unit, University of Sydney, Lidcombe, New South Wales, Australia*, 2. *Faculty of Health Sciences, University of Sydney, Lidcombe, New South Wales, Australia*, 3. *Faculty of Medicine, University of Sydney, Sydney, New South Wales, Australia*, 4. *Centre for Education & Research on Ageing (CERA), Concord, New South Wales, Australia*

The LiFE program is a novel approach to reducing falls and improving function by embedding balance and strength training in daily life activities. LiFE teaches balance and strength principles matching these to tailored and individualised activities that are upgraded over five sessions with two booster visits. LiFE was implemented in older people's homes by both physical and occupational therapists. The effectiveness of LiFE has been established in a randomised trial. We present the findings, discuss the conceptual underpinning, and outline the intervention protocol. A sample of 317 community-dwelling persons 70 years and over, at high risk of falling, were randomly assigned to one of three groups: the LiFE program, a structured balance and strength exercise program, and a control group, who were given an unsupervised sham-gentle exercise program. There was a statistically significant 31% reduction in the rate of falls for the LiFE participants compared to the control gentle exercise group (RR 0.69 (95% CI 0.48 to 0.99),  $n=212$ ). There was a 19% reduction in rate of falls for the structured exercise group compared to controls, which was not significant (RR = 0.81 (95% CI 0.56 to 1.17),  $n=210$ ). There were clinically significant outcomes for the LiFE program for ankle strength, static and dynamic balance, and for balance efficacy, ADL function, energy levels and participation. Adherence over the 12 month follow-up was superior for LiFE. LiFE provides an alternate choice to traditional exercise. Functional tasks should be a focus for protection from falling and for improving functional capacity.

#### APPLICATION OF SPECIFICITY OF LEARNING HYPOTHESIS TO FALL-PREVENTION INTERVENTION

N. Rosenblatt, A. Skoirchet, M.D. Grabiner, *University of Illinois at Chicago, Chicago, Illinois*

Following large postural disturbances, compensatory steps are often needed to restore dynamic stability, i.e. a positive margin of stability (MOS), and avoid a fall. Training the rapid, high-impact compensatory stepping response (CSR) may reduce fall-risk up to 77%, far exceeding reductions associated with the slow, low-impact movements of Tai Chi (TC). This difference likely reflects the dissimilar dynamics, and in turn underlying muscular requirements, of each. Presently we compared strength and power requirements of TC and CSR. Nine healthy, young subjects performed: a) 20 modified single TC steps and b) 20 single-step CSRs following forward leans beyond the point which balance could be maintained. Here, recovery-step-initiation was delayed as long as subjectively possible. Steps were taken onto force plates and kinematics collected using motion capture. Dependent variables were peak stepping-limb knee extension moment and power, and MOS at step-initiation and completion. Subjects were dynamically stable at step-initiation for TC but not CSR, with dynamic stability restored at step-completion (MOS at step-initiation= $126.4 \pm 15.5$  vs.  $-346.1 \pm 52.7$  mm, MOS at step-completion= $460.7 \pm 78.1$  vs.  $49.9 \pm 35.2$  mm, TC vs. CSR, respectively). Knee moments and power were significantly larger during CSR ( $1.64 \pm 0.30$  vs.  $1.03 \pm 0.28$  Nm/kg,  $p<.001$ ;  $-6.13 \pm 3.27$  Nm/kg vs.  $0.36 \pm 0.15$  Nm/kg,  $p<.001$ ). TC required maintaining MOS $>0$

throughout single-limb support, which could improve strength and balance in some older adults. However, based upon the specificity of learning hypothesis, TC will not significantly improve recovery-step dynamics or likelihood of recovery following large postural disturbances. Practicing jointly with CSR could increase the fall prevention efficacy of TC.

### **FEAR OF FALLING IN OLDER PERSONS: INCIDENCE AND PROGRESSION OVER 3 YEARS**

N. Deshpande<sup>1</sup>, E. Metter<sup>2</sup>, J.M. Guralnik<sup>3</sup>, L. Ferrucci<sup>2</sup>, 1. *Queen's University, Kingston, Ontario, Canada*, 2. *National Institute on Aging, Washington, District of Columbia*, 3. *University of Maryland, College Park, Maryland*

Fear of falling (FF) is a serious and common concern in older persons. The present study identified sensorimotor, psychosocial and demographic determinants of 1. Incident fear of falling (InciFF) and 2. Persistence of pre-existing FF (PersisFF) over three years in older persons. FF was quantified in 653 community-living older participants (age  $\geq 65$ ) at baseline and 3-year follow-up using the Survey of Activities and Fear of Falling in the Elderly. Visual acuity, vibrotactile sensitivity, self-reported hearing impairment, standing balance (FICSIT), lower limb and grip strength, cognition (MMSE), depression (CESD), personal mastery (PSMS), social support, demographic characteristics (Age, sex, BMI and years of education) and history of fall/s in the previous year were recorded at baseline. Out of 334 participants who did not report FF at baseline 65 participants reported InciFF. In binary logistic regression analysis participants with impaired balance (FICSIT score  $\leq 19$ ), history of fall/s or significant depressive symptoms (CESD  $>16$ ) were 3 times more likely, those with severe hearing difficulty were 3.5 times more likely and women were twice more likely to develop InciFF. Out of 319 participants who had FF at baseline, 142 did not report FF at the follow-up. In binary logistic regression analysis, women or those having significant depressive symptoms were twice more likely to report PersisFF. Hearing impairment was the strongest risk factor for InciFF. Additionally, older women and elderly with impaired balance, history of fall/s or depression should be proactively monitored for FF.

### **SESSION 2300 (PAPER)**

#### **FAMILY AND INFORMAL CAREGIVER ISSUES AND RESPONSES TO OLDER ADULT CARE**

##### **WALKING ALONG A TREACHEROUS SEA: HOW CAREGIVERS UNDERSTAND SYMPTOMS OF ADVANCED HEART FAILURE**

H.C. Bursch, *Adult and Gerontological Nursing, College of Nursing, The University of Iowa, Iowa City, Iowa*

This study sought to illuminate how caregivers (CGs) experience the responsibility of symptom interpretation and management in advanced heart failure (AHF). Method: Seven older spouse CGs of care recipients (CRs) with NYHA II-IV heart failure each participated in 3 reflective interviews over a period of 2 months, followed by a phone call at the conclusion of the study 2-10 months later. Data were analyzed using a method based on Interpretive Theory by Paul Ricoeur and grounded in his Philosophy of Ethics. Findings: CGs articulated 3 themes with 9 subthemes: (1) ongoing attempts to view AHF as part of their CRs' entire illness presentation, (2) the heavy burden of feeling responsible for symptom interpretation, and (3) hopes and fears regarding symptom progression in the context of little information. The essence of their task was like a walk in the fog on a rocky shore along the sea. CGs wanted to partner with healthcare providers in symptom interpretation and management but were frequently excluded from the conversation and felt there were no choices regarding treatment preferences even in the hours surrounding death. Implications: Rather than focusing on AHF as a condition of fluid excess which can generally be treated,

HCPs should allow for understanding of the weakened heart, which ultimately cannot be treated in AHF. Understanding how CGs prioritize symptom management with multiple comorbidities can facilitate adherence and incorporate CR-CG preferences for care. More research is needed for management of breathlessness at home and implications of DNR status on treatment plans.

### **EFFECTIVENESS OF FAMILY CAREGIVERS FOR IDENTIFICATION OF DELIRIUM: THE FAMILY CONFUSION ASSESSMENT METHOD (FAM-CAM)**

M.R. Steis, L.K. Evans, K.B. Hirschman, A.L. Hanlon, D.M. Fick, N. Flanagan, S.K. Inouye, *Veterans Administration, Orlando, Florida*

Background/ Objectives: As the population ages, delirium superimposed on dementia is an increasing problem. Family caregivers may provide critical information to assist with early detection of mental status changes. The purpose of this study was to explore agreement between the Family Confusion Assessment Method (FAM-CAM) with interviewer-rated CAM ratings for identification of delirium. Design: Exploratory analysis of agreement. Setting: Community. Participants: 52 family caregivers and 52 elders with pre-existing cognitive impairment. Measurements: Family members completed the FAM-CAM via interview or electronically. Trained interviewers rated the CAM following cognitive assessment of the elder. Delirium was determined by fulfillment of the CAM algorithm. Results: The total sample included 52 paired CAM:FAM-CAM assessments completed across 52 dyads of elders with pre-existing cognitive impairment and family caregivers. The point prevalence of delirium was (7/52)13%. Characteristics did not differ significantly between the delirium and non-delirium groups. The FAM-CAM questions that mapped directly to the original four-item CAM algorithm had the best overall agreement with the interviewer-rated CAM, kappa=0.85 (95% confidence interval, CI 0.65-1.0), sensitivity 88% (CI 47-99%) and specificity 98% (CI 86-100%). Conclusion: In this preliminary study, the FAM-CAM appears to be a sensitive screening tool for detection of delirium in elders with cognitive impairment utilizing family caregivers, with relevance for both research and clinical practice.

### **DIGITAL DIVIDE AMONG INFORMAL CAREGIVERS OF INDIVIDUALS LIVING WITH DEMENTIA**

H. Kim, *University of Virginia, Greenville, North Carolina*

Introduction Although Internet-based information and resources are promising strategies to help ameliorate caregiving stress, there is limited information available on health-related Internet use among dementia caregivers. This study aimed to understand the digital divide among informal caregivers of individuals with dementia. Its three specific aims were to identify: (1) the prevalence, (2) predictors, and (3) user profiles for health-related Internet use in dementia caregivers. Method Based on Pearlin's Stress Process Model, this secondary data analysis used data provided in a 2009 survey conducted by the National Alliance for Caregiving. Telephone interviews with standardized questionnaires were used to collect self-reported sociodemographic and clinical information for dementia caregivers (n=450). Descriptive analyses and a hierarchical multiple regression analysis were performed using SPSS 19.0. Results/Findings Fifty-nine percent of dementia caregivers were identified as health-related Internet users. Increasing levels of health-related Internet use was associated with higher levels of emotional stress or financial hardship (P<.05). Compared to non-users, Internet users were likely to be younger, to be more educated, and to be care-recipient's children rather than spouses. Additionally, levels of income and caregiving role strain were important to determining the digital divide (P<.05). Discussion Our findings confirmed the significance of demographic factors on the digital divide in previous studies, but the predictive value of caregiver stress for health-related Internet use is a new addition. These findings will assist healthcare providers, researchers, and policy makers to know how Internet-based strategies should best

be designed, implemented, and distributed to meet the needs of dementia caregivers.

### **INTERNET USE IN CAREGIVING TRAJECTORY OF INFORMAL CAREGIVERS OF INDIVIDUALS WITH DEMENTIA**

H. Kim, *University of Virginia, Greenville, North Carolina*

**Introduction:** The Internet serves as a valuable resource for informal caregivers who are caring for individuals with dementia. However, little attention has been paid to health-related Internet use as a mediator in the context of caregiving. This study evaluated the impact of health-related Internet use on the relationship between caregiver stress and their perception of health status. **Method:** Based on stress process model, this secondary data analysis used data provided in a 2009 survey conducted by the National Alliance for Caregiving. Dementia caregivers reported sociodemographic and clinical information through telephone interviews (n=450). The statistical analysis was accomplished by structural equation modeling using Amos 19.0 and SPSS 19.0. **Results/Findings:** Overall, higher level of caregiver stress was associated with more health-related Internet use ( $\beta=0.131$ ,  $p<0.006$ ). Dementia caregivers with higher levels of stress perceived their health status as poor, with a strong direct effect ( $\beta=-0.270$ ,  $p<0.001$ ). However, indirect effect mediated through health-related Internet use was non-significant (0.008). Thus, Internet use did not provide any mediating or buffering effects in this relationship (total effect=-0.262). Additionally, advanced caregivers' age and racial minorities (Hispanic and African American) were significant covariates in this relationship ( $p<0.001$ ). **Discussion & Conclusions:** Although this study showed that health-related Internet use did not reduce the impact of caregiver stress on poor self-rated health in dementia caregivers, their strong interest in Internet use was identified. This study suggests that Internet-based approaches should be integrated with conventional healthcare services under a healthcare provider's thoughtful guidance to ensure the high quality of the Internet-based resources.

### **BEHAVIORAL PROBLEMS MEDIATE THE ASSOCIATION BETWEEN COGNITIVE IMPAIRMENT AMONG OLDER ADULTS AND DEPRESSION AMONG THEIR CAREGIVERS**

R. Malhotra<sup>1</sup>, A. Chan<sup>1,2</sup>, C. Chei<sup>1</sup>, D. Matchar<sup>1</sup>, *1. Health Services and Systems Research, Duke-NUS Graduate Medical School Singapore, Singapore, Singapore, 2. National University of Singapore, Singapore, Singapore*

Behavioral problems among older adults with cognitive impairment(CI) may contribute to depression among their caregivers. We assess the presence and extent of mediation of the association between older adult CI and clinically significant depressive symptoms(CSDS) among their caregivers by older adult behavioral problems. Data for 1,111 care recipient (aged 75+ with >1 activity of daily living limitation)-spouse/child caregiver dyads from a national survey from Singapore was used. Caregiver CSDS status (yes/no) was based on Centre for Epidemiological Studies Depression Scale score. Older adult CI status (yes/no) was based on Short Portable Mental Status Questionnaire score and if unavailable, on Revised Memory and Behavior Problems Checklist(RMBPC) memory-problem subscale score. Older adult behavioral problems were assessed using RMBPC disruptive behavior subscale score (8-items;range:0-32). Logistic regression models assessed the association between older adult CI and caregiver CSDS, with and without adjusting for behavioral problems. Sobel's test assessed for mediation of the association by behavioral problems. Caregivers of older adults with CI, versus without CI, had significantly higher odds (adjusted odds ratio 1.49 [95% CI 1.07,2.09]) of CSDS. However, the strength of the association became lower and non-significant (1.35[0.96,1.92]) after adjusting for behavioral problems. Mediation analysis confirmed that behavioral problems significantly, but partially, mediate (Sobel's test, $z=2.14$ , $p=0.02$ ;%mediated: 24.8%) the association between older

adult CI and caregiver CSDS. While caring for an older adult with CI is detrimental for the caregiver's mood, management of behavioral problems of such older adults has the potential to be especially helpful in reducing depression among their informal caregivers.

### **SESSION 2305 (PAPER)**

#### **GERIATRIC ASSESSMENT, CASE MANAGEMENT AND ISSUES WITH MEDICARE/MEDICAID**

##### **A SYSTEMATIC REVIEW OF THE USE OF GERIATRIC ASSESSMENT FOR OLDER ADULTS IN ONCOLOGY**

M. Puts<sup>1</sup>, J. Hardt<sup>1</sup>, J. Monette<sup>2</sup>, V. Girre<sup>3</sup>, E. Springall<sup>1</sup>, S.M. Alibhai<sup>1,4</sup>, *1. Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Ontario, Canada, 2. Jewish General Hospital, Montreal, Quebec, Canada, 3. Centre Hospitalier Departemental, La Roche sur Yon, France, 4. University Health Centre, Toronto, Ontario, Canada*

The use of geriatric assessment is recommended for older adults in the oncology setting. So far, no systematic review of geriatric assessment has been conducted. **Aims of review:** 1) to provide an overview of all geriatric assessment (GA) instruments developed and/or in use in the oncology setting, including feasibility and psychometric properties. 2) To systematically evaluate their effectiveness in predicting outcomes from cancer and its treatment. **Methods:** Systematic review of literature published between January 1996 and November 16, 2010. Articles could be published in English, French, Dutch or German. **Data sources:** Medline, Embase, Psycinfo, Cinahl and the Cochrane Library. **Results:** 83 manuscripts reporting on 73 studies were identified. The quality of most studies was poor to moderate. Most studies showed that it was feasible to conduct a GA. The time needed to conduct a GA ranged between 10-120 min. Most often the GA was completed to describe the health and functional status of participants. Few studies examined the predictive validity of the GA; some showed GA predicted treatment complications and mortality, while others reported no impact. Few studies have shown their impact on treatment decisions or cancer outcomes but nevertheless the GA identified many undetected health and functional status issues. **Conclusion:** The evidence shows that it was feasible to conduct a GA but more evidence is needed with regard to the effectiveness of GA in the oncology setting using higher methodological quality studies.

##### **EVALUATION OF A HIGH RISK CASE MANAGEMENT PILOT PROGRAM FOR MEDICARE BENEFICIARIES WITH MEDIGAP COVERAGE**

K. Hawkins<sup>1</sup>, R.J. Ozminkowski<sup>1,2</sup>, G.R. Bhattarai<sup>1</sup>, P. Parker<sup>2</sup>, J. Huang<sup>1</sup>, T.S. Wells<sup>1</sup>, R.J. Migliori<sup>2</sup>, C.S. Yeh<sup>3</sup>, *1. Analytics and Data Management, OptumInsight, Ann Arbor, Michigan, 2. UnitedHealth Group Alliances, Minnetonka, Minnesota, 3. AARP Services, Inc., Washington, District of Columbia*

**Research Objective:** To evaluate the second year experience of a High Risk Case Management (HRCM) pilot program. **Methods:** Nurses and social workers provided in-person, telephonic, and mailed services to improve care coordination from 12/1/2008 to 12/31/2010. Adults (65+ years of age) who resided in one of five pilot states and who had a Hierarchical Condition Category score > 3.74, or were referred into the program were included in the analysis. This included 1,290 members who participated in the program, and 6,811 members who were qualified but did not participate. Regression analyses were used to estimate healthcare savings and differences in quality of care metrics between engaged program members and similar non-engaged members. Quality of care metrics related to reduced hospital readmissions as well as Evidence Based Medicine (EBM) metrics were evaluated. **Results:** Although not statistically significant, 63% of hospital readmission related metrics and 79% of EBM metrics showed engaged members received higher quality of care. The program showed an estimated savings of

\$1.5 million dollars, but was not statistically significant. Most of these savings were attributable to Medicare. Conclusions: This study focuses on hospital readmission related metrics for a HRCM program designed solely for Medicare members with Medigap coverage. The HRCM program was associated with higher quality of care; however, the decrease in costs was not statistically significant in the second year of the program.

#### **MEDICARE-BASED MULTIMORBIDITY INDEX FOR PROJECTING MORBIDITY AND MORTALITY AMONG OLDER ADULTS IN THE U.S**

I. Akushevich, J. Kravchenko, H. Whitson, H.J. Cohen, S.V. Ukraintseva, K.G. Arbee, A.I. Yashin, *Duke University, Durham, North Carolina*

The growing sector of older persons with multimorbidity merits special attention due to the rising costs of their medical services and long-term care. Medicare-based data allow for developing a tool for measuring multimorbidity that weights the relative health impact of chronic conditions in the Medicare population. This tool may improve the precision of prognoses for mortality in older adults comparing to the Charlson Comorbidity Index (CCI). Using SEER-Medicare data (1991-2005), a new Adjusted (for US elderly population) MultiMorbidity Index (AMMI) was developed by selecting the list of clusters of contributing diseases and calculating disease-specific weights. In AMMI diseases such as heart failure, myocardial infarction, stroke, respiratory diseases, and dementia had higher weights, and renal failure, chronic liver diseases, HIV/AIDS, carcinoma in situ, and solid cancers with effective screening had lower weights than there were in the original CCI (evaluated for 1980s general population). Further, a new model was constructed to predict dynamics of AMMI and evaluate the effect of AMMI on mortality. The properties of AMMI were studied empirically and in the population model of mortality and tested in sensitivity analysis. AMMI demonstrated better predictive power (AUC=0.90, i.e., approximately 90% of cases of next month survival status are predicted correctly) compared to CCI (AUC=0.84). The results were stable when alternative assumptions for model construction were applied. The novel multimorbidity index can be used to project morbidity and survival trends among older adults in US. It makes new advances in planning health services and medical expenditures.

#### **ASSESSING ENERGY EXPENDITURE DURING EATING IN VULNERABLE OLDER ADULTS**

L. Goldberg<sup>1</sup>, C.J. Heiss<sup>2</sup>, *1. Wichita State University, Wichita, Kansas, 2. Metropolitan State College of Denver, Denver, Colorado*

Reflecting the conference theme, Charting New Frontiers in Aging, this paper presents data on an innovative way to measure energy expenditure during eating in older adults with swallowing disorders (dysphagia). These older adults appear to fatigue during meals. This fatigue is thought to reflect their increased level of effort (energy expenditure) during eating. Optimal measurement of energy expenditure is documented through body heat output in an enclosed metabolic chamber, or indirect calorimetry in which the nose and mouth are masked and oxygen consumption is measured. Metabolic chambers are not readily available to healthcare providers and indirect calorimetry is not possible during eating. A portable computerized device, SenseWear, has been shown to have concurrent validity, when compared to indirect calorimetry, in measuring energy expenditure during activities such as running. A feasibility study of SenseWear and indirect calorimetry during simulated chewing in college students documented a statistically significant correlation ( $r = 0.49$ ,  $p < 0.05$ ) between the two measurement methods. SenseWear then was used to measure the energy expended by 20 self-reported healthy older adults who were residents of a Continuing Care Retirement Community as they ate a regular lunch. The mean energy expenditure was 61.90 ( $\pm 6.90$ ) kcal. This value was significantly greater than the expected 48 kcal for age- and weight-matched older adults documented through eating in a metabolic chamber. Although continued

refinement of the protocol is needed, results suggest that the use of SenseWear may be a clinically useful way to assess energy expenditure during eating in vulnerable older adults.

#### **IS THERE A CAUSAL RELATIONSHIP BETWEEN POOR SLEEP QUALITY AND FRAILITY IN OLDER WOMEN?**

Q. Xue<sup>1,2</sup>, J. Tian<sup>2</sup>, Y. Huang<sup>4</sup>, P.H. Chaves<sup>1,2</sup>, L.P. Fried<sup>3</sup>, *1. Johns Hopkins School of Medicine, Baltimore, Maryland, 2. Johns Hopkins Center on Aging and Health, Baltimore, Maryland, 3. Columbia University Mailman School of Public Health, New York, New York, 4. Cheng Kung University, Tainan, Taiwan*

Over half of the population aged 65 years and older report chronic sleep problems. Previous studies have shown consistent evidence that both longer sleep duration and sleep deprivation are associated with adverse health outcomes. Using a sample of 252 women from the Women's Health and Aging Study II with up to five measurements over 10 years, we estimated the causal effect of poor sleep quality by self-report (as a time-varying risk factor) on the development of pre-frailty or frailty in community-dwelling older women. Marginal structural models were used to adjust for time-dependent confounders, intermediate variables, and participant dropout. We found that 85% of the women who were non-frail at baseline became pre-frail or frail during the 10-year follow-up; and poor sleep quality was associated with almost three-fold increase in the risk of pre-frailty or frailty onset (hazard ratio=2.83, 95% confidence interval=1.61-4.95,  $p=0.012$ ) after adjusting for age, race, education, smoking status, comorbidity, cognition, depressive symptoms, body mass index, and physical activity, with the last three treated as time-dependent confounders. This study offers initial evidence that poor sleep quality may play a causal role in the development of frailty.

### **SESSION 2310 (PAPER)**

#### **REHABILITATIVE CARE & PHYSICAL THERAPY**

##### **POSTURAL RESPONSES ARE MODULATED WHEN SUPPORT SURFACE TILT IS COMBINED WITH VIRTUAL VISUAL FLOW IN HEALTHY ELDERLY AND ADULTS WITH STROKE**

J. Slaboda<sup>1</sup>, E. Keshner<sup>2</sup>, *1. Physical Therapy, University of Nevada, Las Vegas, Las Vegas, Nevada, 2. Temple University, Philadelphia, Pennsylvania*

The influence of optic flow was examined when responding to a postural disturbance, and on the subsequent postural realignment to vertical. Thirteen healthy older adults (50-80 yrs) and 13 adults with stroke (49-70 yrs) were categorized as visually dependent or independent through a Rod and Frame task. Postural responses were assessed while subjects stood quietly during 3 deg dorsiflexion tilt of the support surface combined with pitch rotations of a wide-field-of-view virtual reality visual field. Support surface tilt was held for 30 sec and then returned to neutral over a 30 sec period while the visual field continued to rotate. Segmental displacement and muscle EMG responses were recorded. An instantaneous mean frequency curve of muscle activity, center of mass, center of pressure, and ankle and hip angular excursion were used in a functional principal component analysis to measure changes over time. Results of these analyses indicated that both groups aligned their bodies to the visual flow during the pitch upwards rotation but adults with stroke produced much larger ankle responses than healthy older adults indicating a difference in postural strategy. Rod and Frame scores were correlated with lateral sway indicating that visually dependent individuals exhibited greater reliance on visual flow when it was matched to the velocity of the tilt perturbation.

## PRE FRACTURE MOBILITY LEVEL EVALUATED BY THE NEW MOBILITY SCORE PREDICTS LONG TERM REHABILITATION OUTCOMES

K.S. McGilton<sup>1</sup>, A.M. Davis<sup>2</sup>, G. Naglie<sup>3</sup>, S.C. Stewart<sup>4</sup>, 1. *Research, Toronto Rehabilitation Institute, Toronto, Ontario, Canada*, 2. *Toronto Western Research Institute, Toronto, Ontario, Canada*, 3. *Baycrest Centre for Geriatric Care, Toronto, Ontario, Canada*, 4. *Queens University, Kingston, Ontario, Canada*

**Purpose:** Clinicians need valid and easily applicable predictors of outcome in patients with hip fracture. To date, the potential of the New Mobility Scale (NMS), used to evaluate pre fracture mobility level, as a predictor of long-term rehabilitation outcomes has not been investigated. **Methods:** We studied 70 patients with a median age of 80 years who were consecutively enrolled in a study and admitted from their own homes post hip fracture to acute care hospitals (mean of 2.2 days) followed by a rehabilitation stay (mean of 7.0 days). The main outcome was the regain of independence in mobility, defined as independence in transferring to bed, toilet or tub, walking and climbing stairs, as measured by the Motor-FIM. Predictor variables were NMS mobility level before fracture, age, sex, and cognitive status, which was measured using the Mini-Mental State Examination. **Results:** In the multiple regression analysis, sex, cognitive status and NMS mobility level before fracture were significant at 3 months post discharge and accounted for 7%, 18% and 26% of the variance, respectively, in their mobility independence. At 6 months, cognitive status and NMS mobility level before fracture predicted 15% and 21%, respectively, of the variance in FIM-Mobility. Thus males with cognitive impairment and a low pre mobility NMS would be less likely to regain independence in mobility over time. **Discussion:** The NMS mobility level before fracture, sex, and cognitive status facilitate prediction of the rehabilitation outcomes at 3 and 6 months post hip fracture rehabilitation.

## THE ABSENCE OF ELECTROMAGNETIC FIELDS AND MIRROR THERAPY AS AN EFFECTIVE INTERVENTION COMBINATION STRATEGY FOR REDUCING PHANTOM LIMB PAIN IN VASCULAR AMPUTEES

H. Houston<sup>2,1</sup>, A. Dickerson<sup>1</sup>, 1. *Occupational Therapy, East Carolina University, Greenville, North Carolina*, 2. *Vidant Medical Center, Greenville, North Carolina*

This presentation will describe the results of a study to investigate the effectiveness of combining an intervention to eliminate electromagnetic fields and mirror therapy to decrease phantom limb pain. Fourteen adults with a unilateral vascular amputation (9 acute amputation) wore a Farabloc limb cover and performed mirror therapy exercises for four weeks. Measures were completed at three points (pre and post treatment and 4 weeks after the end of therapy) and included residual limb measures, pain, functional, and quality of life components. Results from ANOVAs showed a decrease in phantom limb pain for intensity ( $F(1,14)=8.83, p<.001$ ), frequency ( $F(1,14)=6.8, p<.001$ ), and duration ( $F(1,14)=2.1, p=.043$ ). Most significantly, wound healing and edema reduction (from pre to post  $F(1,14)=16.99, p<.001$ ) for acute amputees decreased time to prosthetic fitting from 12 to 8 weeks. Activities of daily living and quality of life variables also showed significant improvement (self care:  $F(1,14)=4.27, p<.001$ ; Walking:  $F(1,14)=2.6, p=.016$ ; Quality of life:  $F(1,14)=3.32, p=.004$ ). Prosthetic wearing times for previous amputees increased from 0-2 hours per day to 8-12 hours per day. Protocols and implications for function and quality of life will be discussed.

## MEDICAL INSTABILITY IS ASSOCIATED WITH POOR FUNCTIONAL RECOVERY IN SNF-BASED POST-ACUTE CARE

S.E. Hardy, S. Studenski, *Medicine/Geriatrics, University of Pittsburgh, Pittsburgh, Pennsylvania*

Older adults are being discharged from the hospital quicker and sicker, with the most vulnerable being discharged to skilled nursing

facilities (SNF) for post-acute care. Medical instability on admission to SNFs for PAC may limit the ability of older adults to regain their baseline functional status. We examined the association of markers of medical instability with return to baseline ADL function among 119 previously community-dwelling adults aged 65 or older admitted to a SNF for PAC. Our study population had a mean $\pm$ SD age of 81 $\pm$ 8 years, 72% were female, and 86% were white. On a scale ranging from 0 (no difficulty in any of 7 ADLs) to 14 (dependent in all 7 ADLs), they had mean functional scores of 2.3 $\pm$ 2.5 pre-hospital and 9.8 $\pm$ 3.7 on admission to PAC; 60 (50%) failed to regain their baseline function by discharge from rehab. Markers of instability associated with failure to regain baseline function were heart rate > 120 with minimal exertion (no 39%, unable to walk for reasons other than HR 56%, yes 67%;  $p=0.04$ ) and delirium (no symptoms 30%, symptoms without meeting CAM criteria 64%, delirium 60%,  $p=0.002$ ); abnormal oxygen saturation was also associated with failure to recover (no 40%, yes 63%), although this did not reach statistical significance ( $p=0.08$ ). Orthostatic changes, abnormal respiratory rate with minimal exertion, depressive symptoms, and pain were not associated with functional recovery. Early identification and treatment of vital sign abnormalities with minimal exertion has the potential to improve functional outcomes of SNF-based PAC.

## BALANCE AND FUNCTIONAL RESPONSES IN YOUNGER AND OLDER ADULTS: COMPARISON OF TWO TRAINING METHODS

S.J. Leach, *Physical Therapy, East Carolina University, Greenville, North Carolina*

Falls are a major health risk for older adults associated with increased mortality rates. Since the ability to take a step is an important component of fall prevention, one training method in this study utilized a rapid multi-directional stepping task (DATSAT) while the second method incorporated strength and endurance (SE) training. The purpose of this study was to determine balance and timed functional task responses in younger and older healthy adults comparing two different training methods. 30 healthy younger (HY) adults (18-29 y.o.) and 30 healthy older (HO) adults (65- 86 y.o.) were randomly assigned to either the DATSAT group or the SE group. For 18 training sessions the DATSAT group performed 12 sets of 8 trials of rapid multi-directional stepping in a divided-attention environment, while the SE group pedaled a stationary bike for 15 minutes at 60% max HR and completed 1 set of 8 repetitions of progressive bilateral leg strengthening exercises in 6 muscle groups. Test measures included maximum step length (MSL) in the forward, lateral, and backward directions, Timed Up and Go, the Berg Balance Scale and the following timed functional tasks: walk backward 3m; 5 x sit-to-stand; 5 x step up and down; floor-to-stand; kneel-to-stand. At pretest, the HY group had better balance and faster timed functional task responses than the HO group. Both groups demonstrated significant improvements from pretest to posttest and generally the HY and HO groups improved by similar amounts. The DATSAT group had greater improvements than the SE group in MSL.

## SESSION 2315 (SYMPOSIUM)

### ASSESSING THE NEEDS OF OLDER ADULTS IN NICARAGUA: A MULTI-DISCIPLINARY, CROSS-UNIVERSITY APPROACH

Chair: *K. Brown Wilson, Jessie F. Richardson Foundation, Clackamas, Oregon*

Discussant: *M.A. Perkinson, Saint Louis University, St. Louis, Missouri*

Populations worldwide are aging rapidly, and the opportunity to prepare for this global demographic shift is quickly diminishing, especially in developing nations, which, unlike developed nations today, "will grow old before they become rich." Early research on popula-

tion aging focused solely on more-developed countries; little information is available on the needs of older adults in the developing world. A coordinated effort to address this demographic imperative began in 2003, when the Jessie F. Richardson Foundation (JFR) – a charitable non-profit organization in Clackamas, Oregon – responded to a challenge from the Pan American Health Organization to broaden its mission to serve indigent elders to include addressing the needs of older adults in developing countries. Nicaragua was chosen as a beta site based on the paucity of in-country expertise in gerontology and geriatrics, the prevalence of severe poverty, relative political stability, and the ability to readily observe and measure change over time. With leadership from JFR, four universities in Oregon have developed programs in various disciplines focused on identifying needs and enhancing the health and well-being of older adults in Nicaragua. Models include a multidisciplinary service-learning program involving projects requested/guided by older Nicaraguans, including community-based elder needs assessments; a clinical program for students in allied health fields involving a health assessment of elders residing in homes for the elderly; a program for nursing students involving clinical needs assessments; and undergraduate field research. This symposium will detail the programs, describe key findings, outline future research needs, and discuss the applicability to other developing nations.

#### **ASSESSING THE HEALTH NEEDS OF COMMUNITY-RESIDING ELDERS IN NICARAGUA**

M.B. Neal, A. DeLaTorre, M. Cannon, *Portland State University, Portland, Oregon*

Portland State University (PSU) began developing service-learning and research projects in Nicaragua in 2003-04, when it became the first university to partner with the Jessie F. Richardson Foundation to begin to address the needs of indigent older Nicaraguans. Since then, each year from 9-18 undergraduate and graduate students from multiple disciplines throughout the university (e.g., public health, social work, business, biology, engineering) have taken an academic course concerning global aging and health, with a focus on Nicaragua, and then traveled with faculty to Nicaragua for 12-17 days to engage in a range of service and research projects. The data gathered have pertained to the health status and needs of urban and rural elders specifically in the state of Boaco, Nicaragua, and have included both quantitative and qualitative data. This presentation will detail the research findings to date and suggest directions for future research.

#### **ASSESSING ELDER HEALTH IN NICARAGUAN “HOGARES PARA LOS ANCIANOS” USING A COMMUNITY-BASED REHABILITATION APPROACH**

T. Boggis, A. Black, R. Reisch, K. Shaffer, *Pacific University, Hillsboro, Oregon*

In collaboration with the Jessie F. Richardson Foundation, other Oregon universities, and institutions located in Nicaragua, a team of allied health professional students and faculty from Pacific University have visited Nicaragua each year since 2007 with an aim to promote the health of marginalized elders. The program embraces an interdisciplinary, inter-collegial, Community-Based Rehabilitation (CBR) approach to guide research, service delivery and education. CBR is a participatory approach endorsed by the World Health Organization to facilitate sustainability of efforts. This presentation will detail the health concerns of Nicaraguan elders based on a needs assessment conducted within multiple regions of Nicaragua; the guiding principles of an interdisciplinary CBR approach and its outcomes in the promotion of sustainable research, education and services relevant to Nicaraguan elders; and how knowledge gained from this program informs practice in the development of similar initiatives.

#### **IMPROVING NURSING CARE OF ELDERS IN NICARAGUA THROUGH HEALTH ASSESSMENTS AND TRAINING PROGRAMS**

D. Bachand<sup>1</sup>, K. Brown Wilson<sup>2</sup>, *1. Concordia University, Portland, Oregon, 2. Jessie F. Richardson Foundation, Clackamas, Oregon*

Concordia University, in collaboration with the Jessie F. Richardson Foundation, initiated a program in 2010 to improve elder care in Jinotepe, Nicaragua. In the first year of the program, five nursing students, two nursing faculty, and one pre-med student participated by assessing and treating 350 older adults, as well as building indigenous capacity by training local healthcare professionals. In 2011, Concordia's director of nursing, a social work faculty, and two nursing students returned to Nicaragua to determine future projects in three cities, talked with the boards of directors of two nursing homes, and met with students and faculty at the University of Nicaragua-Managua to explore collaborative training opportunities. In May, 2012, nursing faculty, eight nursing students, and JFR staff will perform clinical work, education, and training of caregivers. This presentation will review the work of the program to date and share the findings of the health assessments conducted.

#### **SOCIAL FACTORS THAT CONTRIBUTE TO THE HEALTH OF OLDER NICARAGUANS IN BOACO**

C. Bolkan<sup>1</sup>, K. Tapia<sup>2</sup>, *1. Washington State University Vancouver, Vancouver, Oregon, 2. Portland State University, Portland, Oregon*

A native Nicaraguan undergraduate student who participated in the Portland State University (PSU) service-learning program to Nicaragua was accepted into the McNair Scholars program, which provides research training to underrepresented students who hope to pursue doctoral degrees. The student collaborated with a Washington State University Vancouver (WSU) professor on a research project intended to understand the social factors that contribute to the health of older adults in Boaco, Nicaragua. They analyzed exploratory data previously collected in the PSU program and then specifically targeted the collection of new data that examined how the behaviors and attitudes of older Nicaraguans affect their physical and mental health. This presentation will detail the results of that study, suggest interventions that may mitigate the identified behaviors and problems, and describe how undergraduate field research opportunities can benefit students and the community.

#### **SESSION 2320 (SYMPOSIUM)**

##### **ASSISTIVE TECHNOLOGY AND EMPLOYMENT AMONG OLDER AND YOUNGER PEOPLE WITH DISABILITIES**

Chair: *J. Wiener, Aging, Disability and Long-Term Care, RTI International, Washington, District of Columbia*

Discussant: *C. Harrington, University of California, San Francisco, San Francisco, California*

Two of the key issues among older and younger people with disabilities are the effectiveness of assistive technology and participation in the workforce. Providing human assistance to people with disabilities is expensive and workforce shortages in long-term care and the broader American workforce are almost certain to grow over time. In addition, informal caregivers are often not able to maintain regular paid employment while providing care to loved ones or friends. Some observers have suggested that assistive technologies might substitute for human workers in the provision of personal assistance services to promote care recipient and caregiver independence. Using the 2004 National Long-Term Care Survey, the first presentation will analyze whether this is the case. The findings suggest that the answer depends on the types of needs being met and whether the caregiver is paid to provide care. Closely related to the issue of assistive technology is what people with disabilities need to participate in the workforce. Current labor force participation rates among people with disabilities are extremely low. A second presentation will present an analysis of a sur-



vey of Medicaid home care beneficiaries in six states and the barriers to their working. A third presentation will assess a wide range of assistive technologies for people with Alzheimer's disease, finding that most are of limited utility. Most require too much executive function to be useful, although their role in monitoring safety may be more promising. Charlene Harrington, Director of the Center for Personal Assistance Services, will be the discussant.

### **WHICH WORKS BEST FOR ME? ASSISTIVE TECHNOLOGY, PERSONAL ASSISTANCE SERVICES OR BOTH?**

W.L. Anderson<sup>1</sup>, J. Wiener<sup>2</sup>, *1. Aging, Long-Term Care and Disability, RTI International, Research Triangle Park, North Carolina, 2. RTI International, Washington, DC, District of Columbia*

Disability and need for personal assistance services (PAS) has declined in recent years, while use of assistive technology (AT) has increased. Prior work has considered whether AT and PAS are complements or substitutes, but this relationship depends on contextual factors and analysis methods. This study assessed which of five ATs were substitutes or complements by decomposing PAS into total and formal care hours. Sample members were 2004 National Long-Term Care Survey community-dwelling respondents receiving assistance with activities of daily living. OLS on total PAS hours was estimated on the entire sample, and Logit and OLS models were estimated on the likelihood and hours of formal PAS, respectively. We found substitution effects on the use of total PAS for three types of AT, but complementary effects on the use of formal PAS for two types of AT. Understanding these relationships is important for near term fiscal implications and longer-term workforce policy.

### **WORK AND DESIRE TO WORK AMONG MEDICAID HOME AND COMMUNITY-BASED SERVICES BENEFICIARIES**

J. Wiener<sup>1</sup>, W.L. Anderson<sup>2</sup>, *1. Aging, Disability and Long-Term Care, RTI International, Washington, District of Columbia, 2. RTI International, Research Triangle Park, North Carolina*

Despite many policy initiatives to bring them into the labor force, most people with disabilities do not work, due to health problems and lack of supportive services, transportation and assistive technologies. Unemployment is a problem, especially for younger people with disabilities, because work is important for social participation and independence. This presentation reports on an analysis of a survey of Medicaid home and community-based services beneficiaries in six states. Medicaid home and community-based services waiver participants who are working are quite different from those who are not working. The Medicaid-enrolled working population with disabilities has better health status and is more likely to participate in education and training, and has better access to assistive technology and transportation than the non-working population. Despite better health status and lower ADLs, the working population receives more hours of home and community-based services. Strategies to increase labor participation will be discussed.

### **ASSISTIVE TECHNOLOGIES FOR PEOPLE WITH DEMENTIA AND THEIR CAREGIVERS AT HOME: WHAT MIGHT HELP?**

J. Maier, J. O'Keefe, *Aging, Long Term Care & Disability, RTI International, Waltham, Massachusetts*

This presentation provides an overview of assistive technology (AT) products that are designed for persons with dementia and their caregivers. Compared with AT products available to people with physical impairments, few products are available that can help compensate for the cognitive deficits common in persons with dementia. Failure to recognize the complexity of dementia results in the development of AT products designed to address a single deficit—memory impairment. These products are likely to be effective only for people with mild cog-

nitive impairment and are likely to be of little value to people whose executive function is impaired. Technology to facilitate monitoring and supervision by caregivers may have the potential to reduce caregiver burden, by reducing the need to constantly be with the person with dementia, but it cannot completely eliminate the risk.

## **SESSION 2325 (SYMPOSIUM)**

### **FINDINGS FROM THE NATIONAL POST-ACUTE CARE PAYMENT REFORM DEMONSTRATION**

Chair: *B. Gage, RTI International, Waltham, Massachusetts*

The purpose of this panel is to discuss RTI's work with the Centers for Medicare and Medicaid Services (CMS) in developing the Continuity and Assessment Record and Evaluation (CARE) tool, a set of standardized assessment items for post-acute care settings, and subsequent testing of items in a national demonstration. The panel will cover several facets of this work, including: an overview of the demonstration, measurement of functional change, findings of resource utilization across post-acute care settings, and the analysis of readmissions in post-acute care settings. Through this symposium, we will demonstrate the many advantages and uses of the CARE tool as the first comprehensive assessment tool designed to collect data from all types of post-acute care providers, including inpatient rehabilitation facilities, long-term care hospitals, home health agencies, and skilled nursing facilities, in four major domains: medical, functional, cognitive impairments and social/environmental factors.

### **30-DAY READMISSION RATES IN POST-ACUTE CARE SETTINGS**

M. Ingber, *RTI International, Waltham, Massachusetts*

Readmissions increase costs and can be an indicator of poor quality. Previously it has been difficult to compare outcomes and quality across post-acute care (PAC) settings due to differences in measures and data collection procedures. The study objective was to test whether patient risk for readmission is associated with the type of PAC setting used, after controlling for patient acuity. We looked at all-cause readmissions for PAC patients within 30 days of acute hospital discharge. After adjusting for patient characteristics, we found that LTCHs had lower rates of readmissions within 30 days of discharge in relation to SNFs. This could be because LTCHs are hospitals with a greater ability to treat higher severity patients, so fewer patients require readmission to acute hospitals. This study shows the utility of the CARE tool in studying risk adjusted readmission rates across PAC disciplines, which was previously difficult due to the lack of a standard tool.

### **RESOURCE UTILIZATION ACROSS POST-ACUTE CARE SETTINGS**

M. Morley, *RTI International, Waltham, Massachusetts*

A goal of the PAC-PRD was to examine patient-specific resource use in the four PAC settings (HHA, SNF, IRF, and LTCH). Staff time data were collected to quantify the time spent with individual patients. These data were stratified into groups with similar case-mix characteristics to look at whether different settings provide equal treatment intensity for similar patient types. Multivariate analyses examined the factors predicting routine nursing resource intensity across PAC settings. The results of the analyses demonstrate that routine resource intensity varies across settings. The results also indicate the potential for using one case-mix adjustment system for inpatient PAC settings and a separate model for home health given that resource use patterns differed significantly in HHA compared to the inpatient PAC settings.

### **FUNCTIONAL CHANGE OUTCOMES IN POST-ACUTE CARE SETTINGS**

A. Deutsch, *RTI International, Waltham, Massachusetts*

It is vital to understand patient outcomes when studying the effectiveness of treatments. Due to the previous lack of a consistent tool to

measure functional status across settings, the study of patient outcomes after post-acute care stays has been an interest of CMS. This study examined the change in self-care and mobility functioning from admission to discharge in post-acute care settings using items from the CARE tool in order to measure functional outcomes across these sites. After controlling for selected measures of patient acuity at admission, provider type was shown to be a statistically significant predictor in the models of change in self care functional ability but not for mobility functioning. The analysis did not attempt to control for non-clinical factors such as patient engagement, family involvement, or length of treatment which may vary between settings. While the findings are not definitive, they indicate potentially interesting results related to comparative outcomes.

## OVERVIEW OF THE POST-ACUTE CARE PAYMENT REFORM DEMONSTRATION

B. Gage, *RTI International, Waltham, Massachusetts*

In response to the lack of a standardized system of payment and assessment for post-acute care (PAC) providers, Congress authorized the Post-Acute Care Payment Reform Demonstration in 2005. RTI, in conjunction with CMS, created a standardized assessment, the Continuity Assessment Record and Evaluation (CARE) tool, and collected assessments and resource utilization data from PAC providers in eleven market areas. The tool assesses patient acuity, functional and cognitive impairment and social support. Selected results of this effort will be presented. The CARE tool has the capacity to improve data collection and enhance understanding of the patients receiving care in various PAC settings.

## SESSION 2330 (SYMPOSIUM)

### MAKING FAMILIES MATTER IN LONG-TERM CARE

Chair: *S. Zimmerman, Univ North Carolina Chapel Hill, Chapel Hill, North Carolina*

Discussant: *L.P. Gwyther, Duke University, Durham, North Carolina*

The majority of older adults who reside in nursing homes (NHs) and residential care/assisted living (RC/AL) received support from family members before they moved into the long-term care setting, and continue to receive support long after they move in. Family involvement is not always straightforward, however, as they may not have a clear role in care and may feel burdened by the role they do have. Similarly, the relations of staff with families may be conflicted. This symposium will report findings from an NIH-funded group randomized trial intended to promote family involvement in long-term care to improve resident quality of life and promote family and staff well-being, entitled Families Matter in Long-Term Care. Data from family (N=488) and staff (N=397) from 24 NHs and RC/AL settings will be presented to shed light in five areas: differences in staff and family well-being in NHs versus RC/AL; the role of dementia in family involvement and burden; staff burden in RC/AL; fidelity decision-making related to the long-term care intervention research; and results of the trial. Among other findings presented will be that Families Matter resulted in decreased family burden and better resident quality of life, but also more family guilt and conflict, while staff reported uniformly positive outcomes including less burnout, more of a sense of working in partnership with families, and that families were more empathic (all  $p < .05$ ). The discussant will consider the findings of all presentations in the context of promoting the well-being of residents, family, and staff in long-term care.

### DIFFERENCES IN STAFF AND FAMILY WELL-BEING IN NURSING HOMES AND ASSISTED LIVING

S. Zimmerman<sup>1</sup>, L.W. Cohen<sup>1</sup>, D.A. Reed<sup>1</sup>, L.P. Gwyther<sup>2</sup>, A.S. Beeber<sup>1</sup>, P.D. Sloane<sup>1</sup>, *1. Univ North Carolina Chapel Hill, Chapel Hill, North Carolina, 2. Duke University, Durham, North Carolina*

Across the country, staff and family provide care to almost 1.5 million nursing home and 1 million assisted living residents. Staff and family well-being is important, and considering that assisted living may care for residents who might otherwise be in nursing homes, it is helpful to understand whether the setting relates to differences in well-being. In models adjusted for resident and other differences, families (N=488) from 24 settings reported more guilt and depression but less burden ( $p < .05$ ) in nursing homes, but no differences in 11 other areas; staff (N=397) reported more uplifts, absenteeism, and were more likely to recommend the workplace in nursing homes ( $p < .05$ ), but no differences in 18 other areas. Taken together, it is important to note that family and staff well-being are substantially similar across settings, although there is cause to look more closely where there are differences to understand how the setting might better improve well-being.

### FAMILIES MATTER IN LONG-TERM CARE: RESULTS OF A GROUP RANDOMIZED TRIAL

S. Zimmerman<sup>1</sup>, L.W. Cohen<sup>1</sup>, L.P. Gwyther<sup>2</sup>, D.A. Reed<sup>1</sup>, T.R. Washington<sup>1</sup>, J.G. Cagle<sup>1</sup>, P.D. Sloane<sup>1</sup>, J. Preisser<sup>1</sup>, *1. Univ North Carolina Chapel Hill, Chapel Hill, North Carolina, 2. Duke University, Durham, North Carolina*

In light of the workforce shortages in long-term care and the presence of family who want to be involved after their relative moves there, this project helped families create a specific role for themselves (related to helping the resident do things, get around, look good, eat well) in six nursing homes and 18 assisted living settings. At six month follow-up in intervention sites compared to control sites, families (N=488) reported decreased burden and better resident quality of life, but also more guilt and conflict; staff (N=397) reported less burnout, more of a sense of working in partnership with families, and that families were more empathic (all  $p < .05$ ). Findings suggest a benefit to increasing family involvement – especially for residents and families – but attention must be paid to the reasons for and ways to alleviate family members' resulting guilt and conflict.

### FAMILY AND STAFF CAREGIVERS WEIGH IN ON ROLE OF DEMENTIA IN FAMILY INVOLVEMENT AND BURDEN

L.W. Cohen<sup>1</sup>, D.A. Reed<sup>1</sup>, L.P. Gwyther<sup>2</sup>, P.D. Sloane<sup>1</sup>, A.S. Beeber<sup>1</sup>, T.R. Washington<sup>1</sup>, S. Zimmerman<sup>1</sup>, *1. Univ North Carolina Chapel Hill, Chapel Hill, North Carolina, 2. Duke University, Durham, North Carolina*

Family involvement is important to the quality of life of long-term care residents, but may create family burden and do so differently when the resident has dementia. This study asked family and staff caregivers of 467 residents from 24 nursing homes and assisted living settings about the frequency and content of family visits and related burden. Although families of all residents reported similar visit frequency, content varied based on dementia. Families of residents with dementia spent more time supporting resident care, including discussing care with staff; attending to resident hygiene, nutrition, and physical function; and helping around the community ( $p < .05$ ). Staff reported similar patterns of family involvement, but less involvement in most areas, including visitation ( $p \leq .001$ ). Independent of dementia, involvement in four activities related to higher family burden. Because some activities are more likely to increase burden, all stakeholders should be thoughtful about how families should optimize visit time.

## HOW EQUAL IS THE BURDEN? CHARACTERISTICS AND ATTITUDES OF DIRECT CARE AND ADMINISTRATIVE STAFF IN ASSISTED LIVING

A.S. Beeber<sup>1</sup>, L.W. Cohen<sup>1</sup>, S. Zimmerman<sup>1</sup>, D.A. Reed<sup>1</sup>, L.P. Gwyther<sup>2</sup>, P.D. Sloane<sup>1</sup>, 1. *Univ North Carolina Chapel Hill, Chapel Hill, North Carolina*, 2. *Duke University, Durham, North Carolina*

Residential care/assisted living (RC/AL) differs from nursing homes by having less of a hierarchical nursing structure, a difference appreciated by proponents who contend that such a hierarchy negatively affects care provision. However, no research has examined the extent to which differences exist between direct care workers (DCWs) and administrative staff (AS) in RC/AL reflective of a hierarchical structure. This analysis compared the characteristics and attitudes of direct care workers (N=250) and administrative staff (N=30) from 18 settings, and also the extent to which they related to turnover. DCWs reported worse health despite being younger, and were more often minorities; they reported poorer attitudes in many areas, including burden, frustration, depersonalization, hassles, and relations with family; of these, burden related to increased likelihood of turnover (all  $p < .05$ ). These findings suggest that RC/AL staffing is of a hierarchical nature, and may benefit from attention to the burden and frustration experienced by DCWs.

## FIDELITY DECISION-MAKING IN LONG-TERM CARE INTERVENTION RESEARCH: A CASE EXAMPLE

T.R. Washington<sup>1</sup>, S. Zimmerman<sup>1</sup>, J.G. Cagle<sup>1</sup>, L.W. Cohen<sup>1</sup>, A.S. Beeber<sup>1</sup>, D.A. Reed<sup>1</sup>, L.P. Gwyther<sup>2</sup>, P.D. Sloane<sup>1</sup>, 1. *Univ North Carolina Chapel Hill, Chapel Hill, North Carolina*, 2. *Duke University, Durham, North Carolina*

Treatment fidelity, the extent to which an intervention is delivered as intended, continues to be a methodological challenge in social and behavioral intervention research. Treatment fidelity is a particularly thorny issue in long-term care, especially when there is hope that the intervention will be translated into actual care practices, due to staff turnover, resident attrition, regulatory changes, and limited resources and space. In light of these challenges, this paper presents a case example to describe fidelity decision-making when conducting a multifaceted family involvement intervention across 12 long-term settings, including decisions related to dosing and fidelity monitoring and promotion. Various strategies and the rationale for these decisions will be discussed, such as measuring dose by staff as well as family exposure; monitoring fidelity by family report as opposed to observation; and promoting fidelity by postcard reminders. The authors conclude with recommendations for fidelity enhancing strategies in long-term care intervention research.

## SESSION 2335 (SYMPOSIUM)

### NEIGHBORHOOD AND HEALTHY AGING: A MULTI-FACTORIAL AND MULTI-CITY PERSPECTIVE

Chair: *H. Chaudhury, Gerontology, Simon Fraser University, Vancouver, British Columbia, Canada*

Co-Chair: *J. Norstrand, Boston College, Boston, Massachusetts* Co-Chair: *G. Luhr, Portland State University, Portland, Oregon*

Although research on neighborhood-based factors influencing healthy aging and aging-in-place is fast growing, there is much to be

examined in terms of influencing factors, their interrelationships, associated processes and variations across diverse geographic regions. This symposium presents five recent empirical studies that present a diverse set of issues and challenges in neighborhood environmental, social, physical aspects in influencing walkability, mobility, diet, social cohesion and depression. The first study presents relationship between neighborhood resources and mobility in older adults in Philadelphia. The second study continues this theme in the specific context of food environment's role on diet-health outcomes and food consumption in older adults in Montreal. The third study reports findings on the impact of higher traffic volume on walkability, air quality and objective health indicators in Vancouver. The fourth study looked at the association of neighborhood walkability, perceived safety and social cohesion with depression among older adults in New York City. The final study explored differences in sense of community and its influencing factors in rural and urban areas of Japan. The empirical findings of these studies make a rich addition to the domain of neighborhood and health relations, and make a strong case for continued research in understanding the complexity and multi-layered nature of neighborhood-health relationship. Moreover, the associations between neighborhood-level variables and both physical and mental health outcomes are further substantiated in these studies. Relevance of the issues in five diverse urban areas across three countries underscore the global nature of the importance of neighborhood in healthy aging.

### NEIGHBORHOOD RESOURCES AND MOBILITY OF OLDER ADULTS IN PHILADELPHIA, PA

A.L. Rosso<sup>1</sup>, T. Grubestic<sup>2</sup>, A. Auchincloss<sup>1</sup>, L. Tabb<sup>1</sup>, J. Taylor<sup>1</sup>, Y.L. Michael<sup>1</sup>, 1. *Epidemiology and Biostatistics, Drexel University School of Public Health, Philadelphia, Pennsylvania*, 2. *Drexel University College of Information Science and Technology, Philadelphia, Pennsylvania*

Diversity of resources in the immediate neighborhood may influence mobility of elders. We used GIS to evaluate access to 19 neighborhood resources among 675 community-dwelling older adults living in 275 Philadelphia neighborhoods (census tracts) in 2010. Resources included, for example, churches, grocery stores, senior centers and pharmacies. Mobility was measured by the Life-Space Assessment (LSA; range: 0-104, median = 52). ZIP code in which subjects spent the most time away from home was recorded. Adjusted associations between neighborhood resources and mobility stratified by travel patterns were calculated by generalized estimating equations. Among those who stayed in their home ZIP code, access to more diverse resources was positively associated with higher LSA scores (9.9 points, 95% confidence interval: 1.2, 18.6 for most compared to least diverse neighborhoods) after adjustment for demographic characteristics and individual and neighborhood socioeconomic status. Findings suggest that neighborhood access to diverse resources supports mobility of older adults.

### NEIGHBORHOOD CHARACTERISTICS AND DEPRESSION AMONG OLDER ADULTS IN NEW YORK CITY: THE ROLE OF NEIGHBORHOOD WALKABILITY, PERCEIVED SAFETY AND SOCIAL COHESION

T. Yan<sup>1</sup>, S. Merkin<sup>2</sup>, W. Gallo<sup>3</sup>, 1. *SCAN Health Plan, Long Beach, California*, 2. *University of California Los Angeles, Los Angeles, California*, 3. *City University of New York, New York, New York*

Objectives. To examine the associations between neighborhood characteristics and depression among older adults in New York City (NYC). Methods. Data are from the 2008 Health Indicators Project, a cross-sectional survey of 1,870 older adults attending 56 NYC senior centers. Neighborhood characteristics included walkability, perceived safety,

and social cohesion. Depression was assessed using the nine item depression scale of the Patient Health Questionnaire (PHQ-9). Generalized linear models with log transformation were conducted to examine the associations between neighborhood characteristics and depression. Results. Better neighborhood walkability ( $b=-0.07$ ,  $p<.0001$ ), perceived safety ( $b=-0.03$ ,  $p=.001$ ), and social cohesion ( $b=-0.04$ ,  $p<.001$ ) were associated with a lower level of depression among older adults, adjusting for individual sociodemographic, behavioral, and biological factors. Discussion. Improvement in physical and social neighborhood environments may contribute to better mental health among older adults.

#### **THE 2010 VANCOUVER OLYMPIC GAMES AND SUSTAINABILITY IN ACTION FOR SENIORS (2010 SAS): ENVIRONMENTAL IMPACTS OF MEGA-EVENTS ON OLDER ADULTS**

H. Stewart<sup>1,2</sup>, E. Hwang<sup>3</sup>, R. Allen<sup>4</sup>, C. Lim<sup>5</sup>, R. Savage<sup>1</sup>, 1. *Department of Gerontology, Simon Fraser University, Vancouver, British Columbia, Canada*, 2. *Brain Research Centre, The University of British Columbia, Vancouver, British Columbia, Canada*, 3. *Department of Family and Consumer Sciences, University of Tennessee Martin, Martin, Tennessee*, 4. *Faculty of Health Sciences, Simon Fraser University, Burnaby, British Columbia, Canada*, 5. *Department of Civil Engineering, University of British Columbia, Vancouver, British Columbia, Canada*

The 2010 Vancouver Winter Olympics provided an opportunity to study mega-event mediated measurable changes to the built environment and their impacts on residents of the host city, including older adults. An integrated transportation plan employed during the Games resulted in significant changes to pedestrian and vehicular volumes and routes in Vancouver including neighbourhoods with relatively higher densities of older adults. It was hypothesized that these changes would have measurable impacts on neighbourhood air quality, and downstream effects on older adult residents' physical activity levels, mobility, health and overall quality of life. We collected data on functional health, quality of life, respiratory function, and physical activity from older adults residing in 2 neighbourhoods experiencing traffic changes before, during and after the Games. During the same observation periods, we monitored neighborhood walkability and air quality and conducted clinical examinations of participants to assess health impacts. Study results will be discussed.

#### **BLENDING IN A COMMUNITY THROUGH SOCIAL PARTICIPATION: HOW TO CULTIVATE THE SENSE OF COMMUNITY IN JAPANESE URBAN SENIOR RESIDENTS**

K. Katagiri<sup>1</sup>, I. Sugawara<sup>2</sup>, 1. *Institute for Social Gerontology, Nipponkoa Welfare Foundation, Tokyo, Japan*, 2. *Institute of Gerontology, the University of Tokyo, Tokyo, Japan*

The number of elderly households is increasing, especially in Japanese urban cities. Most children of elderly people live away from them; thus, the latter must live in harmony with their neighbors so that they can continue living in their familiar environments. However, they seldom interact with their neighbors and do not get very involved in their communities. This study aims to explore differences in the sense of community and determines what can enhance this sense in rural and urban areas. A random sampling survey on Japanese people aged 50–60 years was conducted in urban and rural areas in 2008. Rural residents' sense of community was better than that of their urban counterparts. Multiple regression analyses on sense of community showed that engagement in social activities positively related; its coefficient was larger for urban residents. The result suggested that social participation effectively ensures "aging in place", especially in urban areas.

#### **ASSOCIATIONS BETWEEN THE FOOD ENVIRONMENT, DIET-HEALTH AWARENESS, AND OLDER ADULTS' DIET**

G. Mercille<sup>1,4</sup>, L. Richard<sup>1,2,7</sup>, L. Gauvin<sup>4,5,6</sup>, Y. Kestens<sup>5,4</sup>, B. Shatenstein<sup>7,3</sup>, M. Daniel<sup>8,5</sup>, H. Payette<sup>9,10</sup>, 1. *Institut de recherche en santé publique de l'Université de Montréal, Montréal, Québec, Canada*, 2. *Faculty of Nursing, Université de Montréal, Montréal, Québec, Canada*, 3. *Department of nutrition, Université de Montréal, Montréal, Québec, Canada*, 4. *Department of Social and Preventive Medicine, Université de Montréal, Montréal, Québec, Canada*, 5. *Centre de Recherche du Centre Hospitalier de l'Université de Montréal, Montréal, Québec, Canada*, 6. *Léa-Roback Research Centre on Social Inequalities of Health in Montréal, Montréal, Québec, Canada*, 7. *Institut Universitaire de Gériatrie de Montréal, Montréal, Québec, Canada*, 8. *Sansom Institute for Health Research, University of South Australia, Adelaide, South Australia, Australia*, 9. *Department of Community Health Sciences, University of Sherbrooke, Sherbrooke, Québec, Canada*, 10. *Research Center on Aging, Health and Social Services Center-University Institute of Geriatrics of Sherbrooke, Sherbrooke, Québec, Canada*

This study examined associations between exposure to neighborhood food sources, awareness of diet-health outcomes, and food consumption among seniors living in Montreal in 2004 ( $n=722$ ). Proportions of fast-food outlets (FFO) relative to all restaurants and proportions of healthful food stores (HFS) relative to all stores were estimated for 500m buffers around participants' homes with GIS data. Two dietary patterns were identified from food-frequency questionnaire data. Main and interactive effects of awareness levels and food-sources exposure on diet scores were tested using separate linear regression analyses for women and men, accounting for individual- (health and socio-demographic) and area-level (socioeconomic and ethnicity) covariates. In both sexes, lower diet-health awareness was associated with poorer food consumption. Negative effects of FFO on diet scores were more pronounced among women with lower levels of awareness. Environmental and individual level factors jointly influence food consumption in older women.

#### **SESSION 2340 (SYMPOSIUM)**

##### **RESEARCH STRATEGIES TO CREATE AN AGE-FRIENDLY WORLD ONE COMMUNITY AT A TIME**

Chair: *K. Fitzgerald, Center for Gerontology, University of Zurich, Zurich, Switzerland*, *Western Kentucky University, Bowling Green, Kentucky*

Co-Chair: *D.B. Bradley, Western Kentucky University, Bowling Green, Kentucky*

Discussant: *A.O. Pelham, San Francisco State University, San Francisco, California*

This symposium will examine the international movement to form age-friendly cities which encourages municipalities to transform themselves so that they become better places to live for older people. Characteristically, these initiatives involve multiple institutional sectors. A focus on community features is a departure from aging initiatives concerned with older people as individuals. In many developed nations, the vast majority of resources in public initiatives to support older people are invested in financial security, health care, and long-term care where the focus is on individual benefits. Community features that collectively benefit residents have received much less systematic attention. The call for age-friendly community features comes at a time when the public sector has little money for new initiatives. This means that the policy tools available to encourage age-friendly community initiatives do not include major direct financial incentives. Instead, the policy tools are more likely to involve public education, regulation, enforcement, and perhaps tax incentives. After an introduction of the age-friendly cities concept developed by the World Health Organization, five case studies will be presented showcasing a variety of public policy research strate-

gies and implementation venues in the United States. Bowling Green (KY), Des Moines (IA), Philadelphia (PA), Portland (OR), and New York City (NY) have each approached the research and program implementation process slightly differently and will provide the audience a detailed discussion about how each city is using gerontological research to create collaborations among local organizations and the city government to inform public policy while making the community age-friendly.

### **ENGAGING AGING IN THE COMMUNITY: THE DEVELOPMENT OF AGE-FRIENDLY CITIES**

K. Fitzgerald<sup>2,1</sup>, D.B. Bradley<sup>2</sup>, P.H. Blanchard<sup>3</sup>, U. Tokekar<sup>2</sup>, 1. *Center for Gerontology, University of Zurich, Affoltern am Albis, Switzerland*, 2. *Western Kentucky University - Center for Gerontology, Bowling Green, Kentucky*, 3. *AARP Kentucky, Bowling Green, Kentucky*

Research utilizing an active aging framework conducted for the World Health Organization (WHO) was the basis for the development of the WHO Global Network of Age-friendly Cities. This presentation describes an age-friendly city and discusses how the outcomes of focus groups conducted in 33 cities around the world were utilized to develop core features of an age-friendly city. The case of how a small southern city, Bowling Green (KY), implemented a civic engagement model to achieve the WHO Age-friendly City status is examined. Researchers from Western Kentucky University, AARP Kentucky and the City of Bowling Green convened a “gathering” of 45 organizations and employed an engagement model focusing on citizens, voices, common ground and knowledge. Results included a decision on common issues, a commitment to support a Senior Leadership program and renewed community partnerships aimed at improving policies and informing leaders about ways to enhance Bowling Green’s age friendliness.

### **WHAT AFFECTS YOUR ABILITY TO LIVE YOUR BEST LIFE IN YOUR COMMUNITY?**

Y. Shah<sup>1</sup>, K. Sovern<sup>2</sup>, J. Olah<sup>3</sup>, 1. *Des Moines University, Des Moines, Iowa*, 2. *AARP, Des Moines, Iowa*, 3. *Aging Resources of Central Iowa, Des Moines, Iowa*

This question framed the first phase of the research effort resulting in the City of Des Moines named a WHO age-friendly city (AFC) member. Des Moines consists of 58 neighborhood associations organized into 4 wards. In late 2011 the authors initiated series of community outreach and engagement meetings, utilizing the Meridia audience response system in each of Des Moines city wards. The meetings were designed to introduce the participants to the AFC project design. We will present our baseline data of participant responses confirming congruence or acceptance with some of the WHO AFC criteria. We followed up on this by implementing a household survey administered in the City of Des Moines. We will report the results of household surveys, designed to measure 50+ year old resident attitudes about the extent to which their community meets the WHO ‘age-friendly’ criteria.

### **INTEGRATING RESEARCH INTO POLICY: THE CASE OF AGE-FRIENDLY PHILADELPHIA**

A. Glicksman, K.O. Clark, L.N. Ring, C. Hoffman, *Research, Phila Corporation for Aging, Philadelphia, Pennsylvania*

While both researchers and policy makers are often committed to the same goals, it can be difficult to bring the two groups together in an effective collaboration. Age-friendly Philadelphia (AfP), an effort of the Philadelphia Corporation for Aging, has successfully blended research (statistics, Geographic Information Systems and qualitative methods) into a policy and planning agenda on environment and aging. This presentation will illustrate how M. Powell Lawton’s “Environmental Press” model has influenced research efforts to support public policy. The example that will be used will be findings from an NINR/NIH funded study of the impact that neighborhood environments have on health outcomes of low-income older adults, called Walkability’s Impact on Senior Health (WISH). We will examine how the findings are turned into policy initiatives designed to make the city more age-friendly.

### **AGE-FRIENDLY PORTLAND: TRANSLATING RESEARCH TO COMMUNITY ACTION**

A. DeLaTorre, M.B. Neal, *Institute on Aging, Portland State University, Portland, Oregon*

In 2006-07, the Institute on Aging (IOA) at Portland State University undertook a baseline assessment of Portland’s age friendliness as a participant in the World Health Organization’s (WHO) Age-friendly Cities project. Since then, IOA researchers have disseminated findings, facilitated the City’s membership in the WHO Global Network of Age-friendly Cities, and developed partnerships aimed at improving policies and informing leaders about ways to enhance Portland’s age friendliness. This presentation describes the progress made toward the creation of an Action Plan for an age-friendly Portland and specifically addresses several key aspects of the project, including: the formation of partnerships with university, public, private, and non-profit agencies; the creation of an advisory group; participation on the Mayor’s advisory task force and consultation with the Bureau of Planning and Sustainability on the development of the Portland Plan, including a provision for Action Plan development; and identification of indicators to monitor progress over time.

### **AGE-FRIENDLY NYC**

R. Finkelstein, S. Roher, *The New York Academy of Medicine, New York, New York*

The Age-friendly NYC Initiative, formed in 2007, conducts research and evaluation to identify key needs, inform priorities, and assess effectiveness of program components. Sixty community consultations were conducted with thousands of older adults to obtain their perspectives on NYC assets and challenges; focus groups with immigrant groups were conducted in five languages to ensure cultural diversity, and; special forums were held with LGBT older adults. Aging Improvement Districts, a new model of neighborhood development piloted in three diverse neighborhoods, have been evaluated in terms of outreach, inclusion, and impact on older adults and neighborhood stakeholders. The presentation will include a discussion of findings and the challenges of translating community-based gerontological research into program and policy initiatives. Objectives: After attending this activity, participants will be able 1.To describe original research conducted with older adults in New York City; 2.To analyze how gerontological research can inform policy changes.

## **SESSION 2345 (PAPER)**

### **HEALTH CARE SERVICE, ORGANIZATION, AND TRANSITION**

#### **30-DAY READMISSION AMONG SERIOUSLY ILL OLDER ADULTS: WHY DO THEY COME BACK?**

S. Enguidanos<sup>1</sup>, E. Vesper<sup>2</sup>, K. Lorenz<sup>3</sup>, 1. *Davis School of Gerontology, University of Southern California, Los Angeles, California*, 2. *Kaiser Permanente, Downey, California*, 3. *Veterans Administration, Los Angeles, California*

Background: Hospital readmissions among seriously ill patients are extremely costly and may not align with patient preferences for care. While numerous studies have examined factors associated with hospital readmission among general populations of older adults, little is known about factors associated with readmissions among seriously ill patients receiving palliative care consultations. Methods: Retrospective secondary analysis was conducted to investigate the factors associated with hospital readmissions among patients receiving a consultation from the inpatient palliative care team. Data from 408 managed care patients 65 years old and older were collected following an inpatient palliative care consultation and subsequent hospital discharge. Results: Among inpatient palliative care patients, 10% of those discharged from the hospital were readmitted within 30 days. Factors associated with hospital

readmission included being discharged from the hospital with no care in the home or to a nursing facility. There was a weak association for those who did not have an advance directive ( $p=.06$ ) having greater odds of hospital readmission. Having a close family member as primary emergency contact was marginally associated with lower odds of readmission compared with those with either a friend or distant relative or no emergency contact ( $p=.09$ ). Conclusions: Having hospice or home-based palliative care post-discharge was associated with significantly lower odds of hospital readmission, suggesting continuity of palliative care is an important factor in reducing hospital readmissions. Implications of these readmissions on quality and costs of care will be discussed along with need for future research on new models of care to improve continuity.

#### **HEALTH CARE EXPERIENCES OF MEDICARE/MEDICAID-ELIGIBLE OLDER ADULTS IN CONNECTICUT: A QUALITATIVE STUDY**

N. Shugrue<sup>1</sup>, P. Higgins<sup>1</sup>, K. Ruiz<sup>1</sup>, M. Price<sup>2</sup>, J. Robison<sup>1</sup>, 1. *University of Connecticut Center on Aging, Farmington, Connecticut*, 2. *Health Policy Matters, Newton, Massachusetts*

In 2011, the Centers for Medicare & Medicaid Services awarded “State Demonstration Grants to Fully Integrate Care for Dual Eligible Individuals” (Medicare and Medicaid) to 15 states, including Connecticut. To inform the design of an integrated health and social service demonstration program to better coordinate care for the state’s dually eligible individuals age 65 and older, researchers conducted eight focus groups with 71 individuals across the state: six with community-dwelling individuals age 65+, both healthy and with chronic disease or disability; one with nursing home residents; and one with family members of individuals with chronic disease or disability. One of the community-dwelling focus groups was conducted with Spanish-speaking individuals. Results from the wide range of experience and opinion were clustered in four domains: current experiences, care coordination, consumer protection, and elements of an ideal health care and service program. Findings concern satisfaction with and ability to find medical care, transition issues from hospitals and nursing homes, the significant role of pharmacists, care managers, and services coordinators, attitudes about healthcare, and the role of family. Significant issues noted include difficulty of finding providers who accept Medicare/Medicaid, confusion and anger around co-pays, missing services, age and racial/ethnic discrimination, lack of knowledge about patient rights and complaint procedures, and lack of care coordination. Desired elements of an improved or ideal system include greater choice in medical and home care providers, increased communication and coordination among providers and between medical and home care services, transportation options for medical care, and increased support to families.

#### **UNDERSTANDING LONG-TERM CONSEQUENCES OF SENTINEL INJURY: ACCOUNTING FOR DEATH**

Y. Shih<sup>1</sup>, F. Porell<sup>1</sup>, M. Carter<sup>2</sup>, 1. *Gerontology Department, University of Massachusetts Boston, Boston, Massachusetts*, 2. *Department of Health Science and Applied Gerontology Program, Towson University, Towson, Maryland*

Sentinel injury among older adults accounts for a large portion of Medicare service utilization and associated expenses in a longer run. Research to date has expanded its focus from event-specific outcomes to long-term consequences of injury. However, since longitudinal analyses of health outcomes other than mortality are commonly performed on data for a subset of survivors with complete data, health trajectories following injury may not fully reflect the health impacts of sentinel injury. To examine for the effects of death on health trajectories of older adults, longitudinal individual growth models of health outcomes were estimated with panel data from the Medicare Current Beneficiary Survey (1998-2005), adjusting for differences in socio-demographic factors, individual health behaviors, and prevalent comorbidities. The

impacts of sentinel injury were measured from discontinuities in estimated trajectories following injury. Health outcome scales for self-reported health and functional status outcomes containing values for decedents were developed from Markov transition models. Empirical findings suggest that health declines significantly over a year after sentinel injury compared with the pre-injured period. In addition, the rate of decline after injury is faster after accounting for deaths. The results suggest that for older persons there are substantial long-term health and functional status impacts of injury, and these impacts are underestimated when decedents are omitted from the analysis.

#### **COMING HOME: A RESEARCH PROJECT EXPLORING AND SUPPORTING OLDER ADULT TRANSITIONS FROM HOSPITAL TO HOME**

A.G. Zakrajsek<sup>1</sup>, E. Schuster<sup>1</sup>, J. Grosh<sup>4</sup>, L. Senawi<sup>2,4</sup>, 1. *School of Health Sciences, Eastern Michigan University, Ypsilanti, Michigan*, 2. *ChelseaCare Home Health, Chelsea, Michigan*, 3. *Saint Joseph Mercy Health System, Chelsea, Michigan*, 4. *Chelsea Community Hospital, Chelsea, Michigan*

With the combined realities of an aging population, greater incidence of people living longer with health issues, and increasing pressure on a healthcare system to provide cost-effective yet comprehensive care, more attention has been placed on older adults as they travel through the health care continuum. Transitioning from one healthcare service to another can raise specific challenges for older adults that impact their health and participation. The aim of this project was to explore transitions of older adults through the health care system, specifically from a hospital or sub-acute setting to home with rehabilitative services in order to develop transition supports. This project grew out of a partnership between university researchers and directors of older adult services at a local hospital and home health agency. Partners used a participatory action research approach to guide the project and employed qualitative research methods to target the aim of the work. Thirteen in-depth interviews and six in-home observations were conducted with older adults who had transitioned home and rehabilitation professionals working with older adults in their homes. Findings indicate key supports were critical to successful transitions, suggest choice and control for older adults as a mitigating factor to transitions, and have implications for changes in service provision in home health services as well as community services in order to improve older adults transitioning home from a hospital stay. Resources to support transitions based upon research findings through the project will be shared with participants during this presentation.

#### **CHRONIC KIDNEY DISEASE AND OLDER ADULTS: A REVIEW OF THE AGING LITERATURE**

T.R. Washington<sup>1</sup>, T. Hilliard<sup>2</sup>, 1. *Social Work, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*, 2. *Public Health, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*

**PURPOSE:** Adults age 65 and older are the fastest growing segment of the chronic kidney disease (CKD) population, constituting over 40 percent of prevalent cases. In light of this, the authors reviewed ten years of publications to determine the extent that the aging literature contains research about older adults with CKD and offers implications for future research and practice. **METHODS:** Titles and abstracts of articles published between 2002 and 2011 in AgeLine were reviewed using “kidney”, “renal”, and “neph\*” as search terms. Publications were excluded if there was no apparent relevance to CKD. **RESULTS:** Using the search terms within this time period, the initial search yielded 310 publications. After imposing additional exclusion criteria (e.g., publication type), this number was reduced by 57 percent. Research topic areas included caregiving, end-of-life, cultural awareness, and decision making. **IMPLICATIONS:** There is a gap in research about older

adults with kidney disease. The aging literature should better inform research and practice with this high-risk and vulnerable population.

## SESSION 2350 (SYMPOSIUM)

### NEW FRONTIERS IN AGING RESEARCH: DOES THE HYPOTHALAMUS REGULATE AGING AND AGE-RELATED DISEASE?

Chair: C. Mobbs, Mount Sinai School of Medicine, New York, New York

Co-Chair: C. Mobbs, Mount Sinai School of Medicine, New York, New York  
Co-Chair: H. VanGuilder Starkey, Penn State College of Medicine, Hershey, Pennsylvania

This symposium is designed to introduce the audience to potentially new areas of aging research that have received little attention to date but may have the ability to profoundly change how we view and study aging. The proposed symposium for 2012 brings together speakers that are conducting research on hypothalamic POMC and AgRP neurons that have been shown to regulate feeding as well as insulin and glucose sensitivity through modulation of sympathetic neuronal activity. Modulation of these neurons early during the lifespan, in response to interventions that modulate aging and/or age-related disease, or later in life has the potential to influence both health-span and lifespan. This symposium will introduce this novel topic area to the audience and discuss opportunities for future research.

### NUTRIENT-SENSITIVE HYPOTHALAMIC NEURONS: ROLE IN AGING AND DIETARY RESTRICTION

C. Mobbs, Charles Mobbs, Charles Mobbs, New York, New York

The first function of hypothalamic neurons to be understood was the regulation of energy balance, since in humans and animal damage to the ventromedial hypothalamus produces profound obesity. Subsequently activity of hypothalamic neurons was shown to be regulated by glucose, insulin, and, more recently, leptin, all of which serve to indicate the availability of nutritional resources. Dietary restriction reduces these reporters of nutritional resources, suggesting a role for hypothalamic neurons in mediating protective effects of dietary restriction. The importance of hypothalamic neurons in regulating lifespan was also suggested by evidence that reducing pituitary activity (driven by hypothalamic activity) increases lifespan. Hypothalamic neurons also determine activity of insulin-like signaling, now known to regulate lifespan across the animal kingdom. Finally expression of hypothalamic creb-binding protein (Cbp) and associated transcription factors specifically in the hypothalamus predicts lifespan in mice, and inhibition of Cbp blocks protective effects of dietary restriction.

### HUNGER-PROMOTING HYPOTHALAMIC NEURONS REGULATE HIGHER BRAIN FUNCTIONS AND LIFESPAN

T. Horvath, M. Dietrich, Yael University, New Haven, Connecticut

Empirical evidence points to the hypothalamus as a critical regulator of the adaptation of the CNS to the changing environment in support of survival. This information, when analyzed didactically, leads to the conclusion that specific subsets of hypothalamic neurons are critical and mandatory upstream regulators of brain regions classically considered as master determinants of CNS function, such as the cortex and hippocampus. The regulatory role of the hypothalamus in cortical and hippocampal functions is asserted via classical neuronal pathways, and by the regulation of peripheral tissue output in the form of hormones and nutrients. When the hierarchical relationship between various brain regions and peripheral tissues are reconsidered, a new viewpoint on the brain, its functions and relationship to integrative physiology and disease becomes apparent. In this review, I argue that the approach of physiological and pathological aspects of brain and whole body functions from this new perspective will offer previously

unsuspected possibilities to better understand the etiologies of various brain disorders, degenerative processes as well as unresolved issues relating to aging.

### ROLE OF HYPOTHALAMIC NEUROCIRCUITS IN CONTROL OF METABOLISM

J.C. Bruening, Max Planck Institute for neurological research, Koeln, Germany

Hormonal signals such as leptin and insulin instruct the hypothalamus about energy availability in the periphery of the organism. Based on these signals hypothalamic neurons adapt their activity in order to provide output signals in control of food intake, energy homeostasis but also fuel partitioning in different peripheral organs. A major constituent of this circuitry comprises the melanocortin system. Here anorexigenic pro-opio melanocortin (POMC) expressing neurons increase their activity upon energy availability to release the neuropeptide  $\alpha$ -MSH. The action of POMC neurons is antagonized by neighbouring the Agouti-related peptide (AgRP) expressing neurons, which are activated upon fasting. We have recently demonstrated that insulin targets both AgRP and POMC neurons in order to efficiently suppress hepatic glucose production. Moreover, age-related and obesity-induced inhibition of insulin and leptin action in those neurons contributes to the development of type 2 diabetes mellitus. Collectively, these experiments indicate an important role for hypothalamic neurons in control of metabolic homeostasis and dysregulation of this circuitry contributes to the onset of age-related diseases such as type 2 diabetes mellitus.

### NEUROENDOCRINE REGULATION OF THE CALCINEURIN/CRTC1 LONGEVITY CIRCUIT IN C. ELEGANS AND MICE

C. Riera<sup>1,2</sup>, P. Follett<sup>1,2</sup>, M. Huising<sup>1</sup>, W. Mair<sup>1,2,3</sup>, A. Dillin<sup>1,2</sup>, 1. The Salk Institute for Biological Studies, La Jolla, California, 2. Howard Hughes Medical Institute, Chevy Chase, Maryland, 3. Harvard School of Public Health, Boston, Massachusetts

The CREB-regulated transcriptional coactivator CRTC1 is a central regulator of energy balance, ER homeostasis and longevity. However, insights into the molecular inputs into CRTC-1 regulation have been limited to the proximal AMPK and Calcineurin regulators, leaving distal, environmental regulators largely unknown. We have discovered that chemosensory-expressed transient receptor potential vanilloid (TRPV) receptors function upstream of Calcineurin to regulate the longevity output of CRTC1 in *C. elegans*. This indicates that a subset of chemosensory neurons utilizes a TRPV calcium signaling cascade to adjust the worm metabolism with environmental conditions by modulating CREB activity, resulting in altered lifespan. To address whether these signals of youth were also conserved in mammalian sensory circuits, we investigated whether the ion channel TRPV1, ortholog to worm TRPV channels, regulates metabolism and longevity in mice. TRPV1 is expressed in afferent sensory neurons of the spinal cord and dorsal root ganglia which provide innervation to viscera. Our data show that TRPV1 knockout mice have increased glucose tolerance and display a youthful metabolic profile at old age. In particular, TRPV1 sensory neurons regulate insulin secretory mechanisms in the pancreatic beta cells. The ongoing lifespan analysis already indicates a strong increased longevity of the TRPV1 knockout mice at 800 days. Taken together these findings show that TRPV channels function in sensory neurons as an evolutionary conserved system integrating multiple sensory inputs and transducing them into neuroendocrine signals that promote longevity by adjusting the metabolic activity through the Calcineurin/CRTC1 circuit. This study was funded by the Glenn Foundation, Howard Hughes Medical Institute and the Swiss National Foundation.

## SESSION 2355 (SYMPOSIUM)

### HOARDING DISORDER IN OLDER ADULTS: NEW DIRECTIONS IN INTERDISCIPLINARY RESEARCH

Chair: *M. Eckfield, UCSF School of Nursing, San Francisco, California*

Hoarding Disorder (HD) is defined as the acquisition of and failure to discard a large number of items to the extent that it limits use of one's home and causes functional impairment and distress. HD affects individuals of all ages, but research has shown that symptoms worsen as adults age and that older adults are disproportionately affected by HD. Research on HD has accelerated over the past two decades, but few of these studies have focused specifically on older adults. In this symposium, an interdisciplinary team of researchers will present findings that chart new directions in the understanding of HD in older adults. There are three presentations in this program. A Grounded Theory qualitative study of older adults with HD provides evidence that there may be at least two different types of hoarding behaviors with distinct patterns and characteristics. A study of neurocognitive functioning demonstrates there are variations among hoarding study participants, their unaffected family members, and healthy controls, and provides evidence that those with HD have difficulties with specific executive functions. Building on these findings, a treatment intervention designed to address and strengthen areas of cognitive dysfunction in older adults has been implemented, and initial findings from this intervention study are presented.

### PATTERNS OF HOARDING BEHAVIORS IN OLDER ADULTS

*M. Eckfield, M.I. Wallhagen, UCSF School of Nursing, San Francisco, California*

Few qualitative studies have been conducted to develop our understanding of hoarding disorder (HD) in older adults. The purpose of this Grounded Theory study was to describe the hoarding behaviors of older adults. Twenty-two participants with HD (age 65-91,  $M=74$ ) were interviewed and verbatim transcripts were analyzed using Atlas Ti software. Two patterns or types of hoarding emerged. One type ( $n=9$ ), the "Impulsive Acquirers", is characterized by a pattern of positively-reinforced, impulsive acquisition whereby individuals bring home large quantities of items. A second type ( $n=13$ ), the "Worried Keepers", is characterized by less acquisition and more worry about making mistakes, so items are retained rather than discarded. "Keeper" individuals described struggles with executive function tasks such as organizing and problem solving, and felt isolated and depressed as a result of living in crowded home environments. These two types suggest there are variations in psychiatric co-morbidities and neurocognitive performance.

### COGNITIVE REMEDIATION AND EXPOSURE BASED TREATMENT FOR GERIATRIC HOARDING DISORDER

*C. Ayers<sup>1,2</sup>, S. Saxena<sup>2</sup>, J. Wetherell<sup>1,2</sup>, 1. VA San Diego Healthcare System, San Diego, California, 2. UC San Diego, San Diego, California*

A recent investigation utilizing a newly developed approach combining cognitive rehabilitation and exposure therapy for hoarding has produced promising outcomes in geriatric hoarding patients (Ayers et al., unpublished). In an open label trial of 12 older adults with Hoarding Disorder (mean age 66.58), symptoms improved an average of 36% on the Savings Inventory- Revised (SI-R; Frost et al., 2004) and 40% on the UCLA Hoarding Severity Scale (UHSS; Saxena et al., 2007). Further, clinician global improvement (Guy, 1976) was rated "very much improved" for most participants. This is noteworthy given that older adults failed to respond to the standard, manualized cognitive-behavioral therapy protocol for hoarding (Steketee & Frost, 2007) improving only 19% on the UHSS and SI-R (Ayers et al., 2010). Specific modules of the treatment and directions for future research will be presented.

### EVIDENCE OF NEUROCOGNITIVE ABNORMALITIES IN OLDER ADULTS WITH HOARDING DISORDER

*C. Mathews<sup>2</sup>, R. Mackin<sup>2</sup>, M. Eckfield<sup>1</sup>, C. Egan<sup>2</sup>, S. Fekri<sup>2</sup>, 1. UCSF School of Nursing, San Francisco, California, 2. UCSF Department of Psychiatry, San Francisco, California*

Individuals with Hoarding Disorder (HD) exhibit difficulties with executive functioning, however HD-specific neurocognitive profiles have not yet been established. The purpose of this study was to compare neurocognitive functioning among individuals who hoard, their unaffected family members and healthy controls. ANOVA procedures were conducted to compare neurocognitive performance among individuals with HD ( $N=12$ , age 47-74,  $M=59$ ), unaffected family members ( $N=12$ , age 47-80,  $M=58$ ) and healthy controls ( $N=28$ , age 61-72,  $M=67$ ), controlling for age, education, and level of anxiety. Those with HD had significantly lower scores on measures of visual learning compared with family members and controls. Surprisingly, both HD and family participants showed significantly greater difficulty on measures of visual categorization and problem solving compared to controls. These findings support the conceptualization that visual learning and categorization/problem solving are core characteristics of HD and also suggest there may be an intermediate HD genetic phenotype.

## SESSION 2360 (SYMPOSIUM)

### HONORING THE CONTRIBUTIONS OF ELAINE BRODY: "WOMEN IN THE MIDDLE" REVISITED

Chair: *K. VanHaitma, Polisher Research Institute, North Wales, Pennsylvania*

Discussant: *E. Brody, Polisher Research Institute, North Wales, Pennsylvania*

Research on caregiving was spearheaded by Elaine Brody in the 1980's. Her ground breaking concept of "women in the middle" (Brody, 1981) examined women in midlife that were the primary caregivers for older relatives while coping with complicated lifestyles that may have included employment, housework and the care of dependent children. From this work, a huge body of research has evolved over the past 30 years. In keeping with the theme of GSA "Charting New Frontiers in Aging", the primary objective of this symposium is to honor the work of Ms. Brody and provide an overview of the knowledge base in the field her work inspired. Each presenter will examine a different aspect of caregiving research, providing an overview of what we have learned from past work in that area, what comprises the current state of the art, and what "new frontiers" remain to be explored by future generations of caregiving researchers and clinicians. Dr. Rachel Pruchno's presentation will provide an overview the knowledge base of basic caregiving research, including advancements in outcome measurement and innovative methodological approaches to research. Dr. Laura Gitlin's presentation will focus on a summary of evidence-based interventions related to caregiving. Ms. Avalie Saperstein's presentation will provide an overview of current state of the art in the translation of evidence-based practices in the context of social service agencies tasked with formally supporting caregivers. Finally, Dr. Steve Albert's presentation will focus on how employers have responded to issues related to caregiving by their workforce.

### CAREGIVING RESEARCH: PAST, PRESENT, & FUTURE

*R.A. Pruchno, New Jersey Institute for Successful Aging, University of Medicine & Dentistry School of Osteopathic Medicine, Stratford, New Jersey*

Caring for another person is the sine qua non of primary relationships, and in later life, caregiving relationships assume a variety of forms, including adult children caring for aging parents, spouses and adult siblings caring for one another, grandparents caring for grandchildren, and parents caring for adult children with physical or emotional disabilities. This presentation begins with an overview of what we know about the



physical and emotional health of caregivers and care recipients, highlighting the theories and findings developed since Brody's ground breaking work in 1981. It profiles today's caregivers, exploring changes in the caregiving experiences that have ensued during the recent decades and identifies new trends likely to develop during the next decades. It concludes by suggesting that the next generation of research requires paradigm shifts in the theories used to understand caregiving and the methodological designs employed to understand and ultimately improve the lives of caregiving families.

#### **WOMEN IN THE MIDDLE REVISITED: RESPONSIBILITIES TO CHILDREN, OLDER PARENTS, AND EMPLOYERS**

S.M. Albert, R. Schulz, *Behavioral & Community Health Sciences, University of Pittsburgh, Pittsburgh, Pennsylvania*

About 42 million Americans provide care to an older person with an ADL limitation. Half are employed, and 69% report a need to make accommodations at work because of caregiving responsibilities. In the MetLife Study of Working Caregivers and Employer Health Care Costs (2010), we examined the experience of 17,097 U.S. employees of a major multinational manufacturing corporation. Nearly 12% of these employees reported caregiving for an older person. Caregiving employees reported poorer health and more chronic disease than non-caregivers, leading to an 8% increase in health care costs and potentially costing U.S. employers an extra estimated \$13.4 billion per year. Younger women were particular at risk and reported more stress, less attention to their own health care, and greater impact on work performance. These findings suggest women are especially hard hit by childcare, eldercare, and work responsibilities.

#### **HOW CAN WE SUPPORT WOMEN-IN-THE MIDDLE? THE EVIDENCE AND NEXT STEPS**

L.N. Gitlin, *School of Nursing, Johns Hopkins University, Baltimore, Maryland*

Ms. Brody's ground breaking work in 1981 helped launch 30 years of critical caregiver intervention research. This paper reviews evidence from robust randomized trials and identifies new research needs. Effective interventions tend to be client-centered, and involve active engagement, multi-components, tailoring, longer or episodic exposure over duration of care, and match dose/intensity to risk profiles/needs. Despite their promise, most interventions have involved small sample sizes (<600), used non-probability sampling, are geographically limited and unrepresentative of diverse families, include limited outcomes, involve mostly dementia caregivers, and are not aligned with population-based evidence of caregiver needs. Also, societal-level interventions are limited. Most women-in-the-middle remain underserved, have unmet needs or receive non-evidence-based services from untrained health/human service professionals. Next generation of interventions must adopt a broader view of caregiving and care contexts to include care transitions, different chronic diseases and care needs across the continuum of care to fully embrace Ms. Brody's vision.

#### **CAREGIVER SUPPORT PROGRAMS: WHAT EXISTS AND FUTURE PROGRAM DESIGN**

A.R. Saperstein, *Consultant, Meadowbrook, Pennsylvania*

The pioneering caregiver research by Ms. Brody has been translated into a vast and diverse array of services addressing caregivers' multi-dimensional needs. This paper summarizes these programs by the services provided, the caregiver cohorts addressed and the sponsoring entities which include government, foundations, private organizations, religious institutions and major health and social services organizations. It highlights the National Family Caregiver Support program authorized by the Older American Act. Exemplary programs offering multiple services that are flexibly used to benefit caregivers' unique needs will be discussed. Recommendations will be offered as to programs for

the future including the role of the WEB and WEB 2.0 social networking.

### **SESSION 2365 (SYMPOSIUM)**

#### **HOW MAJOR LIFE EVENTS CHALLENGE OUR SELF-REGULATION SYSTEM**

Chair: F.J. Infurna, *Institute of Psychology, Humboldt University, Berlin, Germany, The Pennsylvania State University, University Park, Pennsylvania, DIW Berlin, Berlin, Germany*

Co-Chair: D. Gerstorf, *Institute of Psychology, Humboldt University, Berlin, Germany*

Developmental changes in well-being across the adult lifespan may not necessarily be tethered to chronological age, but best characterized vis-à-vis major life events such as bereavement, unemployment, disability, or death. Our objective is to bring together a collection of papers using prospective longitudinal data to examine how major life events challenge our self-regulatory system across the adult lifespan. Infurna and colleagues utilize data from the national Health and Retirement Study to investigate how depressive symptoms change with the experience of and adaptation to cancer diagnosis and illustrate the importance of adaptive capabilities as resources in the process. Wethington targets how life turning points are linked to perceived health and psychological distress in adulthood and reports that stressful life events experienced both in the recent and more extended past are independently associated with depressive symptoms. Lucas and colleagues use data from an Australian panel survey to examine how multiple well-being indicators change in relation to major life events and utilize propensity score matching procedures that allow for comparisons with control groups who have not experienced the event. Heckhausen and colleagues use data from a national German study to examine how perceived control acts as a resource people can draw upon when faced with a major challenge such as unemployment. The discussion by Ursula Staudinger integrates the four papers, highlights the potentials and limits of self-regulation in the context of major life events, and considers future routes of inquiry.

#### **THE NATURE AND CORRELATES OF CHANGE IN DEPRESSIVE SYMPTOMS WITH CANCER DIAGNOSIS: REACTION AND ADAPTATION**

F.J. Infurna<sup>2,1,3</sup>, D. Gerstorf<sup>1,2,3</sup>, N. Ram<sup>2,3,4</sup>, 1. *Institute of Psychology, Humboldt University, Berlin, Germany*, 2. *The Pennsylvania State University, University Park, Pennsylvania*, 3. *DIW Berlin, Berlin, Germany*, 4. *Max Planck Institute for Human Development, Berlin, Berlin, Germany*

Major life events, such as cancer diagnosis, may trigger change processes in well-being. Using longitudinal data from individuals in the Health and Retirement Study (N=2,848; Mage=69, 46%women) who dealt with cancer, we examine how depressive symptoms change in relation to the cancer diagnosis event and whether socio-demographic variables, cognitive and health resources, and cancer-specific mortality risks moderate event-related reaction and adaptation. On average, individuals experienced significant increases in depressive symptoms within two years of cancer diagnosis, still elevated levels two years post diagnosis, and smaller increases post-diagnosis relative to the increases observed pre-diagnosis. Better memory and lower cancer-specific mortality risks were protective against shorter-term reactive increases and associated with better long-term 'adaptation'. Results indicate that people often have the adaptive capabilities to adjust to the challenges accompanying cancer diagnosis and illustrate the utility of using natural experiments such as major life events as a paradigm for studying developmental change processes.

## LIFE TURNING POINTS, STRESSFUL LIFE EVENTS, AND PSYCHOLOGICAL HEALTH AMONG OLDER US ADULTS

E. Wethington, *Human Development, Cornell University, Ithaca, New York*

Using measures based on Wethington (2000), Sutin, Costa, Wethington and Eaton (2010) showed that perceptions of stressful life events as “life turning points” are associated with perceived health and psychological distress. In an independent national telephone sample of adults age 50-95, participants were asked to describe their most recent and “earliest” life turning points and to respond to a stressful life events list. Turning points were coded for negative, positive, mixed, and neutral content. Recent negative events that were perceived as life turning points were related more strongly to depressive symptoms than events not perceived as life turning points. Negative events and chronic stressors from childhood and adolescence that were perceived as life turning points were also significantly associated with depressive symptoms. Those who reported that their most recent life turning point was a positive event or transition reported fewer recent negative life events and more positive social relationships.

## CLARIFYING THE EFFECTS OF MAJOR LIFE EVENTS ON SUBJECTIVE WELL-BEING

R.E. Lucas, S.C. Yap, I. Anusic, *Psychology, Michigan State University, East Lansing, Michigan*

Previous research has used large-scale panel studies to examine how people react and adapt to major life events like marriage, widowhood, unemployment, and the onset of disability. The current study replicates and extends this work using an Australian panel study that allows for the investigation of a broader set of events and a broader range of well-being measures (life satisfaction, positive affect, and negative affect) than have previously been studied. In addition, we use analytic techniques that model nonlinear trajectories to get a more accurate picture of the changes that occur following these life events. Finally, we use propensity score matching procedures that allow for comparisons with comparable control groups who have not experienced the event. Although basic findings regarding changes that occur following major life events were replicated in this new sample, these new analytic procedures challenge some existing interpretations of the evidence for adaptation that has been found.

## PERCEIVED CONTROL FACILITATES ADJUSTMENT TO UNEMPLOYMENT: FINDINGS FROM THE GERMAN SOCIO-ECONOMIC PANEL STUDY (SOEP)

J. Heckhausen<sup>1</sup>, F.J. Infurna<sup>2,3,4</sup>, D. Gerstorf<sup>4,2,3</sup>, N. Ram<sup>2,3,4</sup>, J. Schupp<sup>3,6</sup>, G.G. Wagner<sup>3,5,7</sup>, *1. Psych & Soc Beh, UC Irvine, Irvine, California, 2. Pennsylvania State University, University Park, Pennsylvania, 3. German Institute for Economic Research (DIW), Berlin, Berlin, Germany, 4. Humboldt University, Berlin, Berlin, Germany, 5. Max Planck Institute for Human Development, Berlin, Berlin, Germany, 6. Free University of Berlin, Berlin, Berlin, Germany, 7. Berlin University of Technology (TUB), Berlin, Berlin, Germany*

Perceived control is important for guiding individuals' control striving towards opportunity-rich domains of life and a resource in the face of obstacles. Using data from the German Socio-Economic Panel Study (N = 413, M Age = 41, 48% women), we examine how perceived control changes with unemployment, explore between-person difference factors in moderating such change, and investigate whether levels of control prior to and unemployment-related control change predict post-unemployment outcomes. Results indicate that control remained, on average, relatively stable with unemployment, but there were sizeable between-person differences in such change. Women and participants with fewer years of education experienced stronger declines in control. Regarding life satisfaction, steeper unemployment-related control declines and low levels of control prior to unemployment were associated with lower levels of life satisfaction in the years following unem-

ployment. We discuss possible pathways by which control facilitates adjustment to unemployment and suggest routes for further more mechanism-oriented inquiry.

## SESSION 2370 (SYMPOSIUM)

### IMPACT OF AGE-RELATED VISION LOSS: INTERVENTION OPPORTUNITIES FOR OLDER ADULTS AND THEIR FAMILIES

Chair: *V. Cimarolli, Jewish Home Lifecare, New York, New York*  
Co-Chair: *G. Zijlstra, University of Maastricht, Maastricht, Netherlands*

Discussant: *A. Horowitz, Fordham University, New York, New York*

Low vision is a common age-related chronic condition associated with increased functional disability, depression, mobility problems, falls, and mortality risk. Community-based vision rehabilitation services/interventions are designed to alleviate these negative effects of vision loss and aim to enhance independence and quality of life. Studies evaluating the effectiveness of these services have produced mixed results because of a lack of standardized intervention protocols and use of RCTs. Furthermore, the role of caregivers in the process is understudied. The aim of the symposium is to present new data - from studies conducted in the Netherlands, Germany and the US - on the impact of low vision on older adults' quality of life, on outcomes of standardized vision rehabilitative interventions, and the role of family members in the vision rehabilitation process. First, data on the impact of low vision on health-related quality of life, including depression, anxiety and social support interactions of older adults will be presented. The second presenter will report on a RCT that tested the potential of problem-solving therapy for affecting depression and rehabilitation in older adults with vision impairment. The third paper will focus on the outcomes of a formative evaluation of a psychosocial consultation program. The final presentation will give results from a longitudinal study focusing on the effects of social support (instrumental support receipt and perceived overprotection) on vision rehabilitation service use among older adults and will discuss the role of family caregivers in the rehabilitation process. Our discussant will facilitate a discussion on-site.

### IMPACT OF LOW VISION ON OLDER ADULTS' HEALTH-RELATED QUALITY OF LIFE

G.I. Kempen<sup>1</sup>, J. Ballemans<sup>1</sup>, A.V. Ranchor<sup>2</sup>, G.H. van Rens<sup>3</sup>, G. Zijlstra<sup>1</sup>, *1. CAPHRI - Dept. of Health Services Research, Maastricht University, Maastricht, Netherlands, 2. University of Groningen, Groningen, Netherlands, 3. VU University Medical Center, Amsterdam, Netherlands*

The objective of this study was to examine the impact of low vision on health-related quality of life, including feelings of anxiety and social support, among community-living older adults seeking vision rehabilitation services. Differences of activities of daily living, symptoms of depression and feelings of anxiety and social support between 148 older persons  $\geq 57$  years with low vision and a reference population (N=4792) including eight patient groups with different chronic conditions were tested. Older persons with vision loss reported poorer functioning with respect to activities of daily living, symptoms of depression and feelings of anxiety as compared to the general older population as well as compared to older patients with different chronic conditions. In contrast, older persons with vision loss reported higher levels of social support. Professionals working at vision rehabilitation services may improve their quality of care as they take such information into account in their intervention work.

## TREATMENT OF DEPRESSION IN OLDER ADULTS WITH VISION IMPAIRMENT

J. Reinhardt<sup>1</sup>, A. Horowitz<sup>2</sup>, 1. *Research Institute on Aging, Jewish Home Lifecare, New York, New York*, 2. *Fordham University, New York, New York*

Depression is a major health problem strongly associated with disability among older adults, and affecting about one-third of those with age-related vision loss. This study describes a randomized trial comparing Problem Solving Treatment (PST) to a Social Contact intervention for 42 visually impaired older adults with subthreshold or mild major depression. While recruitment was difficult, those who did participate in the therapy completed their treatment schedule, and had very positive feedback. Data on depression diagnosis and symptoms were collected at baseline, 11-weeks later (following intervention), and 3 months post intervention. Results showed that controlling for baseline status, there was a significant change (decrease) in depression from T2 to T3, and trends for greater rehabilitation service use for the PST group compared to the control group. Implications of using PST to address depression are presented.

## EVALUATION OF A PSYCHOSOCIAL COUNSELING PROGRAM FOR VISUALLY IMPAIRED ELDERLY: INTRODUCING THE ASSESSMENT AND FIRST FINDINGS

I. Himmelsbach<sup>1</sup>, F. Oswald<sup>1</sup>, S. Driebold<sup>1</sup>, A. Franke<sup>1</sup>, F. Esch<sup>2</sup>, K. Metzler<sup>2</sup>, J. Nagel<sup>3</sup>, 1. *Interdisciplinary Ageing Research, Goethe University Frankfurt, Frankfurt, Germany*, 2. *Foundation for the Blind and Visually Impaired, Frankfurt, Germany*, 3. *Blindenstudienanstalt/German Institute for the Blind (blista), Marburg, Germany*

The program presented was developed and refined within a sequential qualitative process. It consists of intertwined segments of exploration of clients' needs and networks and individualized counseling. An outcome evaluation is in progress. The aims of this presentation are (1) to present the evaluation program and instruments and (2) to show subjective evaluations and objective effects of the program. The results presented are based on 50 participants; interviewed in a pre-post design at three measurement points with measures on e.g., adaptation to vision loss, quality of life, well-being, hope, and a subjective evaluation of the counseling program. Findings show small effects on objective impact, e.g., on stability of quality of life, but differentiated patterns of subjective evaluations by the participants including affective responses. Although objective effects remain low, subjective evaluations seem to fit well with individual needs and the impact of the program on emotional stability despite objective decline.

## FAMILY CAREGIVERS' ROLE IN THE VISION REHABILITATION PROCESS

V. Cimarolli<sup>1</sup>, J. Reinhardt<sup>1</sup>, A. Horowitz<sup>2</sup>, K. Boerner<sup>1</sup>, 1. *Jewish Home Lifecare, New York, New York*, 2. *Fordham University, New York, New York*

This longitudinal study involved in-person interviewing of 584 older adults with recent vision loss at baseline, at 6-months and at 12-months to determine the role of family caregivers in the utilization of vision rehabilitation services. Employing a Latent Growth Curve Methodology, results demonstrated that older adults initially high on instrumental support tended to receive more rehabilitation hours with family members present (covariance estimate = 3.02, SE = .51,  $t = 5.89$ ) whereas those initially high on perceived overprotection tended to receive more hours alone (covariance estimate = 3.71, SE = 1.75,  $t = 2.12$ ) between baseline and the 6-month follow-up. The findings illustrate the influence of family caregivers on the utilization mode (with or without family members present) of vision rehabilitation and underscore the importance of integrating family caregivers into the vision rehabilitation process. Specific intervention opportunities, such as psycho-educational caregiver support group programs will be discussed.

## SESSION 2375 (SYMPOSIUM)

### INTERGENERATIONAL RELATIONSHIPS IN GLOBAL CONTEXT

Chair: J. Fast, *Department of Human Ecology, University of Alberta, Edmonton, Alberta, Canada*

Co-Chair: H. Kendig, *University of Sydney, Sydney, New South Wales, Australia*

Discussant: J. Fast, *Department of Human Ecology, University of Alberta, Edmonton, Alberta, Canada*

In this symposium important aspects of intergenerational relations are explored from multi-disciplinary and multi-national perspectives. Kendig, et al, use national survey data to examine the Australian public's perceptions of older workers; of intergenerational equity in receipt of public benefits and relative influence in the public sphere; and of intergenerational conflict. Fast and colleagues rely on in-depth interviews with members of a Canadian intergenerational theatre company to explore outcomes in terms of intergenerational relationships and age-related stereotypes of seniors and young adults "playing" together in community-based, performer-driven theatre practice. Chivers will explore Justin Chadwick's film *The First Grader*, featuring 84 year old mau mau independence veteran Kimani N'gan'ga Maruge, which mirrors gerontological research about the role intergenerational relationships can play in challenging stereotypes. By bringing very different disciplinary traditions to bear in different cultural, social and policy contexts, collectively these studies reveal much about perceptions and practices that reinforce, or break down, stereotypes of aging and the aged.

### INTERGENERATIONAL EQUITY IN AUSTRALIA: ATTITUDES AND POLICIES

H. Kendig, K. O'Loughlin, K. Heese, *Ageing, Work & Health Research Unit, University of Sydney, Sydney, New South Wales, Australia*

This presentation examines Australian attitudes and policies concerning intergenerational equity. Data were collected in 2009 from a national survey and analyzed in terms of younger (18 to 39 years), middle (40 to 59 years) and older (60 years and over) age groups. Respondents (N=1526) were asked about the 'social treatment' of older compared to younger people in various life domains. Most respondents believed that employers treated older workers about the same as younger workers, but the perception was of more negative than positive treatment. All groups, but especially the older one, believed that older people contribute more than younger people to the workplace. The majority believed that older people receive less than their 'fair share' of government benefits and have too little influence and respect. Views varied considerably among age and gender groups. The findings are interpreted in terms of the changing economic prospects and policy treatment of age groups.

### THEY'RE JUST LIKE US: CONFRONTING AGE STEREOTYPES THROUGH INTERGENERATIONAL THEATRE

J. Fast<sup>1</sup>, S. Chivers<sup>2</sup>, J. Eales<sup>1</sup>, S. Anderson<sup>1</sup>, 1. *University of Alberta, Edmonton, Alberta, Canada*, 2. *Trent University, Peterborough, Ontario, Canada*

This paper reports on findings from a project titled *Health and Creative Aging: Theatre as a Pathway to Healthy Aging*. In-depth interviews were conducted with members of the community-based intergenerational theatre group *GeriActors and Friends*, based in Edmonton, Alberta, Canada. While the primary purpose of the project is to examine links between engagement in the arts and healthy aging, one of the main themes to emerge from the data revolves around the intergenerational nature of the company. Both seniors and younger (student) members comment extensively on the ways in which their style of theatre

(sharing and translating personal stories into a creative format and engaging together in a playful approach to performer-created theatre) develops trust, openness, mutual understanding and respect, ultimately breaking down negative stereotypes of, and the generational divide between, older adults and today's youth. As participants from both generations commented "They're just like us, only a different age."

### **EDUCATION FOR ALL: INTERGENERATIONAL RELATIONSHIPS AND MENTORSHIP IN THE FIRST GRADER**

S. Chivers, *Trent University, Peterborough, Ontario, Canada*

This paper focuses on the intergenerational elements of Justin Chadwick's *The First Grader* (UK, USA, Kenya; 2010). Based on a true story, the film features 84 year old Kimani N'gan'ga Maruge (Oliver Litondo), a Mau Mau independence veteran who is determined that the nation's new promise of "education for all" should apply to him just as it does to traditional-aged first grade students. In placing this older man in a first year classroom that is struggling for resources, the story upends the conventional notion of the older wise man as mentor. The film portrays a resourceful, multidimensional exchange of knowledges among the students, the young teacher, and Maruge. In the process, the film mirrors gerontological research about the role intergenerational relationships can play in challenging stereotypes. In particular, it shows the importance of reciprocity to productive interactions among generations.

## **SESSION 2380 (SYMPOSIUM)**

### **METHODOLOGICAL ISSUES IN RESEARCH ON HOME AND HEALTH IN OLD AGE**

Chair: *S. Iwarsson, Department of Health Sciences & Centre for Ageing and Supportive Environments (CASE), Lund University, Lund, Sweden*

Co-Chair: *ÅSE. Brandt, The National Resource Centre on Disability, Assistive Technology and Social Psychiatry, The National Board of Social Services, Odense, Denmark*

Discussant: *L. Gitlin, Department of Health Systems and Outcomes School of Nursing and Department of Psychiatry School of Medicine Director, Johns Hopkins University School of Nursing Center for Innovative Care in Aging, Baltimore, Maryland*

Research on home and health in old age is complex and requires multi-dimensional methodologies that pose many challenges. Based on longstanding experiences from national and cross-national research in different European countries, in this symposium we will present a set of studies that focus on methodological issues. The first presentation, accomplished in Denmark, will address challenges in studying accessibility problems for people with or without dependence on mobility devices when carrying out kitchen tasks in an experimental setting. Thereafter, we will present a novel method of housing planning and provision for the older population, based on simulation using empirically developed functional limitation profiles of groups of very old people. In this study, data collected with community-dwelling people in Sweden, Germany and Latvia were utilized. Next, we will turn to challenges in analysing cross-national qualitative data in different languages on home and health among very old people, exemplified by a Swedish-German endeavor. In the final presentation, we will give a comprehensive overview of challenges faced in conducting experimental controlled and explorative studies with frail community-dwelling older people. Based on the experiences from projects involving frail older people in Sweden, special attention will be given to challenges in anchoring interventions in organizations and to involve frail older people in research. Examples and findings from quantitative as well as qualitative designs and approaches will be discussed in the light of assets and challenges in interdisciplinary and cross-national research contexts.

### **METHODOLOGY FOR VALIDATION OF HOUSING STANDARDS – THE KITCHEN AS AN EXAMPLE**

T. Helle<sup>2,1</sup>, ÅSE. Brandt<sup>3,2</sup>, S. Iwarsson<sup>2</sup>, *1. University College Northern Jutland, Aalborg, Denmark, 2. Department of Health Sciences and Centre of Ageing and Supportive Environments (CASE), Lund University, Lund, Sweden, 3. The National Board of Social Services, Odense, Denmark*

We will present a novel methodology to validate housing standards. Person-environment fit among older persons with different levels of mobility device dependence was investigated during performance of everyday activities in realistic environments. Observational and self-report data were compared. Ten wheelchair users, ten rollator users and ten participants not using mobility devices prepared lunch in a kitchen designed according to standards while accessibility problems were observed followed by a structured interview. The total self-reported accessibility problem score was higher than the observational score. Overall, standards addressing door width, kitchen table height/depth, space requirements and upper base unit shelves did not cause severe accessibility problems, but thresholds, wall cupboards and lower base unit shelves did. Sample identification was challenging and participants had difficulties in rating accessibility problems. The actual use of mobility devices form part of the activity performance. Some standards are not defined properly to enable activity performance in realistic environments.

### **USING KNOWLEDGE ON COMBINATIONS OF FUNCTIONAL LIMITATIONS TO SUPPORT IMPROVED HOUSING ACCESSIBILITY**

B. Slaug<sup>1</sup>, O.K. Schilling<sup>2</sup>, S. Iwarsson<sup>1</sup>, G. Carlsson<sup>1</sup>, *1. Health Sciences, Lund University, Lund, Sweden, 2. University of Heidelberg, Heidelberg, Germany*

This presentation will address multiple health conditions in the older population, related to housing accessibility issues. We will present methods to identify groups characterized by their combinations of functional limitations (so called type profiles) and demonstrate its usefulness. Two datasets were analyzed from the SNAC-GÅS (N=371) and ENABLE-AGE (N=1,542) projects. Representing different phases in the aging process, 67-71 and 75-89 years respectively, the type profiles that were detected differed in frequency as well as in composition. Type profiles from both datasets were targeted for simulated accessibility analysis. In different housing environment scenarios, the severity of accessibility problems posed by physical barriers was ranked for each type profile. The different housing environment scenarios were selected to exemplify dwellings built before and after the introduction of current Swedish governmental directives on accessibility. These simulations showed varied patterns of barrier ranking between the type profiles, and considerable accessibility problems even in newer dwellings.

### **GLOBAL RESEARCH PARTNERSHIPS AND CHALLENGES IN QUALITATIVE ANALYSES**

C. Löfqvist<sup>1</sup>, I. Himmelsbach<sup>2</sup>, M. Granbom<sup>1</sup>, M. Haak<sup>1</sup>, *1. Department of Health Sciences & Centre for Ageing and Supportive Environments (CASE), Lund, Sweden, 2. Interdisciplinary Ageing Research, Faculty of Educational Sciences, Frankfurt, Germany*

We will present challenges in handling language differences in international qualitative research, i.e. how to analyze large qualitative datasets in different languages, and moreover, to make suggestions on the best course of action. Our experiences are based on the cross-national, interdisciplinary European ENABLE-AGE Project, which examines the home environment as a determinant for autonomy, participation, and well-being in very old age. Ten years ago, this extensive project involving five European countries initiated still ongoing research collaboration between Sweden and Germany. Forty in-depth interviews were performed in each country. The ATLAS.ti Scientific Software was utilized

for the cross-national analyses. We will give examples of how such software makes valid multi-lingual analyses possible and then recommend strategies to strengthen the methodological approach. That is, e.g. to stay as long as possible in the native languages during the analyses and moreover, the need for conceptualization and cultural sensitivity. After attending this activity, participants will be: Aware of some of the methodological challenges involved in cross-national qualitative research. Able to reflect upon the complexity in the analyses and considerations needed when dealing with large datasets in multiple languages in cross-national research collaborations.

### CHALLENGES IN PERFORMING COMPLEX INTERVENTION STUDIES IN HEALTH CARE ORGANIZATIONS

S. Dahlin-Ivanoff<sup>1,4</sup>, K. Wilhelmson<sup>2,4</sup>, A. Edberg<sup>3,4</sup>, 1. *Institute of Neuroscience and Physiology, Göteborg, Sweden*, 2. *Institute of Medicine, Göteborg, Sweden*, 3. *Department of Health and Society, Kristianstad, Sweden*, 4. *The Swedish Institute for Health Sciences, Lund, Sweden*

The presentation will focus on challenges faced by anchoring research in health care organizations, creating good collaborations with the professionals, and involving older adults in the planning and implementation of research. Methodological challenges faced when conducting research with community-living frail older people will also be communicated. The presentation will draw on experiences from two multidisciplinary and multi-dimensional intervention studies. The study, "Elderly people in the risk zone", was designed to evaluate whether educational senior meetings are more effective than preventive home visits, and if it is possible to prevent or delay deterioration. The study, "Continuum of care for frail older people", was designed to evaluate whether an intervention programme for frail older people can reduce the number of hospital visits, increase satisfaction with health and social care, and maintain functional abilities. The studies have both exploratory and experimental components to facilitate a multi-faceted knowledge production. After attending this activity, participants will be aware of some of the methodological challenges: to balance between on one side the demands and conditions of the health care organizations and on the other side scientific quality and conducting randomized interventions targeting older frail heterogeneous groups

### SESSION 2385 (SYMPOSIUM)

#### MILITARY SERVICE AND THE LIFE COURSE

Chair: *C.M. Aldwin, Human Dev. & Fam. Sci., Oregon State University, Corvallis, Oregon*

Discussant: *D. Alwin, Pennsylvania State University, University Park, Pennsylvania*

Military veterans are interesting samples for studying both optimal and impaired aging processes. Veterans are a select population, given enlistment requirements for good physical and mental health, and many of them may exhibit optimal aging. However, some have been exposed to hazardous and traumatic events which can accelerate their aging processes. The relative balance of optimal vs. impaired aging may vary by cohort, as the percentage of veterans exposed to different types of trauma varies by war. This symposium stems from NIA R24AG03943, Lifespan Outcomes of Military Service, whose purpose is to develop a research network on the effects of military service on aging. Spiro's presentation outlines the theoretical and practical implications of studying the aging process among veterans. He reviews the long-term positive and negative aspects military service on physical and psychosocial outcomes. The second paper, by Settersten et al., utilizes data on veterans from the Grant Study. Subjective appraisals of military service during World War II have strong but sometimes counterintuitive relationships with survival and indicators of well-being. In contrast, Hughes et al. examine PTSD and sleep disorders among female veterans. Many

linked their sleep problems to specific incidents in their military service; the average duration of these problems was 17 years. Finally, Wilmoth et al. examined the use of VA and DI disability benefits among disabled veterans, and found that very few utilized both sources of support. The discussant is Duane Alwin, Director of the Center for Life Course and Longitudinal Studies at Pennsylvania State University.

#### LIFESPAN OUTCOMES OF MILITARY SERVICE

A. Spiro, *Boston University & VA Boston, Boston, Massachusetts*

Today's soldiers are tomorrow's veterans, and for most, they will be veterans far longer than they were soldiers. We recognize the physical and mental injuries of those who return from deployment in OIF-OEF. But what are the long-term effects of military service among the aging veterans? Today's veterans tend to be older than the general civilian population, with about 2/3 over 55 years of age. While initially healthier than their peers, traumatic events and hazardous exposures resulting from military service can alter their health for the worse. Despite the advantages of military service in training and skills, for many the negatives can outweigh the positives for the remainder of their lives. We consider various aspects of military service and how they can affect health, well-being, and socioeconomic outcomes among America's aging veterans.

#### THE LEGACIES OF MILITARY SERVICE IN WORLD WAR II ON MEN'S HEALTH AND WELLBEING IN LATE LIFE

R.A. Settersten<sup>1</sup>, J. Day<sup>1</sup>, R.J. Waldinger<sup>2</sup>, G.H. Elder<sup>3,4</sup>, 1. *Social and Behavioral Health Sciences, Oregon State University, Corvallis, Oregon*, 2. *University of North Carolina, Chapel Hill, North Carolina*, 3. *Harvard University, Boston, Massachusetts*, 4. *Massachusetts General Hospital, Boston, Massachusetts*

Using data on veterans from the landmark Grant Study (N=241), we probe the effects of World War II service on men's health and wellbeing in late life. We analyze a measure of subjective appraisal of service in 1946, which is positively predicted by exposure to danger and duration of service. We examine its connection to survival at 60, 70, 80, and 86; indicators of social and psychological wellbeing at 70 and 80; and evaluations of military service, and its place in the life course, at 70. Even after controlling for midlife health, appraisal of service has a strong but surprisingly negative effect on survival, a weaker but positive effect on social wellbeing, and no effect on psychological wellbeing. There is a strong positive connection between postwar appraisals and appraisals made over 40 years later. We discuss these findings in light of the exceptionally positive aging experiences of the Grant men.

#### SLEEP PROBLEMS AND PROBABLE PTSD AMONGST OLDER FEMALE VETERANS

J. Hughes<sup>1</sup>, S. Jouldjian<sup>1</sup>, C. Alessi<sup>1,2</sup>, D.L. Washginton<sup>3,2</sup>, J.L. Martin<sup>1,2</sup>, 1. *Geriatric Research, Education, and Clinical Center, VA Greater Los Angeles Healthcare System, North Hills, California*, 2. *David Geffen School of Medicine at UCLA, Los Angeles, California*, 3. *VA Greater Los Angeles Healthcare System, Los Angeles, California*

There is growing awareness of insomnia and PTSD among women veterans returning from recent Iraq and Afghanistan conflicts, yet little is known about the negative effects of untreated insomnia and PTSD across the lifecourse. Within a larger cross-sectional study of insomnia in women veterans (n=107), 52% (n=39) were aged 55 or over. 18% identified a military-related stressor as the cause of their sleep problems with duration of problems averaging 17 years. 46% also had probable PTSD, which was related to more severe insomnia, greater sleep disturbance, and higher psychological distress (p's<0.001). There were no differences in PTSD prevalence between those over versus under age 55. There was a trend for longer military service to be associated with better sleep and less psychological distress. Further research is needed to explore how early-life military service impacts the development and

management of PTSD, insomnia and other psychiatric conditions over the lifecourse.

### **THE USE OF VA DISABILITY BENEFITS AND SOCIAL SECURITY DISABILITY INSURANCE AMONG VETERANS**

J. Wilmoth<sup>1</sup>, A.S. London<sup>1</sup>, C. Heflin<sup>2</sup>, 1. *Syracuse University, Syracuse, New York*, 2. *University of Missouri, Columbia, Missouri*

Although there is substantial functional limitation and disability among veterans of all ages, relatively little is known about veterans' use of Department of Veterans Affairs (VA) Disability Benefits and Social Security Disability Insurance (DI) across the life course. Reliance on DI may be different for veterans who do and do not qualify for VA disability benefits. We hypothesize that the extent to which VA benefit use supplements or supplants DI use depends on the age of the veteran and varies across cohorts who served in the military during different time periods. This project uses data from the 1992, 1993, 1996, 2001, and 2004 Survey of Income and Program Participation (SIPP) to examine veterans' participation in, and income received from, VA and DI programs. The results indicate that the rate of joint participation in these two programs is low and that there is variation in program use by age and cohort.

## **SESSION 2390 (SYMPOSIUM)**

### **NEW DEVELOPMENTS IN GERONTOLOGICAL RESEARCH: A TRIBUTE TO THE LIFE WORK OF GORDON STREIB**

Chair: *K.F. Ferraro, Purdue University, West Lafayette, Indiana*

Co-Chair: *A. Pienta, University of Michigan, Ann Arbor, Michigan*

Gordon Streib and his colleagues launched a trailblazing study of retirement in 1952 – the Cornell Study of Occupational Retirement. The longitudinal design of the project was rare for retirement research, allowing the investigators to follow a large sample of both men and women into their retirement years. During his 60+ year career, Gordon Streib wrote prolifically about many topics relating to this earlier retirement study. Most recently, he wrote about life in retirement communities. Gordon Streib's work was theoretically groundbreaking and methodologically sophisticated. Because of this, it has had a lasting impact on gerontological scholarship. This session discusses the present day relevance of the monograph, *Retirement in American Society*, resulting from the Cornell Study of Occupational Retirement (David Ekerdt and Phyllis Moen). Next, two of Gordon Streib's colleagues from the University of Florida will discuss contemporary research on retirement communities (Stephen Golant) and intergenerational relationships in the retirement years (John Henretta). Finally, the session will showcase Streib's historic data collection (Amy Pienta) and summarize the efforts of ICPSR in restoring the collection so it may be used by the research community.

### **FAMILY STRUCTURE AND INTERGENERATIONAL RELATIONS**

J.C. Henretta, *University of Florida, Gainesville, Florida*

Gordon Streib's essays on intergenerational relations noted the important role of family structure and functioning in determining intergenerational relationships. In this view, dyadic relations in a family take place within the family context that partly determines the nature of the dyadic relationship. Recent research on intergenerational relations has developed this insight by creating family-specific models that examine the degree to which intergenerational relations, such as assistance between generations, is a family characteristic affecting all family members in similar ways and to what degree these relationships vary between dyads in the same family. Moreover, this approach identifies the role of specific family structure characteristics in producing similarity among family members. This presentation discusses two recent examples of this approach that examine intergenerational assistance from adult children

to an elderly parent and from parents to their adult children. After attending, participants will understand methodological trends and substantive results in intergenerational research.

### **ACTIVE ADULT RETIREMENT COMMUNITIES: ACHIEVING BOTH RESIDENT COMFORT AND AUTONOMY**

S. Golant, *Geography, University of Florida, Gainesville, Florida*

One focus of Gordon Streib's research was on the autonomy of U.S. active adult retirement communities. He investigated the ability of both the owners and older residents to influence their day-to-day activities. His research reminds us that this residential environment appeals to older persons not just because of its material and social comforts, but also because it is congruent with their values of self-reliance and independence. Thus, even as their moves to these communities are want-based or amenity-oriented, they are also motivated by their needs for autonomy. We outline a holistic, emotion-based model of residential environment congruence that recognizes this multidimensionality. It theorizes that older persons achieve residential normalcy or occupy congruent residential environments when they are in their residential comfort zones and enjoy pleasurable, hassle-free, and memorable feelings; and when they are in their residential mastery zones and occupy places where they feel overall competent and in control.

### **A 40-YEAR APPRECIATION OF STREIB & SCHNEIDER'S "RETIREMENT IN AMERICAN SOCIETY"**

D. Ekerdt<sup>1</sup>, P. Moen<sup>2</sup>, 1. *Univ of Kansas, Lawrence, Kansas*, 2.

*University of Minnesota, Minneapolis, Minnesota*

This volume was a synthesis of findings from the pioneering Cornell Study of Occupational Retirement. After 40 years, the contents of "Streib & Schneider" seem all the more remarkable. The longitudinal design of the project, conducted across the 1950s, was rare for retirement research, allowing the investigators to follow a large sample of both men and women pre- to post-retirement. The main conclusion was that retirement did not have the broad negative consequences for individuals that role theory had predicted. Retirees tolerated the new status well. The authors also alerted the field to such issues as self-selection into retirement and the potential ambiguity of retirement transitions. They outlined the new institutionalization of retirement in American society as the 1960s dawned, and even endorsed civic engagement for retirees. Beyond the findings, this volume also mentored subsequent retirement research by exploring design issues (e.g., panel drop out) and sharing survey formats.

### **RETIREMENT IN THE 1950S: REBUILDING STREIB'S LONGITUDINAL DATABASE**

A. Pienta, J. Lyle, *University of Michigan, Ann Arbor, Michigan*

Gordon Streib conducted the Cornell Study of Occupational Retirement in 1952 with a sample of employed men and women (n=4,032). The study was designed to understand the transition from work to retirement. Follow-up interviews were conducted every 1-2 years. The study is an important piece of history because: (1) it is a longitudinal study pre-dating the Longitudinal Retirement History Study, (2) both men and women were interviewed, and (3) the data were never released. ICPSR is working to publicly release the data collection. The study also contains valuable health and biomarker data that has never been made publicly available to researchers. Future plans include release of these data as well. Given the Social Security policy changes of the 1950s, the study represents an unprecedented resource for understanding how retirement culture emerged during this landmark time period. It is an appreciation of Gordon Streib that these data will be made available.

## SESSION 2395 (SYMPOSIUM)

### SOCIAL INEQUALITY IN HEALTH IN LATER LIFE

Chair: I. Schöllgen, Mannheim Institute of Public Health, Social and Preventive Medicine, Mannheim, Germany

Discussant: C. Mendes De Leon, University of Michigan, School of Public Health, Ann Arbor, Michigan

A large body of research shows differences in health according to social status, important dimensions being race/ethnicity and socioeconomic status (SES). Rather recently, the study of social inequality in health has been extended to later life, initiating a discussion on the concept of social status and the indicators used for its measurement. In addition, there is an increasing interest in more proximal bio-behavioral outcomes as well as the role of psychosocial factors in health inequality. These issues will be addressed in this symposium. The first two speakers deal with race/ethnicity-related inequality, using data from the Health and Retirement Study. Quiñones and colleagues examine change in smoking, exercise, and alcohol intake behaviors after chronic illness diagnosis in whites, blacks, and Hispanics, finding substantial racial/ethnic variation in behavior change following disease incidence. Nicklett shows that the effects of disease-related support on type 2 diabetics' health outcomes vary by race/ethnicity as well as type of support. The final two papers deal with SES-related inequality in later life in European samples. The findings by Schöllgen and colleagues suggest a differential significance of subjective social status and wealth as predictors of cardiovascular disease and diabetes risk markers, indicated by metabolic syndrome components. Finally, Nilsson, Lund, and Avlund show that financial assets predict the onset of mobility-related fatigue. Mendes de Leon will serve as discussant. His expertise in research on the effects of racial background and socio-economic status in disease and disability will provide insights towards understanding the complexities of health inequality in later life.

### RACIAL AND ETHNIC DIFFERENCES IN HEALTH BEHAVIOR CHANGE AFTER CHRONIC ILLNESS DIAGNOSIS

A.R. Quinones<sup>1,2</sup>, C.L. Nagel<sup>1</sup>, N. Huguet<sup>3</sup>, J. Newsom<sup>3</sup>, M.S. Kaplan<sup>3</sup>, B. McFarland<sup>1</sup>, 1. Public Health & Preventive Medicine, Oregon Health & Science University, Portland, Oregon, 2. Veterans Affairs Medical Center, Portland, Oregon, 3. Portland State University, Portland, Oregon

Chronic disease morbidity disproportionately affects middle-aged and older minorities, particularly black Americans. Because engaging in healthy behaviors can reduce illness severity and improve physical functioning, it is important to understand race/ethnic differences in health behavior change after chronic condition onset. This research examines behaviors before and after heart disease (HD), diabetes, cancer, stroke, or lung disease diagnosis. Data came from 5696 HRS respondents (1992-2010) with incident chronic disease. Adjusted chi-squared tests and logistic models analyzed changes in behavior for white, black, and Hispanic respondents after diagnosis. Within race/ethnic groups, significant proportions of whites and blacks quit smoking after any diagnosis. Compared to whites, blacks were more likely to reduce their level of exercise post HD diagnosis and alcohol intake post cancer diagnosis. Hispanics were more likely than blacks to continue smoking after HD or diabetes diagnosis. These results suggest substantial race/ethnic variation in health behavior change following chronic illness diagnosis.

### ARE THERE RACIAL/ETHNIC VARIATIONS IN BENEFITS OF SUPPORT AMONG TYPE 2 DIABETICS? A LONGITUDINAL STUDY OF DISEASE-RELATED SUPPORT IN MID- AND LATE-LIFE

E. Nicklett, School of Social Work, University of Michigan, Ann Arbor, Michigan

To examine protective aspects of disease-related support against health decline and mortality by race/ethnicity, change in self-rated health

(SRH) and mortality hazards were assessed over time using ordinal logistic regression models and discrete-time analysis with longitudinal data from the Health and Retirement Study (2003-2010). Higher levels of support for following a meal plan, physical activity, and weight control at baseline predicted lower odds of health decline for Whites ( $p < .05$ ). Support for taking medicine, foot care, blood sugar testing, and appointments did not predict the odds of change in SRH. None of the disease-related support characteristics were predictors of SRH change for African Americans or Latinos. Baseline disease-related support was generally not predictive of 7-year mortality; however, among Latinos greater support for physical activity predicted reduced odds (0.57) of 7-year mortality. Support was therefore found to be protective against health decline and mortality in some characteristics and among certain groups only.

### SUBJECTIVE SOCIAL STATUS, WEALTH, AND COMPONENTS OF THE METABOLIC SYNDROME

I. Schöllgen<sup>1</sup>, J. Li<sup>1,2</sup>, A. Loerbroks<sup>1,3</sup>, J.A. Bosch<sup>4,1</sup>, 1. Mannheim Institute of Public Health, Social and Preventive Medicine, Mannheim Medical Faculty, Heidelberg University, Mannheim, Germany, 2. University of Duesseldorf, Department of Medical Sociology, Duesseldorf, Germany, 3. Heidelberg University, Cluster of Excellence "Asia and Europe in a Global Context", Heidelberg, Germany, 4. School of Sport and Exercise Sciences, CRUK Institute of Cancer Studies, University of Birmingham, Birmingham, United Kingdom

Subjective social status (SSS) and wealth have been suggested to be particularly useful indicators for research on social inequality in older adults. The present study examined concurrent and longitudinal associations of SSS and wealth with components of the metabolic syndrome (MetS). Data came from 1,561 respondents of the second (T1) and fourth wave (T2) of the English Longitudinal Study of Ageing. Multivariate linear regressions showed that wealth was concurrently and prospectively associated with waist circumference, systolic blood pressure (in men) as well as levels of triglycerides and HDL-cholesterol (in women). The longitudinal associations partly remained significant after adjusting for the respective MetS component at T1. SSS was related to HDL-cholesterol only, with the prospective association becoming non-significant after adjustment for T1 HDL-cholesterol. The findings suggest a differential significance of SSS and wealth as predictors of cardiovascular disease and diabetes risk markers in later life.

### SOCIAL INEQUALITY IN MOBILITY-RELATED FATIGUE AMONG OLDER DANES

C.J. Nilsson<sup>1,2</sup>, R. Lund<sup>1,2</sup>, K. Avlund<sup>1,2,3</sup>, 1. Section of Social Medicine, Department of Public Health, University of Copenhagen, Copenhagen, Denmark, 2. Center for Healthy Aging, University of Copenhagen, Copenhagen, Denmark, 3. Danish Aging Research Center, Universities of Southern Denmark, Aarhus and Copenhagen, Copenhagen, Denmark

Purpose: to investigate if there is social inequality in onset of and changes in mobility-related fatigue in old age, and if common predictors of fatigue and mobility limitations can explain any social inequality. Methods: Logistic regression analyses and multinomial logistic regression analyses were performed in a study population of 2,083 older adults from the Danish Intervention Study on Preventive Home Visits. Results: There was a financial asset gradient in onset of mobility-related fatigue at 3-year follow-up, which remained in fully adjusted analyses. Low financial assets might increase the odds of sustained fatigue but also the odds of improvement from fatigued to non-fatigued over a 4-year period. Conclusion: The study suggests social inequality in mobility-related fatigue, which is an early indicator of the aging process and a strong predictor of disease and disability in old age. Knowledge on social inequality should be integrated in the planning of preventive strategies.

## SESSION 2400 (SYMPOSIUM)

### SOCIAL NETWORK TYPOLOGIES AMONG OLDER ADULTS: CHARTING INFLUENCES ON HEALTH, WELL-BEING, AND MARITAL QUALITY

Chair: K. Abbott, *School of Nursing, University of Pennsylvania, Philadelphia, Pennsylvania*

Discussant: H. Litwin, *The Hebrew University, Jerusalem, Israel*

An important aspect of personal or egocentric social network research is the value of defining the type of network individuals are embedded within and how those typologies (e.g. diverse, friend or community focused, family focused and restricted) influence a range of physical and mental health outcomes. This symposium will feature data from four studies examining typologies of older adults' social networks. First, a cluster analysis is presented for 95 White and 65 Black couples' network typologies. Race and gender differences in network types are explored along with the influence of network type on marital quality. Second, data will be presented from interviews with 192 residents from nine assisted living (AL) facilities in the metro Atlanta area. Cluster analysis finds variation in network types across facility locations, which are associated with variations in residents' education and income. AL residents in large diverse-supported networks, which include AL co-residents and staff, exhibit better health outcomes. Third, data from 50,000 older Europeans is presented showing the results of a K-Means cluster analysis producing a solution of eight network types which have statistically significant associations with well-being. Fourth, data presented from the Social Relations, Aging and Health Study of older adults (N=293) and their convoy members (N= 2101) explores age and health variations of network typologies of community dwelling individuals age 65 and over. This symposium highlights the multiple types of network typologies among the diverse and growing older population who are living in the community and receiving long-term services and supports.

### SOCIAL NETWORK TYPOLOGIES OF BLACK AND WHITE MARRIED COUPLES: IMPLICATIONS FOR POSITIVE AND NEGATIVE MARITAL QUALITY

K. Fiori<sup>1</sup>, K. Birditt<sup>2</sup>, E. Brown<sup>3</sup>, T.L. Orbuch<sup>2</sup>, *1. Gordon F. Derner Institute of Advanced Psychological Studies, Adelphi University, Garden City, New York, 2. University of Michigan, Ann Arbor, Michigan, 3. University of Connecticut, Storrs, Connecticut*

Although research shows that individuals' social networks and marital status have implications for well-being, little is known about the ways in which married couples organize their shared and separate network ties. Furthermore, the one known study looking at 'conjoint' networks and their implications for marital well-being was focused solely on Caucasians (Stein, Bush, Ross, & Ward, 1992). We used cluster analyses to create 'couple' network typologies of White (n = 95) and Black (n = 65) couples' reports of contact with family and friends in their 16th year of marriage (in their early 40s). We found several qualitatively distinct types of networks that had different implications for wives' and husband's reports of positive and negative marital quality. Although there were race differences in the frequencies of network types, there were no interactions between network type and race in predicting marital quality. Implications for network research are discussed.

### SOCIAL NETWORK TYPES AMONG ASSISTED LIVING RESIDENTS AND THEIR RELATION TO HEALTH

M. Perkins<sup>1</sup>, M. Ball<sup>2</sup>, C.L. Kemp<sup>2</sup>, *1. Division of Geriatric Medicine and Gerontology, Department of Medicine, Emory University School of Medicine, Atlanta, Georgia, 2. The Gerontology Institute, Georgia State University, Atlanta, Georgia*

We used cluster analysis to derive four social network types (diverse-supported; diverse-unsupported; family-focused-supported; and fam-

ily-focused-unsupported) among assisted living (AL) residents and examine their relation to residents' health. Data are from a 3-year mixed method NIA-funded project (1R01 AG030486-01) that uses Kahn and Antonucci's (1980) social convoy model as a conceptual and methodological framework to examine the relative importance of co-resident relationships and other network ties to residents' overall health and well-being. Data include structured face-to-face interviews and social network mapping conducted with 192 AL residents in nine AL facilities in metro Atlanta. Residents in large diverse-supported networks, which included co-residents and staff, tended to exhibit better health outcomes. Analysis showed some variation in network types across facility location, differences which are linked to variations in residents' education-level and income. Findings have implications for interventions to improve residents' health and quality of life and address potential health disparities that may exist.

### NETWORK TYPES AMONG OLDER EUROPEANS: FIRST RESULTS FROM THE SURVEY OF HEALTH, AGEING AND RETIREMENT IN EUROPE

K. Stoeckel, H. Litwin, *Hebrew University, Jerusalem, Israel*

The fourth wave of SHARE, executed in 2010-2011, implemented a name generating mechanism for the charting of respondents' personal networks. Data were collected on some 50,000 persons, aged 50 and older, in 15 countries. K-Means cluster analysis was applied to the data set using a set of seven compositional variables as the criterion values for differentiation. The optimal solution produced eight network types. About a third of the respondents were embedded in "family" networks comprised of spouse and two adult children. A quarter had a "diverse" network composed of spouse children and friends. About one fifth had an exclusive "spouse" network, and a tenth had a predominantly "friend" network. Other network types included "parent," "grandchildren," "sibling" and "formal helper" networks. Hierarchical regressions of the CASP-12 well being measure, adjusted for age, gender, ADL, mobility limitations and country, revealed that network type retained a significant independent association with the outcome measure.

### HETEROGENEITY IN SOCIAL NETWORK MEMBER TYPOLOGIES

N.J. Webster, T.C. Antonucci, *Life Course Development Program, Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Evidence suggests that characteristics and typologies of social networks influence the health of older adults. Building upon previous work documenting typologies of social network members, this study explores relationships between demographics, health and typologies of social network members within the social networks of older adults. Data include respondents age 65 and older (N=293) and their social network members (N=2101) from the regionally representative Social Relations, Aging and Health Study (2005). Regression analyses indicate younger and married respondents have a greater proportion of younger family members with whom they have less contact. Older respondents and those with less education reported more middle-aged, close family members with whom they have daily contact. Findings highlight diversity within and across the social networks of older adults often not captured when examining networks in aggregate. Heterogeneity in the latent structure and distribution of these typologies will also be explored.

## SESSION 2405 (SYMPOSIUM)

### SPIRITUAL DIMENSIONS OF LATER LIFE

Chair: M.L. Johnson, *University of Bristol, Bristol, United Kingdom, University of Bath, Bath, United Kingdom*

Co-Chair: J. Walker, *Diocese of Guildford, Guildford, United Kingdom*

The primary purpose of the symposium is to bring together a group of leading researchers and writers on spirituality and ageing; to distil



the latest advances in knowledge and thinking – and to engage in vigorous discussion about how we can interpret this learning for the benefit of older people and those who seek to serve them. Despite the involvement of gerontologists in a bewildering array of issues related to age and ageing, researchers – with a few honourable exceptions – have avoided both spirituality and death. Yet the increasing presence of finitude as we grow older is an inescapable fact. Life review and reflection about personal pasts and diminishing futures are both well known to students of later life. Nonetheless the pressing focus on positive ageing appears to have all but eclipsed study of the inner life, both religious and non-religious. So the literature on ageing and spirituality is still quite slender. Ageing, beliefs and the inner life are long established features of both academic psychology and the different worlds of clinical practice. Here the literature is much fuller; ranging from the detailed studies of religious belief and psychological wellbeing, religion as a cause of guilt and anguish and the theorists who have attempted to formulate models, patterns and stages to deal with the exigencies of life as it progresses through the lifecourse. Here scholars from different disciplines, perspectives and methodologies will contribute macro data, qualitative investigation, conceptual and theoretical insights in an attempt to illuminate the spiritual dimensions of later life.

### **SPIRITUALITY, BIOGRAPHICAL REVIEW AND BIOGRAPHICAL PAIN AT THE END OF LIFE IN OLD AGE**

M.L. Johnson, *1. University of Bristol, Bristol, United Kingdom, 2. University of Bath, Bath, United Kingdom*

It is well recognised that as individuals move into later life, they are less occupied by the demands of paid employment and consequently spend more time in reflection about the life lived. In part this is due to the onset of infirmities, as chronic diseases take their toll on mobility and autonomy. Unchosen solitude and the frustration of a failing body, both prompt recollections of more engaged times and draw attention to the deficits of old age. The evidence of my own biographical interviews indicates that the predominant self evaluation is of disappointment, unworthiness and having failed to ‘come up to expectation’. When it is accompanied by profound guilt, anger at the dishonesty, misuse and abuse of others and shame, there is reason to be deeply concerned. I have termed this condition Biographical Pain. This paper explores the conditions in which biographical pain arises and how it might be addressed.

### **STAGES OF THE SOUL : DREAMS AND THE COMING OF AGE**

H. Moody, *AARP, Washington, District of Columbia*

It has been said that “In our dreams we are always young.” But this is true only as long as we fail to look beneath the surface of our dreams. Our dream life can offer us compelling clues about what “conscious aging” might promise for the second half of life. Psychology for the most part has focused on the first half of life, while gerontology has largely focused on decline instead of positive images of age. Among dream researchers later life has not been a focus of attention. Here we consider dreams about aging, offering suggestions for how our dream life can give directions for a more positive vision of the second half of life. The first half of life is a time for “expeditions and adventures.” But there comes a time when deeper guidance is needed.

### **STABILITY AND CHANGE IN RELIGION AND SPIRITUALITY: DOES RELIGIOSITY INCREASE WITH AGE?**

V.L. Bengtson<sup>2</sup>, M. Silverstein<sup>1</sup>, J.P. Lendon<sup>1</sup>, J. Min<sup>1</sup>, N. Putney<sup>1</sup>, S. Harris<sup>1</sup>, *1. Davis School of Gerontology, University of Southern California, Los Angeles, California, 2. Roybal Institute on Aging, University of Southern California, Los Angeles, California*

Do individuals become more religious as they move into old age? Do members of different age groups, or birth cohorts, have qualitatively

different experiences of religion or spirituality because of their having been born in different historical contexts? In this paper we examine aging and cohort differences in religion and spirituality with data from the Longitudinal Study of Generations. Using a mixed-methods approach, we draw from quantitative survey data collected over 35 years from some 2,000 members of 358 multigenerational families, and in-depth interviews with 156 members of 25 four-generation families of diverse religious backgrounds selected from the original longitudinal panel. We see both aging and cohort effects in this multigenerational sample, while recognizing that there is considerable diversity both within and between age groups. We discuss these results in the context of the life course perspective and intergenerational solidarity theory.

### **RELIGIOUS RITUAL AND PRACTICE IN OLD AGE**

E. Idler, *Sociology, Emory University, Atlanta, Georgia*

All religions have a dimension of ritual, or practice, that defines them. Some, like repeating the rosary or a yoga mantra are primarily spoken; others, like receiving the Eucharist or fasting during Ramadan, may be mostly nonverbal. Some rituals, such as infant circumcision, are performed only once in a lifetime; others, such as the Muslim call to prayer, are performed every day. Over the lifespan, the number of times a ritual is performed and experienced becomes an unbroken thread that ties together the cycles of days, weeks, and years. Study of these experiences was a profound part of the thinking of the classical sociologists, but it vanished in the late 20th century. Recently, there has been a new burst of scholarship, although none of it has made the connection with aging and the life course. This paper articulates connections between new research, and existing literature on religion, aging, and health.

## **SESSION 2410 (SYMPOSIUM)**

### **THE COMPLEX NATURE OF SOCIAL RELATIONSHIPS: IMPLICATIONS FOR STRESS, HEALTH, AND WELL-BEING**

Chair: *K.E. Cichy, Human Development & Family Studies, Kent State University, Kent, Ohio*

Co-Chair: *R.S. Stawski, University of Michigan, Ann Arbor, Michigan*

Discussant: *T.C. Antonucci, University of Michigan, Ann Arbor, Michigan*

The current symposium features research examining the links between relationships, health, and well-being. Social ties represent a valuable resource that buffer individuals from the negative effects of stressful experiences. A growing body of work, however, also emphasizes the value of considering the negative implications of social relationships because social partners are not always caring and even supportive relationships are at times conflicted or demanding. This symposium will highlight work that considers both how relational experiences contribute directly to health and well-being as well as how relational experiences may indirectly contribute to health through mechanisms, such as health behaviors. Pitzer, Mroczek, and Fingerman examine whether adult survivors of childhood physical abuse experience heightened reactivity to daily stressful experiences. Martire and colleagues examine whether knee arthritis patients’ daily pain negatively impacts their spouse’s sleep quality. Next, Cichy, Stawski, and Almeida explore how engaging in negative health behaviors, such as smoking, exacerbate reactivity to daily stressful experiences involving family among African American and European American adults. Finally, Savla and colleagues examine the protective effects of health behaviors and activities on psychological and physiological reactions to stressors among older adult caregivers of partners with mild cognitive impairment. Together, these studies explore potential mechanisms that may

help to explain the pathways through which social relationships contribute to health and well-being. Toni Antonucci will reconcile the presentations and offer insights into how these studies expand our understanding of the links between relationships, health, and well-being.

#### **MAKING A BAD SITUATION WORSE: RACE, NEGATIVE HEALTH BEHAVIORS, AND REACTIVITY TO THE DAILY HASSLES OF FAMILY LIFE**

K.E. Cichy<sup>1</sup>, R.S. Stawski<sup>2</sup>, D. Almeida<sup>3</sup>, *1. Human Development & Family Studies, Kent State University, Kent, Ohio, 2. University of Michigan, Ann Arbor, Michigan, 3. The Pennsylvania State University, University Park, Pennsylvania*

In an effort to cope with family stressors, African Americans may compromise their health by engaging in negative health behaviors, such as smoking, further contributing to their health disadvantage. This study explored how engaging in negative health behaviors exacerbates reactivity to daily family stressors among 34-84 year old African Americans and European Americans ( $N = 1,931$ ) from the National Study of Daily Experiences (NSDE). During 8 days of telephone interviews, respondents reported on their daily stressors, health behaviors (number of cigarettes and alcoholic beverages), affect, and physical symptoms. Among smokers, African Americans' emotional reactivity to family arguments was exacerbated on days they smoked more cigarettes than usual ( $p < .01$ ). African Americans' emotional reactivity to family arguments was also exacerbated on days they drank more than usual ( $p < .001$ ), suggesting efforts to cope with the negative emotions elicited by family tensions by smoking or drinking further compromises health.

#### **THE IMPACT OF DAILY STRESS ON SURVIVORS OF CHILDHOOD PHYSICAL ABUSE: IS THERE HEIGHTENED REACTIVITY?**

L. Pitzer<sup>1</sup>, D. Mroczek<sup>2</sup>, K. Fingerma<sup>3</sup>, *1. University of Notre Dame, Notre Dame, Indiana, 2. Purdue University, West Lafayette, Indiana, 3. University of Texas, Austin, Texas*

Reactivity to daily stress may be more pronounced among adult survivors of childhood physical abuse. To investigate whether adults reporting such abuse are more sensitive to daily stressors, this study examined data from 514 adults (abused = 124; non-abused = 390) from the National Study of Daily Experiences. Multilevel mediation models showed daily stress as a significant mediator—experiencing childhood abuse increased levels of daily negative affect and the frequency of physical symptoms by increasing the perceived severity of daily stressors. Multilevel moderating analyses revealed that on days of high perceived stress, both victims and non-victims of childhood physical abuse reported higher levels of daily negative affect and higher frequency of physical symptoms than on days of lower perceived stress; however, this association was particularly exacerbated for survivors of abuse. Discussion focuses on how instability in the early family environment may ill-equip adults to negotiate the stressors of daily life.

#### **HEALTH BEHAVIORS MODERATE THE STRESSORS OF DAILY CARING FOR SPOUSES WITH MILD COGNITIVE IMPAIRMENT**

T. Savla<sup>1</sup>, K.A. Roberto<sup>1</sup>, R. Blieszner<sup>1</sup>, F.C. Gwazdauskas<sup>2</sup>, *1. Virginia Tech, Center for Gerontology & Dept. of Human Development, Blacksburg, Virginia, 2. Virginia Tech, Dept. of Dairy Science, Blacksburg, Virginia*

Early memory loss among older adults diagnosed with mild cognitive impairment (MCI) challenges spousal relationships because of remaining strengths yet emerging limitations in functioning. Decades of research have confirmed vulnerability factors (age, sex, personal dispositions) and resources (coping strategies, social support) that moderate the relationships of stressors with stress responses. We examine the protective effects of health behaviors and activities such as exercising and confiding to friends on psychological and physiological reactions

to stressors. We use 7 days of diary data and 4 days of saliva samples from 30 spousal care partners of persons with MCI. Multilevel models and lagged models with bootstrapped standard errors revealed that care partners with a sedentary lifestyle are more vulnerable than active care partners to the effects of daily exposure to stressors. These findings were confirmed by elevated physiological markers of stress reactivity. Confiding was not uniformly beneficial, however. Intervention strategies are discussed.

#### **THE IMPACT OF DAILY ARTHRITIS PAIN ON SPOUSAL SLEEP QUALITY**

L.M. Martire<sup>1</sup>, M.P. Stephens<sup>2</sup>, R. Schulz<sup>3</sup>, J. Mogle<sup>1</sup>, F. Keefe<sup>4</sup>, *1. HDFS, Penn State University, University Park, Pennsylvania, 2. Kent State University, Kent, Ohio, 3. University of Pittsburgh, Pittsburgh, Pennsylvania, 4. Duke University, Durham, North Carolina*

The daily pain of arthritis is detrimental for patient sleep and may also affect spousal sleep quality. Using a sample of 140 knee arthritis patients and their spouse we tested the hypothesis that greater daily pain would be associated with poorer sleep quality for the spouse that evening. For 22 consecutive days, patients reported on their knee pain, negative mood, and sleep quality, and spouses reported on their sleep quality and negative mood. Multilevel lagged models indicated that greater knee pain at the end of the day was associated with spouses' poorer overall sleep quality (estimate =  $-.06$ ,  $p < .05$ ) and feeling less refreshed after sleep (estimate =  $-.15$ ,  $p < .01$ ), as reported the next morning. These analyses controlled for morning reports of spouse negative mood, patient pain, and patient sleep quality. Findings illustrate the social implications of chronic pain and a potential mechanism for reduced spouse support.

### **SESSION 2415 (SYMPOSIUM)**

#### **USING THE STRESS PROCESS MODEL TO UNDERSTAND THE ILLNESS EXPERIENCE OF INDIVIDUALS WITH DEMENTIA: IMPLICATIONS FOR THEORY AND DEVELOPMENT OF INTERVENTIONS**

Chair: *K. Judge, Cleveland State University, Cleveland, Ohio, Margaret Blenkner Research Institute, Cleveland, Ohio*

Discussant: *K. Judge, Cleveland State University, Cleveland, Ohio*

An emerging area of research has focused on understanding the illness experience of individuals with dementia (IWDs) from the individual's perspective rather than proxy-reports from family caregivers or clinicians. To date, few models have been proposed to examine how the myriad of symptoms may relate to one another and lead to negative outcomes. The Stress Process Model for Individuals with Dementia (SPM for IWDs) is a conceptual framework for studying the illness experience of IWDs and enables testing of specific hypotheses. The following symposium reports data from several projects that have examined the illness experience from the perspective of the individual using the SPM for IWDs. The first paper reports qualitative data from IWDs and the relationship with activities and pleasant events. Discussion will focus on the need to engage IWDs in cognitively stimulating activities and how this may offset negative outcomes. Using extracted themes from 5 questions, the second paper presents qualitative data from 114 IWDs about their illness experience. Results found congruence in participant's responses and domains of the model. The third paper examines quantitative data from 131 IWDs. Regression analyses were used to predict variables related to 3 outcomes: anxiety, depression, and quality of life. Discussion will focus on how this information can be used to target specific areas via interventions. The fourth paper will discuss results of several intervention studies for IWDs. Examples illustrating how intervention components directly target IWD's abilities in coping and managing with their symptoms will be discussed.

## **PREDICTORS OF SELF-REPORTED ANXIETY, DEPRESSION, AND QUALITY OF LIFE IN INDIVIDUALS WITH DEMENTIA**

N.T. Dawson<sup>1,2</sup>, S.M. Powers<sup>2,1</sup>, M. Krestar<sup>1,2</sup>, S. Yarry<sup>4</sup>, K. Judge<sup>1,3</sup>, 1. *Cleveland State University, Sagamore Hills, Ohio*, 2. *The University of Akron, Akron, Ohio*, 3. *Benjamin Rose Institute on Aging, Cleveland, Ohio*, 4. *VA Palo Alto Health Care System, Palo Alto, California*

Little is known about the illness experience from the perspective of individuals with dementia (IWDs), as most research has focused on IWDs' psychosocial issues from clinician or caregiver proxy reports. Anxiety, depression and quality of life (QoL) are common outcome measures used in this research as they are commonly linked to the IWDs' physical and psychological well-being. It is becoming more evident that older adults with cognitive impairment are able to participate in surveys and provide consistent and accurate responses to questions. Gaining insight regarding possible predictors of anxiety, depression and QoL from the perspective of the IWD is crucial to better understanding the illness experience and identifying areas amenable to psychosocial interventions. Using multiple regression, the authors were able to identify 3 unique and distinct predictions models for self-reported anxiety, depression, and QoL in our sample of IWDs. Theoretical and applied implications of these findings will be thoroughly discussed.

## **'I WISH THEY WOULD REMEMBER THAT I FORGET' - UNDERSTANDING THE ILLNESS EXPERIENCE OF INDIVIDUALS WITH DEMENTIA**

S.M. Powers<sup>1</sup>, N.T. Dawson<sup>2</sup>, M. Krestar<sup>2</sup>, K. Judge<sup>2</sup>, 1. *University of Akron, Akron, Ohio*, 2. *Cleveland State University, Cleveland, Ohio*

Research has found that individuals with dementia (IWDs) face a wide range of challenges in managing and coping with the cognitive and functional changes associated with dementia. In order to fully understand the illness experience it is imperative to understand IWD's subjective accounts about living with memory loss. Guided by the Stress Process Model for Individuals with Dementia (SPM-IWDs) and the use of grounded theory, 5 qualitative questions were analyzed to identify key themes representing the views expressed by 114 IWDs in the mild to moderate stages of dementia. The themes were then mapped onto the SPM-IWDs based on the interrelated concepts of primary stressors (e.g., forgetting), secondary strains (e.g., negative emotional impact), and potential mediators (e.g., strong support system). By utilizing this framework, the themes were used to highlight critical areas of IWD's illness experiences and identify key areas in need of further research and intervention development.

## **'I DON'T WANT TO BE USELESS': MEANINGFUL ACTIVITY FOR INDIVIDUALS WITH DEMENTIA**

H.L. Menne, C.J. Whitlatch, *Margaret Blenkner Research Institute, Benjamin Rose Institute on Aging, Cleveland, Ohio*

For the researchers, practitioners, and families who support individuals with dementia (IWDs), it is essential to recognize what is meaningful and important for IWDs. This presentation highlights results from two studies which rely on reports from IWDs to understand the subjective experience of living with dementia. The first study involved a semi-structured qualitative interview with 6 IWDs about their day-to-day experiences with dementia. Results reinforce the importance of continuity for IWDs, in their activities and in their values. The second study included a structured interview with open-ended responses of 267 IWDs about their current enjoyable activities. Results from this larger study focus on the activity categories that IWDs report enjoying and how these activities relate to well-being. Discussion will highlight the application of findings for expanding the Stress Process Model for IWDs and the implications for hypothesis testing and intervention design.

## **FROM RESEARCH LAB TO COMMUNITY IMPLEMENTATION: DEVELOPING A DYADIC INTERVENTION FOR INDIVIDUALS WITH EARLY-STAGE DEMENTIA AND THEIR FAMILY CAREGIVERS**

C.J. Whitlatch, *Benjamin Rose Institute on Aging, Cleveland, Ohio*

An increasing number of evidence-based programs are available to individuals with early-stage dementia (IWDs) and/or their family caregivers (CGs). These programs show great promise for alleviating stress and improving well-being for IWDs and CGs as they adapt to the unpredictable and long-term changes associated with memory loss. This presentation briefly describes the longitudinal program of research that informed the development of the SHARE intervention (Supporting Health, Activities, Resources, and Education). This early-stage intervention draws heavily upon the Stress Process Model and brings together both the IWD and family CG. SHARE is designed to improve communication, increase mutual understanding of each person's care values and preferences for care tasks, enhance well-being, and increase the IWD's participation in his/her own care. Preliminary, but promising results indicate SHARE's feasibility, acceptability, and positive impact. Discussion will highlight findings of particular importance for improving IWD outcomes

## **SESSION 2420 (SYMPOSIUM)**

### **WISDOM AS AN INTEGRATION OF AFFECT AND COGNITION: LIFE-SPAN DEVELOPMENTAL PERSPECTIVES**

Chair: *U. Kunzmann, University of Leipzig, Leipzig, Germany*

Co-Chair: *S. Thomas, University of Leipzig, Leipzig, Germany*

Discussant: *J. Glueck, University of Leipzig, Leipzig, Germany*

Many psychological approaches to wisdom have considered cognitive abilities as a main characteristic of wisdom, but the role of affective processes in wisdom is less clear. This symposium's goal is to contribute to a better understanding of the ways in which cognitive and affective functions interact across the adult life-span and together determine wisdom and its outcomes. Monika Ardelt adopts a wisdom-concept that encompasses affective, cognitive, and reflective components. She presents longitudinal evidence for the idea that the three facets are interrelated and together contribute to high subjective well-being in old age. Stefanie Thomas and Ute Kunzmann investigate the interplay between wisdom-related knowledge and empathic abilities when giving advice to couples who have a serious marital conflict. Results suggest that individuals with an integrative style, characterized by high scores on both wisdom-related knowledge and sympathy, provided the most useful advice to the couples. In two laboratory studies, Igor Grossmann and colleagues, who have conceptualized wisdom as excellence in reasoning about social dilemmas, find that not all affective functions facilitate wise reasoning; high self-focused emotional involvement in a problem may be a risk factor. Daniel Grün and Y. Cheng also demonstrate that self-focussed affective states, evoked through positive and negative performance-feedback, can hinder cognitive functioning, that is, a differentiated understanding of emotions, particularly in older adults. Judith Glück discusses the complex interactions between cognitive and affective aspects of wisdom across the life-span and concludes that only certain affective functions and processes (e.g., sympathy rather than self-focused negative feelings) facilitate wise cognition.

### **BOOSTING WISDOM VIA PSYCHOLOGICAL DISTANCE**

I. Grossmann, *Psychology, University of Waterloo, Waterloo, Ontario, Canada*

The last 20 years of psychological research on wisdom focused on what wisdom is, and how it varies across the lifespan and different personality profiles. Building on this research, my colleagues and I explored the experimental malleability of wisdom-related reasoning schemas (e.g. recognition of limits of knowledge, perspective-taking, dialecticism),

specifically when reasoning over issues that have profound personal implications. Two experiments demonstrate that cueing people to reason about personally meaningful issues (e.g. future career prospects for an unemployed) from a psychologically distanced perspective enhances wise reasoning and behavior (cooperation). Another set of studies extends these findings to the domain of interpersonal relationship conflict, showing that psychological distance has adaptive effects on reasoning and emotions after reflecting on a hypothetical transgression in close relationships. Theoretical and practical implications of these findings are discussed.

#### **DISENTANGLING THE RELATIONS BETWEEN WISDOM AND DIFFERENT TYPES OF WELL-BEING**

M. Ardelet, *Sociology and Criminology & Law, University of Florida, Gainesville, Florida*

This 10-month short-term longitudinal study attempted to determine the causal relations between old age wisdom and subjective, psychological, and physical well-being, using a sample of 123 older ( $M = 72$  years) white and African American community residents and cross-lagged structural equation models. Results showed that baseline wisdom, assessed by cognitive, reflective, and compassionate personality qualities, was significantly related to increases in subjective well-being, mastery, purpose in life, and physical well-being at Time 2, but only baseline physical well-being significantly affected Time 2 wisdom after controlling for baseline wisdom and well-being scores. A subsequent path model indicated that baseline wisdom directly and indirectly (mediated by Time 2 mastery) enhanced Time 2 subjective well-being and purpose in life. The findings corroborate the hypothesis that wisdom in old age can exert a beneficial impact on subjective, psychological, and physical well-being. Helping individuals grow wiser might pay dividends in later life.

#### **WISDOM-RELATED KNOWLEDGE AND SYMPATHY IN RESPONSE TO INTERPERSONAL CONFLICT**

S. Thomas, U. Kunzmann, *Leipzig University, Leipzig, Germany*

According to the Berlin wisdom model, wisdom has been defined as expert knowledge about fundamental life questions of fictitious persons. This study proceeded from the idea that, in real-life, wise advice-giving does not only require wisdom-related knowledge, but also emotional competencies such as the ability to sympathize with the advisee. To investigate this idea, 192 participants watched three films of couples as they discussed a serious marital conflict. After each clip, participants reported their sympathy with the spouses and gave advice to them. Four types of responding were created. The integrated type, characterized by high scores both on wisdom-related knowledge and sympathy, provided the best advice to the couples in that they suggested a richer repertoire of conflict management strategies than the other types (with high scores on either knowledge or sympathy or low scores on both aspects). These findings suggest that sympathy may be one factor that facilitates wisdom.

#### **EMOTIONAL COMPLEXITY IN VERBAL RESPONSES: THE IMPACT OF REJECTION**

D. Grün, Y. Cheng, *Psychology, NC State University, Raleigh, North Carolina*

From a cognitive-developmental perspective (Labouvie-Vief, Grün, & Studer, 2010), the efficiency and complexity of emotional representations depends on person and context characteristics. Person characteristics include age as a proxy for cognitive resources. Thus, older adults' emotional representations may easier be challenged due to limited resources. Certain contexts may also constrain or promote emotional representations. In the present study, we investigated the impact of positive and negative feedback on verbal responses. To do this, we asked young and older adults to participate in an online interview and to verbally respond to 15 questions. After every three questions, par-

ticipants got either positive (acceptance) or negative (rejection) feedback during the interview from the interviewer, who was a confederate. The verbal responses were coded for emotional complexity as well as for other personality aspects (e.g. self-esteem). The verbal responses were indeed influenced by the feedback condition. Findings are discussed from a cognitive-developmental perspective.

### **SESSION 2425 (PAPER)**

#### **IMAGES AND IDENTITY**

##### **SELF-PERCEPTIONS OF AGING PREDICT MAJOR HEALTH EVENTS IN OLDER ADULTS**

K.A. Sargent-Cox<sup>1</sup>, K.J. Anstey<sup>1</sup>, M.A. Luszcz<sup>2</sup>, 1. *Centre for Research in Ageing, Health & Wellbeing, Australian National University, Canberra, Australian Capital Territory, Australia*, 2. *Flinders University, Adelaide, South Australia, Australia*

Self-perceptions of aging (SPA), a measure of satisfaction with one's own aging, is hypothesised to reflect adaptation to age-related changes. SPA is predictive of all-cause mortality and mortality from respiratory causes in older adults. Our objective was to further understanding of the predictive quality of SPA in late-life by extending the investigation to other major health outcomes. We examined how baseline and time-varying change in SPA predicted occurrence of a cardiovascular event, transition from community dwelling to residential care, and all cause mortality in a large ( $N=1507$ ) representative sample of older adults (65+years) over 16 years (5 waves) in the Australian Longitudinal Study of Aging. Event occurrence models (including discrete and Cox regression) revealed poor SPA at baseline increased the risk of transition to residential care ( $OR=1.37$ ) and mortality ( $HR=1.21$ ), but not a CVD event over the 16 year period. Negative change in SPA increased the risk of a CVD event ( $OR=1.15$ ), residential care transition ( $OR=1.43$ ) and mortality ( $HR=1.26$ ). Adjusting models for other health risk factors including demographics, physical health, cognitive functioning and wellbeing explained the predictive relationship for CVD events, but not for residential care and mortality, indicating independent risk for poor SPA beyond these factors. The findings demonstrate that maintaining positive perceptions of aging in late-life may have important implications for healthy aging. Greater understanding of those who are able to maintain positive SPA may help us to appreciate the mechanisms surrounding healthy aging and inform interventions that assist with adaptation to age-related change in late-life.

##### **SHIFTING IMAGES OF AGING: AN ANALYSIS OF MODERN MATURITY/AARP MAGAZINE FROM 1960 TO 2010**

A. Barrett, *Florida State University, Tallahassee, Florida*

Sociocultural constructions of aging are shifting as Baby Boomers move from middle to later life; however, we know little about the images emerging in popular discourse. I address this issue by analyzing representations of aging reflected in a major periodical targeting older adults – Modern Maturity/AARP Magazine. Using a sample composed of two issues published in each year between 1960 and 2010, I analyze cover images and tables of contents. Analyses reveal shifts in images of aging centering on four themes: adapting to versus resisting aging; aging as an individual responsibility versus social issue; emphasis on historical events shared with age peers versus present or future experiences; and older adults' roles as producers versus consumers. I find that more recent images focus on resisting aging, which is constructed as an individual responsibility. They also focus on the present or future experiences of older adults and emphasize expanded roles in both production (e.g., paid and unpaid work) and consumption (e.g., travel, food). The study reveals the increasing prominence of the image of the super-successful ager, displaying high levels of physical or social activity and youthful appear-

ance. I discuss the implications of these patterns for individuals' experiences of aging.

### **THE NATURAL ECOLOGY OF SUBJECTIVE AGING EXPERIENCES: A DIARY STUDY OF COMMUNITY-RESIDING ADULTS BETWEEN THE AGES OF 70 AND 89 YEARS**

M. Miche<sup>1</sup>, H. Wahl<sup>1</sup>, F. Oswald<sup>2</sup>, R. Kaspar<sup>2</sup>, M.K. Diehl<sup>3</sup>, 1. *Department of Psychological Aging Research, Heidelberg University, Heidelberg, Germany*, 2. *Goethe University Frankfurt, Frankfurt, Germany*, 3. *Colorado State University, Fort Collins, Colorado*

Research has established a substantial link between subjective perceptions of aging and a broad range of developmental outcomes. However, traditional measures of subjective aging experiences, such as felt age, fail to acknowledge the multidimensionality inherent in subjective appraisals of aging, as well as the day-to-day experience of being aware of one's own age. The aim of this paper was to capture the natural ecology of subjective aging based on a daily diary approach. We analyzed 1,757 semi-structured diary entries in which participants described daily events and experiences reminding them of their own aging. These reports were collected from a sample of 225 community-residing adults aged 70 to 89 years and coded for domains of behavior and emotional valence (see Diehl & Wahl, 2010). Negative statements about physical functioning were most dominant. Experiences related to lifestyle and engagement, social-cognitive and social-emotional functioning, and interpersonal relations were mentioned by roughly every second person with subjective aging experiences. Cognitive functioning was least frequently mentioned. Frequency distributions and intensity of subjective aging experiences within domains and subdomains varied as a function of gender, age, socioeconomic status, and health status. Overall, results from this study suggest that more sophisticated measurements are helpful in capturing the multi-faceted nature of subjective aging experiences in the daily context. Future studies should extend this research by investigating the link between domain specific aging experiences and developmental outcomes, such as subjective well-being, and specific behaviors, such as preventive health behavior.

### **THE ASSOCIATION BETWEEN AGE IDENTITY AND SUBJECTIVE WELL-BEING AMONG CHINESE OLDER ADULTS**

K. Liang, *The University of Hong Kong, Hong Kong, China*

**Objective:** Although numerous studies have consistently documented that older adults with youthful age identities report higher levels of subjective well-being (SWB) in youth-oriented western societies, currently there is no evidence available from Chinese older adults and the relationship remains unclear in Chinese culture which has a tradition of respecting and valuing the elderly. The objective of this study is to determine the association between age identity and SWB among Chinese older adults. **Methods:** Data are from the 2006 Sample Survey on Aged Population in Urban/Rural China (SSAPUR), which consisted of 16,882 community-dwelling older adults aged 60 years and above. Dependent variables include life satisfaction and depression. Independent variables include sociodemographic control variables (i.e., age, gender, socioeconomic status), self-rated health, various aging markers (i.e., number of chronic conditions, retirement, widowhood), and age identity. **Results:** Over one fifth (21%) of the respondents reported that they did not feel old. Ordinary least regression analyses revealed that youthful age identity was significantly related to higher levels of life satisfaction ( $p < 0.01$ ) and to lower levels of depression ( $p < 0.001$ ), even when controlling for sociodemographic variables, self-rated health, and various aging markers. **Conclusions:** This study provides new evidence of the important role age identity can play in individual development in later life and demonstrates youthful age identities may have adaptive value for Chinese older adults and contribute to their successful aging.

## **SESSION 2430 (PAPER)**

### **PROMOTING OPTIMAL AGING THROUGH THE ARTS**

#### **WELL- AND ILL-BEING: RESULTS FROM VIDEO DATA ANALYSES OF AN INTERGENERATIONAL ART PROGRAM FOR PEOPLE WITH DEMENTIA**

P. Sauer, S.J. Hahn, K. Beanblossom, J.M. Kinney, E. Lokon, *Scripps Gerontology Center, Miami University, Oxford, Ohio*

Opening Minds through Art (OMA) is an intergenerational art program that is grounded in person-centered ethics (e.g., Kitwood, 1997, 1998). The overall goal of OMA is to promote social engagement, autonomy, and dignity by providing creative self-expression opportunities for people with dementia (i.e., "artists"). Weekly structured sessions lasting approximately 40 minutes pair each artist with a volunteer who facilitates her/his creation of original art. A total of 38 artists (with at least moderate dementia) and their volunteers were video-taped during their weekly sessions over an 18-month period at three long-term care facilities. Trained researchers coded the videotapes using a modified version of the Greater Cincinnati Chapter Well-Being Observation Tool (Kinney & Rentz, 2008). Each tape was divided into five-minute intervals, which were coded for the extent to which the artist demonstrated well-being (i.e., social interest, engagement, pleasure) and ill-being (i.e., disengagement, negative affect, sadness, confusion). After extensive training, inter-rater agreement based on one-third of the tapes was 94.08 percent. Results indicated that, out of the eight observational intervals in the initial session, the average number of intervals in which artists demonstrated well-being (i.e., engagement, social interest and pleasure) were 6.92, 6.68 and 5.63, respectively. Whereas all artists demonstrated multiple domains of well-being, ill-being was demonstrated by far fewer artists and for fewer intervals on average (means ranged from .82 intervals for disengagement to .08 intervals for sadness). Results demonstrate that it is possible to provide programming that promotes well-being among individuals in moderate to advanced stages of dementia.

#### **MUSIC-MAKING: A PROTECTIVE FACTOR AGAINST DEMENTIA**

A. Balbag<sup>1</sup>, N.L. Pedersen<sup>2,1</sup>, M. Gatz<sup>1,2</sup>, 1. *University of Southern California, Los Angeles, California*, 2. *Karolinska Institutet, Stockholm, Sweden*

Music-making is a uniquely complex process: Not only is it a form of art or entertainment, but also a prime example of multimodal integration. Although music processing has traditionally been attributed to the right hemisphere of the brain, it now appears that the brain is wired throughout for music. Recent research illustrates structural and functional brain differences between musicians and non-musicians, stimulating much interest in how music may benefit brain health and cognitive function. While playing an instrument is typically viewed as positively influencing cognition in youth, we ask if older adults also receive cognitive benefit from music-making throughout the life course. Using the Study of Dementia in Swedish Twins, we examined music's potential to protect against dementia. Dementia diagnoses were based on a complete clinical workup. Participation in music-making was taken from informant-based reports of twins' leisure activities. In twin pairs discordant for dementia ( $n = 123$ ) we find evidence that playing a musical instrument is protective against dementia. Compared to the twin who developed dementia or cognitive impairment, the twin who remained cognitively intact was more likely to have engaged in music-making ( $OR = 0.65$ ). Given music's universality, this evidence of its potential role as a non-pharmacological, non-invasive, and modifiable protective factor against dementia is particularly encouraging.

## **VOICEBOX: GIVING THE ELDER COMMUNITY A VOICE USING VIRTUAL PUPPETS AND PUPPETRY**

T.M. Witten<sup>1</sup>, S. Ryu<sup>2</sup>, 1. *Virginia Commonwealth University, Richmond, Virginia*, 2. *Center for the Study of Biological Complexity, Virginia Commonwealth University, Richmond, Virginia*

VOICEBOX is a multi-school, multi-disciplinary project between the VCU School of the Arts, the School of Life Sciences (CSBC), students from the School of Social Work and the College of Humanities and Arts, Department of Women's Studies. The VOICEBOX project explores the development of a creative, expressive and engaging storytelling platform for the senior population in Richmond and surrounds, using the ideas of a virtual (3D) interactive puppet performance. We posit that this software and hardware design can also be used in a therapeutic fashion to be used to mediate depression and loneliness. The project will commence by creating a simple immersive virtual environment for the puppeteer (we will now refer to the senior as the puppeteer) immersive storytelling process. Once it has been tested out and debugged, we will move to public theatre performance by senior volunteers who are willing to be public storytellers (personal or fictional) in public. The virtual 3D puppet will be projected on screen, controlled by the puppeteer via digital wireless technology. The puppeteer will face the virtual puppet from a long distance, speaking into wireless microphone, which will activate the virtual puppet's mouth in real time. Consequently, the virtual puppet lip-sync with the puppeteer's voice, speaking back his/her story as real time echoes. The puppeteer will be standing on a Nintendo WiiFit, transmitting his/her weight balance signal to the virtual puppet which then mirrors the puppeteer's body in a swaying motion. The puppeteer will use an interactive device and select items on screen which will activate pre-configured actions of the virtual puppet, on top of the puppeteer's realtime actions. The combination of these capabilities allows the puppeteer to choreograph visual narratives that will simultaneously inspire the audience and the puppeteer in a live performance. Using the facial tracking technology, the puppeteer's face will be tracked and captured by webcam. The face of live puppeteer will be superimposed on top of the virtual puppet face in the middle of the performance. The single puppeteer will play all characters in story, switching back and forth between multiple characters. By being a puppeteer using virtual puppet, the puppeteer will have an opportunity to tell his/her own personal story and review his/her own memory and history in a more accessible and expressive fashion, which can then be more appreciated, respected and shared with the public (including themselves), as special art forms full of wisdom and true knowledge. The user's live wireless spoken words will motivate the virtual body and will also encourage the realtime, visual and acoustical feedback of the virtual space, thereby creating an experiential and improvisational storytelling process in mixture of multiple realities (i.e., past/present/future, real/fantasy). The VOICEBOX system will help the senior to review and reveal their distant memory, feelings and hidden emotions from their oral storytelling process. It will also give the senior an opportunity to more deeply review their own internal oral history and to make the choice of sharing with their family (across generations) and if they desire, a wider more public audience.

## **PERCEIVED BENEFITS OF SINGING AND QUALITY OF LIFE IN OLDER COMMUNITY CHORAL SINGERS IN FINLAND**

J.K. Johnson<sup>1</sup>, J. Louhivuori<sup>2</sup>, P. Era<sup>2,3</sup>, L. Ross<sup>1</sup>, A. Stewart<sup>1</sup>, 1. *Institute for Health and Aging, University of California, San Francisco, San Francisco, California*, 2. *University of Jyväskylä, Jyväskylä, Finland*, 3. *GeroCenter Foundation for Research and Development, Kinkomaa, Finland*

Objective: Describe experiences of singing in community choirs and determine association with quality of life (QOL). Method: With older choir members in Finland (N=117), we assessed experiences associated with singing (e.g., relaxation, group support, and emotional experiences)

and QOL (WHOQOL-Bref). We describe these experiences and use linear regression to examine their association with QOL. Results: We found a mean of 92 (+11) (possible range 16-126) on the choral singing measure and moderately high QOL levels (means 16-17 on four domains, possible range 4-20). The choral score was significantly correlated with psychological, personal relationships, and environment domains of QOL as well as overall QOL, even after adjusting for age, gender and depressive symptoms. Discussion: Findings suggest a cross-sectional relationship between experiences in choir and QOL in older adults in Finland, which promotes lifelong involvement in music. Future studies should investigate whether choral singing can promote healthy aging (e.g., randomized controlled trials).

## **TOUCHING THE HEARTS OF YOUNG DOCTORS: RESEARCH-BASED READER'S THEATRE AS A CATALYST TO ENHANCE MEDICAL STUDENT EMPATHY AND UNDERSTANDING OF DEMENTIA PATIENTS AND THEIR FAMILY CAREGIVERS**

O. Morey, S.M. Gerik, *Educational Development, University of Texas Medical Branch, Galveston, Texas*

Humanism, compassion and empathy are essential characteristics of healthcare providers for older adults, yet the public often sees provider compassion as lacking. Medical education largely focuses on the scientific model of objective principles with little attention to the human side of care. This, combined with a minimal focus on geriatric education, gives students little understanding of the psycho-social and emotional issues of aging. Recent moves in research-informed theatre have allowed qualitative researcher/educators to use drama to make their research more significant and relevant to healthcare settings. Research-based reader's theatre about topics related to aging can significantly contribute to medical education by allowing students to reflect on their own emotions and the use of an imaginative perspective to develop insight into how best to convey compassion and empathy to older patients and their caregivers. This paper explains how a research-based reader's theatre production about people who care for a loved one with dementia was developed from a qualitative research study, offered to all first year medical students at the University of Texas Medical Branch, and then evaluated using qualitative research methods. Research findings on the impact of the research-based theatre production on medical students' empathy and understanding of the older patient/family caregiver/physician triad will be discussed.

## **SESSION 2435 (SYMPOSIUM)**

### **NAVIGATING THE MAZE OF PAIN AND OTHER SYMPTOMS DURING AND AFTER HOSPITALIZATION**

Chair: S.H. Kagan, *School of Nursing, University of Pennsylvania, Philadelphia, Pennsylvania*

Despite marked attention given to pain management for chronically, seriously ill older adults, patients and their families are commonly unsatisfied with pain and symptom management during hospitalization and are often bewildered by discharge from the hospitalization. As a consequence, challenges persist in assuring adequate pain and symptom management and successful transition from hospital to home and to preventing readmission and iatrogenic events. This symposium, in acknowledging current major policy initiatives and evidence in transitional care aimed at reducing readmission and increasing patient and family-centered care, assumes a focal perspective on pain and symptoms in exploring trajectories from hospital to home. This focal perspective links research in pain management in intensive care, discharge teaching for pain management in general ward care, and home based primary care

to map out patient trajectories and explore novel solutions to address pain management and successful hospital discharge for chronically, seriously ill older adults. The first paper examines the influence of patient characteristics including age on pain management for mechanically ventilated ill adults. The second paper explores patient and family caregiver experiences of managing pain while receiving home health care after hospital discharge. The final paper examines representative cases of home-based primary care and symptom management as an avenue to improve patient outcomes and reduce hospitalization for patients in the Veterans' Administration program that will be tested by Medicare as "Independence at Home". The discussant – a senior nurse scientist – will offer insights into the evidence presented and the larger themes represented to launch interdisciplinary discussion.

### **PATIENTS' AND THEIR INFORMAL CAREGIVERS' EXPERIENCES OF PAIN MANAGEMENT AFTER HOSPITAL DISCHARGE**

J.B. Foust<sup>1</sup>, N.H. Vuckovic<sup>2</sup>, *1. University of Massachusetts, Boston, Massachusetts, 2. Intel Corporation, Beaverton, Oregon*

**Purpose.** To describe the experiences of home healthcare patients and informal caregivers managing pain after being hospitalized. **Methods.** In-depth qualitative interviews were conducted (N=40) with recently discharged home healthcare patients and their informal caregivers (N= 36). Qualitative content analyses were used. Selected medical record data were used to complement interview data. **Results.** Most patients (80%) experienced or had documented pain (N=32). Patients described pain patterns (e.g. intensity, triggers), health professionals' instructions and their responses to pain management strategies (e.g. expectations, medications). Informal caregivers (N=29) described how patients' pain affected them. Discrepancies occurred between pain reported by patients or caregivers and agency documentation (n=10). **Conclusion:** Recently discharged home healthcare patients frequently experienced pain and used diverse strategies to manage their pain. Informal caregivers were affected by patients' pain and provided support. Better identification, education and monitoring are needed to improve post-hospital pain management to address medication use, self-monitoring and promoting activity.

### **THE ASSOCIATION OF AGE AND OTHER PATIENT CHARACTERISTICS WITH PAIN MANAGEMENT IN THE ICU**

M. Happ, J. Lee, J.B. Seamon, M.P. House, S.M. Sereika, J.A. Tate, A. Barnato, *University of Pittsburgh, Pittsburgh, Pennsylvania*

**Purpose:** To explore the association of patient characteristics (age, race, gender, severity of illness) with pain management (days-in-pain; daily maximum pain scores) among mechanically ventilated (MV) patients in ICUs. **Sample/Setting:** Random sample of 30 patients (MV >2 days; awake >12-hours) from 6 ICUs (August-October, 2009) from electronic medical record database. **Method:** We abstracted demographic and clinical information to a 28-day maximum/patient: severity of illness (APACHEiii), highest daily pain rating (1-10 scale), and pain reported by nurse assessment. Data were analyzed using descriptive statistics and multiple linear regression. **Results:** Among 184 patients, aged 58.92+17.92 years, 50.0% were women; 20(10.9%) were black/AA, 160(87.0%) white; APACHEiii =70.27+17.59. Mean maximum daily pain scores=6.5+2.3 and % days-in-pain= 55.90+29.46. Older age was significantly associated with lower mean maximum daily pain rating (F=3.70, p=.057; b=-0.03) and fewer days-in-pain (F=16.15, p<.001; b=-0.55). **Conclusions:** Older MV patient age is associated with lower pain intensity assessments and fewer days-in-pain in ICU.

### **PATIENT EXPERIENCES OF INTERDISCIPLINARY SYMPTOM MANAGEMENT IN VA HOME BASED PRIMARY CARE**

N.H. Vuckovic<sup>1</sup>, T. Edes<sup>2</sup>, L.O. Nichols<sup>3</sup>, *1. Intel Corporation, Beaverton, Oregon, 2. U.S. Department of Veterans Affairs, Washington, District of Columbia, 3. Veterans Affairs Medical Center, Memphis, Tennessee*

**Purpose:** The VA's Home Based Primary Care (HBPC) program, which provides comprehensive interdisciplinary in-home care, has been shown to decrease inpatient utilization and improve patient outcomes. Veterans' experience of the program and resulting health improvements provide additional insights into the value of the program. Medicare is preparing to test this model of care as Independence at Home. **Methods:** We present case studies of two HBPC Veterans based on observations of HBPC staff and interviews with the Veterans and their family caregivers. **Results:** Clinician observations identified that care coordination enables a composite assessment of the Veteran's health needs. Veterans described positive changes in health and quality of life through comprehensive and thorough care. **Conclusions:** This interdisciplinary, team-based care delivery model results in care that is clinically effective and valued by Veterans. **Objectives:** Participants will be able to discuss how this type of care can benefit high cost, complex chronic disease patients.

## **SESSION 2440 (SYMPOSIUM)**

### **PHYSICAL ACTIVITY: A PATHWAY TO COGNITIVE AND FUNCTIONAL HEALTH**

Chair: *C.M. Germain, Center for Aging and the Study of Human Development, Duke University, Durham, North Carolina*

Discussant: *H.R. Romero, Center for Aging and the Study of Human Development, Duke University, Durham, North Carolina*

Dementia represents a diverse category of syndromes characterized by deficits in memory and other cognitive functions, as well as behavior. Symptoms associated with dementia appear to be distributed along a continuum, with even sub-clinical levels of impairment affecting the health and functional ability of older adults. With the continued increase in the aging population, identifying risk and protective factors that help to preserve the functional ability of older adults is of increasing importance. In recent years, investigators have considered a variety of lifestyle variables that may serve as protective factors against cognitive decline including physical health, the availability and presence of social networks, intellectual engagement and physical activity. Participation in physical activities in particular has been of increasing interest because it presents opportunities for non-pharmacological interventions as a method of improving health, functional and cognitive outcomes in late life. The current symposium will present research which examines the protective benefits of physical activity on late life cognition and functional status.

### **COGNITIVE IMPAIRMENT DUE TO VASCULAR DISEASE AMONG MEDICALLY UNDERSERVED OLDER ADULTS**

H.R. Romero, *Bryan Alzheimer Disease Research Center, Duke University Medical Center, Durham, North Carolina*

Medically underserved populations with vascular risk factors are at risk for cognitive impairment. Patients were referred to our free memory clinic by their community health clinic providers and were administered a brief neuropsychological screening. Participants (N=37) were predominantly African American (71%), as well as White (25%) and Hispanic (4%). Average age was 64.7 (47-85) and mean education level was 11 years (6-18). The majority had an annual income near the federal poverty level. Nearly half (46%) were diagnosed with cognitive impairment no dementia (CIND-vascular), primarily associated with cerebrovascular disease. Secondary contributions included substance

abuse, chronic pain, head injury, and depression. Less common diagnoses included Alzheimer's disease (AD), mild cognitive impairment (likely early AD), vascular dementia, and psychiatric disorders. Many participants did not endorse participation in the health center's walk group or vascular disease support group. The findings have important implications for preventing cognitive disorders among individuals with vascular disease.

#### **PHYSICAL ACTIVITY AND COGNITION IN OLDER AFRICAN AMERICANS**

A. Aiken Morgan<sup>1</sup>, K.E. Whitfield<sup>2</sup>, *1. Center for Aging, Duke University Medical Center, Durham, North Carolina, 2. Duke University, Durham, North Carolina*

Research shows that physical activity is related to many positive health outcomes, including lower cardiovascular risks, lower rates of depression, improved aerobic capacity, and improved functional capacity. There is also a growing body of literature showing a positive relationship between physical activity and cognitive function. The present study examined the association between physical activity and cognitive status in African Americans from the second wave of the Carolina African American Twin Study of Aging (CAATSA). Results revealed significant associations between physical activity and cognitive status ( $p < .01$ ). These findings suggest that physical activity is associated with better cognitive status in this sample of older African Americans, which has implications for physical and cognitive health disparities.

#### **LATE-LIFE LIFESTYLE ACTIVITY AS A BUFFER FOR COGNITIVE DECLINE AND FUNCTIONAL IMPAIRMENT**

J. Kuo<sup>1,2</sup>, J.M. Parisi<sup>3</sup>, R. Nahin<sup>3</sup>, A. Fitzpatrick<sup>4</sup>, S. Rapp<sup>5</sup>, O.L. Lopez<sup>6</sup>, B. Snitz<sup>6</sup>, M. Carlson<sup>1,2</sup>, *1. Johns Hopkins University Center on Aging and Health, Baltimore, Maryland, 2. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, 3. National Center for Complementary and Alternative Medicine, Bethesda, Maryland, 4. University of Washington, Seattle, Washington, 5. Wake Forest University School of Medicine, Winston-Salem, North Carolina, 6. University of Pittsburg, Pittsburg, Pennsylvania*

**Objective:** We examined whether baseline social, cognitive, or physical activity better predicted greater declines in cognitive function (3MSE, TMT-B) and functional independence (IADL). **Methods:** The study population consisted of 3,069 community volunteers aged 75 years or older in the Ginkgo Evaluation of Memory (GEM) study. Intellectual, social, and physical activities were measured using the Lifestyle Activity Questionnaire (LAQ; Carlson et al., 2012). Dementia was diagnosed using DSM, IV criteria. **Results:** Physical and intellectual activities were associated with better 3MSE performance, and intellectual activities were associated with better performance in the TMT at baseline. Greater physical activity was predictive of fewer 3MSE errors longitudinally, and increased survival time to incident IADL difficulty ( $p < .01$ ). **Conclusions:** Social and intellectual activities were not associated with reducing rates of cognitive decline. Physical activity was beneficial in buffering decline in the 3MSE and was associated with delayed onset of IADL difficulty, but not with incident dementia.

#### **PHYSICAL ACTIVITY AND COGNITIVE IMPAIRMENT NOT DEMENTIA (CIND) IN LATE LIFE**

C.M. Germain, B.L. Plassman, M. Kuchibhatla, *Center for Aging and the Study of Human Development, Duke University, Durham, North Carolina*

Research suggests that physical activity and exercise may help to delay or protect against cognitive decline and dementia in late life. Whether physical activity is protective against subclinical dementia is unclear. The current study examined the association between participation in vigorous physical activity and likelihood of being diagnosed as CIND. The current study used existing data from ADAMS (Aging, Demographics and Memory Study) which is a representative sample

of  $n = 856$  community dwelling adults over 70 years of age drawn from the Health and Retirement Study (HRS). Results suggest that participation in vigorous physical activity is associated with reduced likelihood of being diagnosed as CIND ( $p < .03$ ). Individuals who reported participating in vigorous physical activity at least 3 times per week were less likely to be diagnosed as CIND six years later than those who reported that they did not engage in vigorous physical activity.

### **SESSION 2445 (SYMPOSIUM)**

#### **THE GERONTOLOGICAL IMAGINATION: RESEARCH IN HEALTH AND AGING FROM THE FIRST COHORT OF DOCTORATES IN GERONTOLOGY**

Chair: *B. Kaskie, University of Iowa, Iowa City, Iowa*

Discussant: *R. Andel, University of South Florida, Tampa, Florida*

Discussant: *A. Watts, University of Kansas, Lawrence, Kansas*

In 1993 the USC Leonard Davis School of Gerontology conferred the world's first doctoral degree in Gerontology. The purpose of this symposium is to present research in health and aging currently being conducted by the first cohort of graduates from the USC program (1993-2012). These presenters will showcase how the PhD in gerontology has led them to ask a variety of interesting research questions using distinct methodological approaches. Valentine Villa, the first doctoral graduate in gerontology, presents findings from the California Health Interview Survey that reveal differences in health outcomes among U.S. born non-Hispanic white, U.S. born Mexican, naturalized Mexican and non-citizen Mexican immigrant baby boomers. Debra Sheets discusses an evaluation of how 14 family and informal caregiver programs impacted individual levels of depression and burden. Susan Stewart demonstrates how she used multiple data sets to depict trends in quality-adjusted life expectancy (QALE) for persons over 65. Adria Navarro examines the effectiveness of an elder abuse forensic center in increasing prosecution of financial abuse. Brian Kaskie reviews workplace wellness programs targeting aging faculty and staff at 187 academic institutions across the United States. The symposium will demonstrate how doctorates in gerontology have made unique contributions in advancing our understanding about the health of our aging population. The symposium also will provide an opportunity to consider the distinct career pathways that have been taken by doctorates in gerontology.

#### **DEVELOPMENTAL EVALUATION OF THE FAMILY AND INFORMAL CAREGIVER INITIATIVE**

D.J. Sheets, *School of Nursing, GEOTOP, Victoria, British Columbia, Canada*

**Background:** Between 2009-2012, The Weinberg Foundation awarded \$8 million in funding to 14 non-profit organizations aimed at developing evidence-based and innovative programs to support family and informal caregivers of older adults. An external evaluation of the initiative focused on outcomes that included caregiver risk, depression, and burden. **Methods:** A developmental evaluation design included process and outcome measures. Qualitative data monitored collaborative partnerships through narrative reports. Quantitative data from ~900 caregivers receiving direct services was gathered from pre- and post- surveys. **Results:** Key findings included the effectiveness of technologies to support caregivers as well as the importance of "no wrong door" approaches to serving caregivers and the need for collaborative partnerships to offer a comprehensive approach to addressing caregiver needs. **Conclusion:** Policies and programs that target caregivers early in the caregiving process are crucial to avert crises and support caregivers as the needs of the care recipient change and progress.



## QUALITY-ADJUSTED LIFE EXPECTANCY IN THE U.S. FROM 1987 TO 2008: TRENDS AND CONTRIBUTING FACTORS

S. Stewart<sup>1</sup>, D.M. Cutler<sup>2,1</sup>, A.B. Rosen<sup>3,1</sup>, 1. *National Bureau of Economic Research, Cambridge, Massachusetts*, 2. *Department of Economics, Harvard University, Cambridge, Massachusetts*, 3. *Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, Massachusetts*

**Background:** The wealth of data on impairments and symptoms collected by U.S. health surveys over time has not been used to systematically track overall health trends among older adults. **Methods:** Trends in quality-adjusted life expectancy (QALE) are measured and decomposed into contributing factors, using national mortality data and impairments and symptoms in the National Medical Expenditure Survey (1987), the National Health Interview Survey (1987, 1994-95, 1996) and the Medical Expenditure Panel Survey (2000-08). **Results:** QALE at age 65 increased by 1.7 years from 1987 to 2008, with gains driven by life expectancy increases (1.45 years) and reductions in most impairments and symptoms (0.50 years). Smoking declined while obesity increased, with a net effect of slowing QALE growth by 0.14 years. **Conclusion:** QALE has increased over the past two decades despite rising obesity and slight worsening of some impairments. Tracking population health with a detailed summary measure is key to informed health policy-making.

## HOLDING ABUSERS ACCOUNTABLE: AN ELDER ABUSE FORENSIC CENTER INCREASES CRIMINAL PROSECUTION OF FINANCIAL EXPLOITATION

A.E. Navarro<sup>1,2</sup>, Z.D. Gassoumis<sup>2</sup>, K. Wilber<sup>2</sup>, 1. *Azusa Pacific University, Azusa, California*, 2. *University of Southern California, Los Angeles, California*

**Purpose:** The aim of this study was to examine the effectiveness of an elder abuse forensic center compared with usual care to increase prosecution of elder financial exploitation. **Design and Methods:** Los Angeles County Elder Abuse Forensic Center cases (aged 65+), heard 2007 to 2009 (n=237), were matched to a population that received usual care from Adult Protective Services (APS). **Results:** Significantly more Forensic Center cases were submitted to the District Attorney's office (DA) for review (22%, n=51 vs. 3%, n=7 usual care, p<.001). Using logistic regression, the strongest predictor of case review and ultimate filing and conviction was whether the case was presented at the Forensic Center, with ten times greater odds of submission to the DA (OR=11.00, CI:4.66-25.98). **Implications:** Previous studies have not demonstrated that elder abuse interventions impact outcomes; this study breaks new ground by showing that an elder abuse multidisciplinary team increases rates of prosecution.

## WORKPLACE WELLNESS PROGRAMS FOR AGING ACADEMICS: A ROLE FOR GERONTOLOGISTS

B. Kaskie<sup>1</sup>, Z. Cong<sup>2</sup>, 1. *University of Iowa, Iowa City, Iowa*, 2. *Texas Tech University, Lubbock, Texas*

**Purpose:** Few colleges or universities have identified the challenges and opportunities presented by aging employees as a top priority. This research examined workplace wellness programs targeting aging faculty and staff at academic institutions. **Data/Methods:** A cross-sectional survey of 187 human resource specialists from a representative sample of academic institutions provided data on workplace wellness programs most relevant to aging employees (e.g., retirement counseling). These institutional wellness programs were regressed onto a mixed effect model featuring contextual, institutional and individual level constructs (e.g., location of institution, size of student body, background of HR specialist). **Results:** Wellness programming varied significantly across academic institutions and was related to two variables: the over-all size of the institution and whether the HR specialist had completed any training-in-aging. **Conclusion:** Implementing a formal effort to increase well-

ness programming for an aging academic workforce appears relatively straightforward, and is likely to generate individual and institutional benefits.

## HISPANIC BABY BOOMERS: HEALTH INEQUITIES LIKELY TO PERSIST IN OLD AGE

V.M. Villa<sup>1,2</sup>, S. Wallace<sup>1</sup>, S. Bagdasaryan<sup>2</sup>, M.P. Aranda<sup>3</sup>, 1. *Public Health, UCLA, Los Angeles, California*, 2. *CSULA, Los Angeles, California*, 3. *USC, Los Angeles, California*

**Purpose:** As the baby boom generation enters the ranks of the elderly, the U.S. will witness an unprecedented growth in racial/ethnic diversity. Hispanics will comprise 20% of the next generation of older adults, representing the largest minority population age 65+. **Data/Methods:** Utilizing data from the California Health Interview Survey 2007, logistic regression was used to test for differences in health among U.S. born non-Hispanic white, U.S. born Mexican, naturalized Mexican, and non-citizen Mexican immigrant baby boomers born between 1946 and 1964 (ages 43-61). **Results:** The Mexican origin disadvantage in health attenuates in part when controlling for socioeconomic status, but some disadvantages remain. **Conclusion:** Baby boomers of Mexican origin do not share the advantages of health, income, and educational attainment enjoyed by U.S. born non-Hispanic whites. As this cohort moves into old age, the cumulative disadvantage of existing disparities are likely to result in continued health disparities.

## SESSION 2450 (PAPER)

### EPIDEMIOLOGY: DISTRIBUTIONS AND PATTERNS OF OLDER ADULT HEALTH

#### INJURIES OCCURRING TO RURAL OLDER ADULTS

L.S. Edelman, L.J. Cook, L. Olson, *University of Utah, Salt Lake City, Utah*

Injury rates increase with age, with falls accounting for the majority of injuries occurring to older adults. Rural areas have increased proportions of older adults yet there is a paucity of research about injury circumstances, treatments and outcomes in this population. In this study we compared injuries occurring to rural and urban older adults in a Western state. **Method:** We probabilistically linked records from State emergency department, hospital discharge, and vital record databases to identify adults 65+ years of age with injury diagnoses codes during 2007-2008. Older adults living in counties with fewer than 100 individuals per square mile were considered rural. **Results:** Rural residents experienced 29% of the 32,437 injuries occurring to older adults; counties with the highest fatal and non-fatal injury rates were rural. Injured rural older adults were less likely to be female (57 vs. 61%, p<0.05) and to be hospitalized for the initial injury (17% vs. 20%, p<0.05) than urban older adults. Rural older adults were less likely to be injured from falling or motor vehicle collisions and more likely to be injured by machinery, other modes of transportation, natural/environmental injuries, being struck, or overexertion. During the study period, 12% of older adults died but only ¼ of deaths were due to injuries. **Conclusions:** Differences in rural and urban older adult injury rates are not as great as reported in younger adult populations. Differences in injury etiologies can be used to design injury prevention programs targeted to rural older adults.

## ASSOCIATION OF CHANGES IN WEIGHT WITH BODY COMPOSITION AND MORTALITY IN OLDER ADULTS: HEALTH ABC

R.A. Murphy<sup>1</sup>, K. Patel<sup>1</sup>, S.B. Kritchevsky<sup>2</sup>, D.K. Houston<sup>2</sup>, F.A. Tylavsky<sup>3</sup>, P.M. Cawthon<sup>4</sup>, A.B. Newman<sup>5</sup>, T.B. Harris<sup>1</sup>, *1. Epidemiology, Demography and Biometry, National Institute on Aging, Bethesda, Maryland, 2. Wake Forest University, Salem, North Carolina, 3. University of Tennessee Health Science Center, Memphis, Tennessee, 4. California Pacific Medical Center, San Francisco, California, 5. University of Pittsburgh, Pittsburgh, Pennsylvania*

Background: Aging is often accompanied by changes in weight and body composition that may indicate declining health. Methods: We examined the association of weight changes with body composition and mortality among 1,975 participants (53% women, 37% black) in Health ABC. Annual weight and DXA measurements from the first 5 years of Health ABC were analyzed with mortality follow-up for 8 subsequent years. A 5% weight change from year to year or from year 1 was used to define weight patterns as stable (n=664), loss (n=662), gain (321) or unstable (gain and loss of 5%, n=328). Results: At the end of the initial 5-year period, weight losers had the lowest weight, lean mass and fat mass. Weight unstable women tended to weigh less than weight stable women (p=0.06) which was due mainly to differences in fat mass (p=0.04) not lean mass (p=0.12). There were no significant differences in body composition between men with stable or unstable weight. Compared to participants with stable weight, those with weight loss or unstable weight had increased mortality risk; weight gainers did not have increased mortality risk. Adjusting for demographics, BMI, physical activity, smoking, multiple morbidities and physical performance, the hazard ratios (HR) (95% confidence interval) for weight loss in women and men were 1.53 (1.12-2.09) and 1.47 (1.14-1.91), respectively; for weight unstable women and men, the HRs were 1.71 (1.21-2.41) and 1.69 (1.23-2.32), respectively. Conclusions: Weight loss and cycling were strongly associated with increased mortality, underscoring the importance of monitoring weight history for geriatric care.

## GAIT SPEED AND DISABILITY IN ELDERLY: CHS, HEALTH ABC, HEPESE, INCHIANTI, MROS, PEP AND SOF STUDIES

S. Perera, K. Patel, C. Rosano, A.B. Newman, J.A. Cauley, J.M. Guralnik, L. Ferrucci, S. Studenski, *Division of Geriatric Medicine, University of Pittsburgh, Pittsburgh, Pennsylvania*

Background: Gait speed predicts future health outcomes, but absolute rates of disability and predictive accuracy estimates are needed to make individualized clinical decisions. Objective: To evaluate the relationship between gait speed and disability. Methods: Logistic regression analysis and synthesis of individual data from 7 large cohort studies of 27,432 adults aged 65+ with baseline 4-6m standing start gait speed, followed up for 3 years. Outcomes: Incident dependence in any activity of daily living (ADL) and bathing/dressing only; difficulty walking 2-3 blocks, climbing flight of stairs and in either one of them. Results: Participants had mean age 73.4 (5.3); gait speed 0.99 (0.22) m/s; and were 60% women. Gait speed predicted ADL dependence (age-adjusted pooled odds ratios per 0.1 m/s increase=0.71; p=0.0023), and risk decreased with gait speed across the full range. For 7 gait speed categories defined by 0.2 m/s intervals, the absolute percentages of 3-year incident ADL disability were 19%, 11%, 5%, 3%, 2%, 1% and 2%, and walking difficulty 35%, 21%, 13%, 7%, 7% and 3%. Area under ROC curve for ADL dependency increased from 0.766 to 0.804 when gait speed was added to a model with age, gender, disease history, BMI, blood pressure and prior hospitalization. Results were similar for other outcomes and when disability at interim assessments was considered. Conclusion: In this pooled analysis of individual data from 7 selected large cohorts, gait speed predicted incident disability in older adults.

## ASSOCIATION OF A MODIFIED PHYSIOLOGIC INDEX WITH MORTALITY AND INCIDENT DISABILITY

J. Sanders<sup>1</sup>, R. Boudreau<sup>1</sup>, B. Penninx<sup>2</sup>, E.M. Simonsick<sup>3,4</sup>, S.B. Kritchevsky<sup>5</sup>, S. Satterfield<sup>6</sup>, T.B. Harris<sup>4</sup>, A.B. Newman<sup>1</sup>, *1. University of Pittsburgh, Pittsburgh, Pennsylvania, 2. VU University Medical Center, Amsterdam, Netherlands, 3. Johns Hopkins School of Medicine, Baltimore, Maryland, 4. National Institute on Aging, Baltimore, Maryland, 5. Wake Forest University, Winston-Salem, North Carolina, 6. University of Tennessee, Memphis, Tennessee*

Background: Indexes constructed from components may identify individuals who age well across systems. We studied the associations of a Modified Physiologic Index (systolic blood pressure, forced vital capacity, Digit Symbol Substitution Test score, serum cystatin-C, serum fasting glucose) with mortality and incident disability. Methods: Data are from the Health, Aging, and Body Composition study on 2737 persons (51.2% women, 40.3% black) aged 70-79 at baseline and followed on average 9.3 (2.9) years. Components were graded 0 (healthiest), 1 (middle), or 2 (unhealthiest) by tertile or clinical cutpoints and summed to calculate a continuous index score (range 0-10). We used multivariate Cox proportional hazards regression to calculate risk of death or disability and determined accuracy predicting death using the area under the curve. Results: Mortality was 19% greater per index unit (P<0.05). Those with highest index scores (scores 7-10) had 3.53-fold greater mortality than those with lowest scores (scores 0-2). The unadjusted index (c-statistic=0.656, 95% CI 0.636-0.677, P<0.0001) predicted death better than age (c-statistic=0.591, 95% CI 0.568-0.613, P<0.0001) (P<0.0001 for comparison). The index attenuated the age association with mortality by 33%. A model including age and the index did not predict death better than the index alone (c-statistic=0.671). Prediction was improved with the addition of other markers of health (c-statistic=0.710, 95% CI 0.689-0.730). The index was associated with incident disability (aHR per index unit = 1.04, 95% CI 1.01-1.07). Conclusions: A simple index of available physiologic measurements was associated with mortality and incident disability and may prove useful for identifying persons who age well across systems.

## EFFECT OF GENE-ENVIRONMENT INTERACTIONS BETWEEN APOE $\epsilon$ 4 AND LIFETIME ALCOHOL CONSUMPTION ON COGNITION IN OLDER ADULTS

B. Downer<sup>1</sup>, F. Zanjani<sup>1</sup>, D. Fardo<sup>2</sup>, *1. University of Kentucky, Gerontology, Lexington, Kentucky, 2. University of Kentucky, Biostatistics, Lexington, Kentucky*

Background: Few studies have analyzed if the association between alcohol consumption and cognitive functioning is modified by APOE genotypes. Data from 475 participants of the Offspring Cohort of the Framingham Heart Study were used to examine if outcomes for immediate and delayed logical, paired associate and visual memory were affected by interactions between lifetime alcohol consumption and APOE  $\epsilon$ 4. Methods: Participants were dichotomized according to presence ( $\epsilon$ 4+) or absence ( $\epsilon$ 4-) of APOE  $\epsilon$ 4 alleles. Alcohol consumption data collected during clinical exams 1-7 were used to determine lifetime alcohol consumption status (abstainer, moderate or at risk consumer). Analysis of Covariance was used to compare adjusted mean cognitive scores according to alcohol consumption and APOE  $\epsilon$ 4 status. Results:  $\epsilon$ 4+ at risk consumers had lower cognitive scores compared to  $\epsilon$ 4- at risk consumers for delayed (p=0.035) and immediate (p=0.067) logical memory and immediate (p=0.041) and delayed (p=0.062) paired associate memory.  $\epsilon$ 4+ moderate consumers had a lower score for immediate logical memory compared to  $\epsilon$ 4- moderate consumers (p=0.039).  $\epsilon$ 4- at risk consumers had higher scores compared to  $\epsilon$ 4- moderate consumers for immediate (p=0.033) and delayed (p=0.023) logical memory and immediate paired associate memory (p=0.072). Visual memory was not modified by  $\epsilon$ 4 status in moderate or at risk consumers. APOE did not have an effect on any domains for abstainers. Conclusions: APOE status had the greatest effect on cogni-

tion in at risk alcohol consumers. Additionally, higher lifetime alcohol consumption may contribute to higher cognitive functioning in multiple domains for individuals with no APOE ε4 alleles.

## SESSION 2455 (PAPER)

### MENTAL HEALTH, DEPRESSION, AND ANXIETY IN OLDER ADULTS

#### GERIATRIC DEPRESSION AND THE ROLE OF DISABILITY IN HOME HEALTH CARE PATIENTS

D.V. Liebel, B. Powers, E. Hauenstein, *School of Nursing, University of Rochester, Rochester, New York*

**Background/Objective:** Psychological interventions alone or combined with antidepressant medication can effectively treat mild to moderate geriatric depression. However, most home healthcare patients with depression and disability do not receive these interventions. Moreover, relatively little is known about which psychological interventions used by home healthcare nurses and participants are helpful in negotiating and establishing depression management. Therefore the aim of this descriptive exploratory study was to provide a deeper understanding about how home healthcare participants' and nurses perceive and experience depression detection and evaluation and its impact on participants' mood and disability status. **Method:** The first phase of this qualitative study consisted of conducting 2 focus groups and 16 structured interviews with community nurses providing depression care to geriatric home healthcare participants. In the second phase 25 nurse home visits were observed with geriatric home healthcare participants who had depression and disability. **Findings:** Focus-group findings highlighted the role nurses play in depression detection and evaluation including the challenges and rewards of delivering depression care and nurses' efforts to advocate for patient services within the limitations of Medicare system. Observation visit findings demonstrated the process nurses engaged in while doing mental health promoting therapeutic work and elements of therapeutic nurse behavior (e.g. negotiating nurse-patient goals). **Conclusions:** Findings provided insight into therapeutic mechanisms used by nurses to facilitate good disability and depression care management during a homecare episode. Subsequently, these strategies can be used to create best practice for nurses' therapeutic work in routine homecare with potential to make it a reimbursable activity.

#### LATE-LIFE DEPRESSION AND ITS ASSOCIATION WITH BIOLOGICAL AND PHYSIOLOGICAL MARKERS OF INFLAMMATION

A. Iglewicz<sup>1</sup>, D. Kritz-Silverstein<sup>2</sup>, J. Bergstrom<sup>2</sup>, S. Zisook<sup>1</sup>, E. Barrett-Connor<sup>2</sup>, *1. University of California San Diego, Department of Psychiatry, San Diego, California, 2. University of California San Diego, Department of Family and Preventive Medicine, San Diego, California*

**Background:** Depression is associated with increased morbidity and mortality from cardiovascular disease and cancer—two of the leading causes of death in older adults. Understanding the mechanisms underlying this association may be key to preventing depression-related poor medical outcomes. This study examines one such possible mechanism, namely the association between depressive symptoms and selected biological and physiological markers of inflammation. **Methods:** Blood Interleukin (IL)-6 and C-reactive protein (CRP), systolic (SBP) and diastolic blood pressure (DBP), and depressive symptom levels were measured in 1513 community dwelling adults aged 55 years and over (average age 70.7) as part of the Rancho Bernardo Study, a longitudinal population-based study. Participants completed the Beck Depression Inventory (BDI), a validated measure of depressive symptoms. Associations between depression and the biological and physiological markers of inflammation were adjusted for age, gender and change in weight. **Results:** A significant association was found between depres-

sive symptoms and both SBP ( $p=0.0048$ ) and DBP ( $p=0.0172$ ) after adjusting for gender, but not after adjusting for age or weight change. Higher depressive scores were associated with higher levels of IL-6 ( $p=0.0018$ ) and CRP ( $p=0.0248$ ) before and after adjustment for gender, age, and weight change. **Conclusions:** Depressive symptoms in older adults are associated with biological and physiological markers of stress and inflammation. This may be the mechanism underlying the association of depressive symptoms with morbidity and might guide future clinical research aimed at preventing the physical sequelae of depression.

#### FINANCIAL SUPPORT AND DEPRESSION OUTCOMES AMONG OLDER ADULTS

M. Park<sup>1</sup>, D.L. Huang<sup>2</sup>, *1. University of Washington, Seattle, Washington, 2. Veterans Affairs Puget Sound Health Care System, Seattle, Washington*

**Objectives:** To examine the association between financial support and depression outcomes among community-dwelling U.S. older adults (age  $\geq 65$  years). **Methods:** Cross-sectional analysis of NHANES 2005-2008 data ( $N=2,745$ ). Descriptive analyses were used to characterize the study sample and stratified by sex. Bivariate and multivariate analyses were used to determine the association between risk for depression (defined as PHQ-9 score  $\geq 10$ ) and availability of financial support. Financial support was determined by participant response to a question asking about availability of financial support from another person (yes/no answer). We used adjusted Wald tests, logistic regression, and multivariate logistic regression to determine the association between late-life depression and financial support. **Results:** Approximately 22% of older adults reported having no financial support. (27% of older men v. 19% of older woman ( $P<0.001$ )). Disproportionate older adults with no financial support (39.0%) had depression compared to older adults with financial support (21.9%). Availability of financial support was associated with lower risk for depression (OR 0.52, 95% CI 0.33, 0.84) after controlling for race/ethnicity, level of education, sex, marital status, poverty status, and Charlson comorbidity score. **Conclusion:** Availability of financial support was associated with lower risk for late-life depression. Policy considerations may be needed for older adults who do not have additional sources of financial support.

#### CHARACTERIZING PRIMARY CARE HELPSEEKING FOR DEPRESSION AMONG DEPRESSED OLDER ADULT LATINOS

A. Izquierdo<sup>1</sup>, C. Sarkisian<sup>1,2</sup>, M. Miranda<sup>1</sup>, *1. University of California Los Angeles, Los Angeles, California, 2. VAMC Greater Los Angeles Geriatric Research Education and Clinical Center, Los Angeles, California*

Effective treatments for depression in older adults are available. Older adult Latinos, however, are less likely to be treated than older non-Latino whites. Using the largest qualitative dataset collected to date on older Latinos with a history of depression and primary care access, this study aims to characterize how and why this unique population uses primary care services for depression management. We used data from a qualitative sub-study at 10-year follow-up to the Partners in Care (PIC) study, which was a randomized controlled trial of quality-improvement programs for depression among people with depression and primary care access, to explore, using standard qualitative methods, the major themes and subthemes that emerged around older adult Latino participants' experiences with a recent primary care visit. Ninety-five older adult Latinos (77% response) completed at least one of three qualitative interviews over 12 months time (75% female, age range 50-88 years, 265 interviews). Certain themes like patient activation; patient awareness of depression as a disease; positive past experiences with depression care; perceived provider traits (e.g., empathy, willingness to listen); repeated provider-led outcomes assessment; and patient-provider ethnic/gender concordance, facilitated care. Other themes such

as mistrust of provider due to a negative experience and/or general beliefs; and absent provider-led outcomes tracking limited participants' helpseeking. By describing the major themes and subthemes that characterize primary care helpseeking for depression among older depressed Latino adults, our study may help inform the development of future interventions to improve depression care for older depressed Latinos and reduce mental health disparities.

#### **DEPRESSIVE LEVELS AND RETIREMENT: A STRESS-PROCESS MODEL APPROACH TO ASSESSING THE EFFECTS OF RETIREMENT IN MIDDLE-AGED ADULTS**

G. Hoffman, *Health Services, UCLA, Los Angeles, California*

**Background:** Retirement from work is an important transitional process during the life course. As this transition occurs, individuals experience changes in their roles and responsibilities. Such significant changes in identity and self-understanding as well as longer periods of time in retirement may correspond to changes in mental health. **Methods:** Using data for 4,998 middle-aged and older men and women from the 2004-2008 Health and Retirement Surveys (HRS) and the 2006 and 2008 HRS Psychosocial Surveys, this study assessed longitudinal changes in CES-D depressive symptom levels among recently retired (retired in 2008 but working in either 2004 or 2006) and consistently retired individuals (retired in each of 2004, 2006, and 2008) compared to current workers (working in 2008). **Results:** Recent retirement is associated with an increase in depression levels of 0.24 points, or nearly 17% of the mean depression score at follow-up in 2008 (1.38). Consistent retirement is associated with a .21 increase in depression levels (15% of the mean level) at follow-up. Compared to current working status, recent retirement was associated with twice the odds and consistent retirement was associated with slightly more than twice the odds of higher depressive symptoms. **Implications:** This study's findings thus underscore the need for particular attention to depressive symptoms among middle-aged and older adults who have been retired for more than several years. Accordingly, the issue of retirement may increasingly require the attention of public health experts in order to provide education and prevention efforts to help retiring and retired adults avoid poor long-term outcomes.

### **SESSION 2460 (SYMPOSIUM)**

#### **LINKING RESEARCH, EDUCATION AND PRACTICE: REALLY?**

**Chair:** R. Applebaum, *Scripps Gerontology Center, Miami University, Oxford, Ohio*

**Discussant:** R. Browdie, *Benjamin Rose Institute, Cleveland, Ohio*

For many years GSA has paid homage to linking research, education and practice. From annual conference themes and sessions, to publications, society-wide awards, and the standing Research Education and Practice (REP) committee of the society, GSA has made a commitment to this objective. These endeavors, in combination with a new emphasis on translational research, suggest that enhancing these linkages is a priority for the field. Despite these efforts, critics suggest that collaboration between the research, education and practice areas of gerontology has been limited. The gap between research and practice, research and education, and education and practice seems to occur in part because each area has differing goals, language, and reward structures making collaboration the exception rather than the rule. For example, researchers are typically driven by "the interesting question", while practitioners may be driven to solve a particular problem faced in day to day practice life. Educators have to balance the pressures of the University setting with the training needs of practice organizations. This symposium is designed to address three critical areas: First, we consider the barriers to creating a process that truly integrates research, education and practice in a meaningful way that results in changes to how we study, teach, and provide services. Second, we discuss models and strate-

gies that have succeeded in creating such linkages. Finally, we discuss how big a priority this should be in gerontology and if so what mechanisms can be put in place to advance the state of the art.

#### **RELEVANT RESEARCH AND INFORMED PRACTICE: STRATEGIES USED TO "WALK THE TALK" IN MENTAL HEALTH**

N.L. Wilson<sup>1,2,3</sup>, M.E. Kunik<sup>2,1</sup>, *1. Baylor College of Medicine,, Houston, Texas, 2. Houston Veterans Affairs Center of Excellence in Health Services Research, Houston, Texas, 3. Texas Consortium of Geriatric Education Centers, Houston, Texas*

Delivering effective mental health services to an increasingly diverse and growing population of older adults requires new developments within academic and practice environments. There is recognition that "evidence-based practice requires more practice-based evidence" (Green, L., 2008) and, therefore, researchers, policymakers and practitioners all need new approaches for collaboration. Preparing practitioners and scholars with skills to build bridges to each other and to policymakers is needed. In this presentation, program examples (the Partners in Dementia Care program [VA Medical Centers and Community Partners], Calmer Life anxiety treatment for African American elders, and Healthy IDEAS Depression Intervention for community agencies) highlight challenges and strategies used to generate practice-relevant and actionable research; and to support successful implementation of evidence within community agencies addressing depression, anxiety or dementia in older adults. Involvement of trainees in practice research and models of facilitation of community-academic partnerships will be discussed.

#### **RESEARCH, EDUCATION, AND PRACTICE: A POSTDOCTORAL APPROACH**

D.C. Carr<sup>1</sup>, L. Manning<sup>2</sup>, *1. Institute on Aging, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, 2. Duke University, Durham, North Carolina*

In this presentation, we discuss how postdoctoral training programs explore, facilitate, and model linkages between research, education, and practice. We begin by discussing strategies that have been used to cultivate these linkages in our respective postdoctoral settings. We describe pressing issues emerging and junior investigators face in attempting to link research, education, and practice, and describe opportunities and challenges for more effectively engaging these three areas in a postdoctoral setting, especially as a means to facilitate "translational" linkages. We conclude by considering the purpose and value of postdoctoral training programs in providing a critical opportunity to train scholars to effectively link research, education, and practice, and to teach the value and purpose of aspiring to making the linkages in order to advance gerontological scholarship, and ways postdoctoral programs can foster these linkages in the future.

#### **THE ULTIMATE SWEET SPOT? RESEARCH AND EDUCATION IN THE REP INTERSECTION**

S.R. Kunkel, *Scripps Gerontology Center, Miami University, Oxford, Ohio*

Linkages between research and education seem natural and numerous. Education is enriched when it is discovery-based, rooted in current evidence, and provided by an educator with an active research agenda. Similarly, the quality and impact of research is enhanced when it is shaped in a lively educational environment of continuous examination of assumptions and emerging paradigms, and designed with a vigilant eye on textbook ideals of methodological rigor. However, this ultimate blending of research and education is not always possible, nor is it equally valued in all settings. This presentation will outline a continuum of research-education linkages, anchored at one end by lecture-based integration of research concepts to guided independent research

at the other. A summary of the constraints posed by different research environments and by differences in mission at educational institutions will provide the foundation for a discussion of what is possible and what is desirable for the field of gerontology.

## **USING EDUCATION TO BRIDGE RESEARCH AND PRACTICE**

T. Teasdale, 1. *University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*, 2. *Veterans Affairs South Central MIRECC, Oklahoma City, Oklahoma*

Education is the bridge between research and practice. Done right, it is a two-way street informing both. Done wrong, it is a distraction for focused professionals. The educator's challenge is to create linkage between investigators and practitioners that both stimulate thinking and facilitate action. When educational mechanisms work, resulting bridge-work between colleagues underwrite the promise of translational research. But past failures abound. Simply bringing researchers and practitioners together hasn't often produced breakthrough, since dissimilarities in lingo and goals can stymie conversation. A more formidable barrier is that training programs for researchers and clinicians continue to stress specialization and focus; two traits that can keep research and practice separate. However, successful approaches exist which attend to how people learn, develop compelling incentives, and exploit gaps in knowledge that overlap distinct interests. Linking REP is a priority. These examples of how education science bridges the gap will be discussed.

## **SESSION 2465 (SYMPOSIUM)**

### **POLICY SERIES: CRITICAL AGING POLICY DISCUSSIONS FOR THE 113TH CONGRESS**

Chair: *B.W. Lindberg, National Academy on an Aging Society, Washington, District of Columbia*

Discussant: *D. Whitman, AARP, Washington, District of Columbia*

This session, sponsored by AARP and the GSA Public Policy Committee, will involve a discussion of key aging policy issues that the upcoming 113th Congress will need to address. It will also provide a perspective on how aging advocacy organizations develop their agendas, conduct and use research, and advocate on behalf of their members.

## **SESSION 2470 (SYMPOSIUM)**

### **RESIDENTIAL CARE FACILITIES: HEALTH AND FUNCTIONAL STATUS, SERVICE USE, AND MEDICAID**

Chair: *J. Wiener, Aging, Disability and Long-Term Care, RTI International, Washington, District of Columbia*

Discussant: *K. Polzer, National Center for Assisted Living, Washington, District of Columbia*

Residential care facilities (RCFs), including assisted living facilities, are an important component of the long-term care delivery system. In 2010, there were 31,100 facilities with 733,400 residents. Furthermore, about 139,000 RCF residents receive services through the Medicaid program. This symposium presents analyses of the newly available 2010 National Survey of Residential Care Facilities (NSRCF), the first nationally representative survey of RCFs. The first presentation will examine the relationship between the health and functional status of RCF residents and the services and staffing provided by the facilities. The analysis will also examine the health and functional profile of RCF and nursing home residents (using the Minimum Data Set). The second paper will compare functional limitations of the residential care population to the community-dwelling population. Using activities of daily living and Nagi measures from the National Health Interview Survey and the NSRCF, this study will assess whether physical functioning is a differentiating factor between the two populations. The third

presentation will compare facilities serving Medicaid residents to those which do not accept any residents on Medicaid; it will also present descriptive characteristics of RCF residents by their Medicaid status. The final paper will assess the extent to which residential care facilities participating in the Medicaid program are "community-based services" rather than "institutions." The Centers for Medicare & Medicaid Services is currently considering a proposed regulation that would impose standards on facilities that wish to participate in Medicaid home and community-based services waivers.

### **ASSISTED LIVING FACILITY RESIDENTS AND THE SERVICES THEY RECEIVE: ARE THEY A GOOD MATCH?**

G. Khatutsky, J. Wiener, A.M. Greene, R.E. Johnson, *Aging, Disability and Long-Term Care, RTI International, Washington, District of Columbia*

This study examines health status of residents in residential care facilities (RCFs) in relation to service receipt and availability. We also compare resident health/functional profiles in residential care and nursing facilities. This analysis uses data from the 2010 National Survey of Residential Care Facilities (NSRCF). Results show that while RCF residents represent a relatively impaired and frail population, their acuity levels are substantially lower compared to nursing facility residents. For example, 42% of RCF residents have Alzheimer's disease or other dementia, 31% report having limitations on all 5 IADLs, and 72% and 52% require assistance with bathing and dressing respectively. In contrast, 57% of nursing facility residents have Alzheimer's disease or other dementia, 98% require assistance with bathing and 92% with dressing. We also examine RCF residents' service receipt by their functional and cognitive status and RCF staffing ratio. Multivariate analysis examines factors predicting RCF direct care staffing ratio.

### **ARE THERE DIFFERENCES BETWEEN MEDICAID AND NON-MEDICAID RESIDENTIAL CARE FACILITIES?**

A.M. Greene, J. Wiener, G. Khatutsky, R.E. Johnson, *Aging, Disability and Long-Term Care, RTI International, Washington, District of Columbia*

Medicaid is an important source of financing for health and supportive services for low-income people living in residential care facilities. This study, which uses the National Survey of Residential Care Facilities, compares the characteristics of facilities where some of the residents have their long-term care services paid by Medicaid to facilities that do not. We also examine the differences in demographic characteristics, health, functional status and service use between Medicaid and non-Medicaid residents. Analyses show that about half of the facilities serve at least one resident whose services are paid by Medicaid; over half of Medicaid participating facilities are small (4-10 beds) and 26% of the facilities might be considered "high" Medicaid facilities (50% or more Medicaid residents). Residents whose services are covered by Medicaid are younger than non-Medicaid residents and a slightly higher proportion of the non-Medicaid residents than non-Medicaid residents has Alzheimer's disease.

### **ARE RESIDENTIAL CARE FACILITIES "COMMUNITY-BASED" SETTINGS OR INSTITUTIONS?**

J. Wiener<sup>1</sup>, G. Khatutsky<sup>1</sup>, A.M. Greene<sup>1</sup>, R.E. Johnson<sup>1</sup>, E. Rosenoff<sup>2</sup>, 1. *Aging, Disability and Long-Term Care, RTI International, Washington, District of Columbia*, 2. *Office of the Assistant Secretary for Planning and Evaluation/U.S. Department of Health and Human Services, Washington, District of Columbia*

Residential care facilities (RCFs) are like nursing homes in that they provide round-the-clock supervision and room and board, but many facilities seek to offer homelike settings that are "community-based." The Centers for Medicare & Medicaid Services (CMS) is considering regulations that would limit participation of RCFs in Medicaid home

and community-based services waivers to facilities that provided apartments, allow residents to age in place, and provide community integration. Analyses of the National Survey of Residential Care Facilities found that while facilities providing services to Medicaid beneficiaries are not too different from non-Medicaid residents, the industry as a whole does not meet the CMS proposed standards. For example, only a small minority of residential care facility residents live in apartments, and Medicaid beneficiaries are less likely to live in apartments than are non-Medicaid residents. We also examine RCF characteristics related to community integration.

## **SESSION 2475 (SYMPOSIUM)**

### **TAKING CARE? GLOBAL DISCOURSES ON INTERGENERATIONAL RELATIONSHIPS AND FAMILY SUPPORT**

Chair: *N. Keating, Human Ecology, Edmonton, Alberta, Canada*

Beliefs about family relationships and support in later life families have a powerful influence on the social policy, on the expectations of families as key supporters of older persons and ultimately on quality of life of older adults. Regional discourses differ considerably, with some drawing on themes of family solidarity and others on views of families as structurally fragile or uncaring. In this symposium we address these discourses with selected data on generational relationships in families of older adults in four world regions: Africa, Asia, Europe and North America. Presenters will discuss issues affecting families in societies undergoing rapid social transition in Asia; in the face of persistent poverty in sub-Saharan Africa; in welfare states in Europe; and in discourses about family solidarity in Mediterranean and North American cultures. Learning objectives are to increase understanding of regional differences in beliefs about family responsibility; and of extant knowledge on diversity in family structure and support. Discussion will focus on differences and similarities across these regions. Implications are considered for theoretical understandings of family solidarity, family structure and intergenerational ambivalence that highlight the need for theory construction to account for these global, contextual differences. An international agenda is proposed for bridging knowledge gaps and addressing key issues in family relationships of older adults. This symposium is presented under the auspices of the International Association of Gerontology and Geriatrics, Global Social Initiative on Ageing.

### **DISCOURSES ON FAMILIES AND CARE IN CHANGING EUROPE'S WELFARE STATES**

*T.G. van Tilburg, M. Broese Van Groenou, Dept. of Sociology, VU University Amsterdam, Amsterdam, Netherlands*

Many welfare states in Europe have extended financial support and public provision in the field of elderly care. However, these provisions are under pressure due to the financial crisis (requiring budget cuts), aging population (resulting in a smaller number of young carers and an increasing numbers to take care of), and increasing labor participation of women (who often are informal carers). There are various options to address these problems. For example, in southern Europe people in need of care hire migrants and in north-western European countries societal arrangements are effective offering options to pay family members for the care they provide. Empirical evidence for developments in various countries is presented and discussed. It is concluded that various options contribute to professionalization of family constellations replacing traditional intergenerational care.

### **FAMILY SUPPORT IN THE CONTEXT OF RAPID SOCIAL TRANSITION: THE EXPERIENCE OF CHINA**

*X. Pei, H. Luo, Tsinghua University, Beijing, China*

Decrease in family resources resulting from rapid urbanization and the development of social services, pushed by needs of a growing aged population, provide an opportunity to examine the impact of social tran-

sition on intergenerational support within Chinese families. This study intends to explore the expectations of family support for the aged and the reality of flows of care, resource allocation, sharing and obligations within Chinese families. Using selective national survey data, we illustrate current gaps between social beliefs in family care and the reality, and identify changes in the past two decades under the framework of intergenerational solidarity. The findings indicate increasing difficulties of maintaining close family ties, weakening of traditional beliefs in family care for aged members, and efforts to reconstruct intergenerational care under the impact of economic, social, and cultural transitions. Implications are discussed and an attempt is made to theorize family relations of societies experiencing rapid modernization.

### **FAMILY TIES IN THE US AND LEBANON: INTERGENERATIONAL RELATIONS**

*T. Antonucci<sup>1</sup>, K.J. Ajrouch<sup>2</sup>, S. Abdulrahim<sup>3</sup>, 1. Institute for Social Research, University of Michigan, Ann Arbor, Michigan, 2. Eastern Michigan University, Ypsilanti, Michigan, 3. American University of Beirut, Beirut, Lebanon*

Discourses about family solidarity and the strength of intergenerational ties differ considerably in Mediterranean and North American cultures. In this study we compare US and Lebanese reports of family ties and relationships. Drawing from identical measures of network structure and family support exchanges in both countries, we find that intergenerational family forms are similar in both countries but that some characteristics differ in the relationship experience. Lebanese report networks that are highly family focused, but much smaller than that of the U.S. However, data concerning actually or expected intergenerational instrumental exchanges are not very different. We compare and contrast reports of network structure, support type, and support quality by age with a focus on the intergenerational relationship.

### **CARE FOR OLDER ADULTS IN SUB-SAHARAN AFRICA: DISCOURSES AND REALITIES OF FAMILY SOLIDARITY**

*I. Aboderin<sup>1,2</sup>, J. Hoffman<sup>2</sup>, 1. African Population and Health Research Center, Nairobi, Kenya, 2. Oxford Institute of Ageing, University of Oxford, Oxford, United Kingdom*

The population of older persons in sub-Saharan Africa (SSA) is growing rapidly, with considerable functional impairment and care need. Most care is performed by families, typically within settings of poverty and infrastructural constraints. The families' exclusive role accords with a dominant policy discourse, which upholds the centrality of family support as an unassailable traditional African value and asset – in explicit contrast to 'individualistic' western approaches, which approve of formal care models. Drawing on evidence from policy analysis and quantitative and qualitative studies from Kenya, Nigeria and South Africa, we demarcate how the realities of family care for older persons in SSA relate to the official normative discourse. The paper frames its analysis in relation to theoretical ideas about family solidarity in societies undergoing 'modernization' and individualization and examines key implications for policy debates on the relative role that family, State or other sectors should play in care provision in SSA.

## **SESSION 2480 (SYMPOSIUM)**

### **THE NATIONAL PREVENTION STRATEGY: IMPLEMENTING AMERICA'S PLAN FOR BETTER HEALTH AND WELLNESS**

Chair: *D. Alley, University of Maryland, Baltimore, Maryland*  
Discussant: *L. Anderson, Centers for Disease Control, Atlanta, Georgia*

The National Prevention Council, established through the Affordable Care Act, provides a critical infrastructure to enhance cross-sector collaboration among federal agencies and to drive improvements in prevention and wellness. In June 2011, the Council released the National

Prevention Strategy, which adopts a health-in-all policies approach and lays out a framework for coordinating policies in areas such as environmental protection, community planning (housing, transportation, etc.), and public health and health care. This symposium highlights efforts to implement the Strategy across multiple sectors. Kathy Sykes, Environmental Protection Agency designee to the Council, will discuss EPA's involvement in the Council, current efforts to integrate prevention and environmental policy, and tools to incorporate health into decision-making. Mary Leary will present the Easter Seals' approach to building community coalitions that link transportation and prevention, emphasizing the importance of transportation in empowering older adults, creating healthy and safe environments, and facilitating access to preventive services. Tony Kuo will provide an overview of Los Angeles County's efforts to address senior health issues through the use of the Strategy's recommendations and will share lessons learned from local implementation. Finally, Steven Wallace will discuss the relevance of National Prevention Strategy outcome measures to the older population and highlight strategies for selecting interventions to increase the use of clinical preventive services. Taken together, these speakers represent a range of perspectives from government, nonprofit, and academic settings engaged in implementing the National Prevention Strategy's recommendations to address the needs of older adults.

#### **TOOLS AND STRATEGIES TO DESIGN HEALTHY COMMUNITIES FOR ALL AGES AND ABILITIES: MAKING IT EASY TO BE HEALTHY FOR A LIFETIME**

K.E. Sykes, *US EPA, Office of Research and Development, Washington, District of Columbia*

The National Prevention Strategy, authorized by the Affordable Care Act, will help transform the health care system by recognizing that in addition to personal choices and behaviors, quality of our environment contributes to good health. A growing body of evidence reveals numerous environments that affect health including the built environment, as well as food, natural, socio-economic, chemical and psycho-social factors. EPA is exploring a systems approach connects these interrelated environments, promoting health for persons of all ages and mitigating the inequities that create health disparities. The built environment can promote independence, social interactions and health. Communities that adopt policies that promote equitable development and smart growth principles are age-friendly. The National Environmental Policy Act's Environmental Impact Assessments, Health Impact Assessments, and a proposed Aging Impact Assessment are tools that examine the health consequences of proposed projects and policies to planners and decision-makers. Case studies focusing on elders will be presented.

#### **ADOPTING THE NATIONAL PREVENTION STRATEGY'S VISION LOCALLY: A PERSPECTIVE FROM LOS ANGELES COUNTY**

T. Kuo, *Los Angeles County Department of Health, Los Angeles, California*

Policy, system change, and environmental strategies can be cost-effective approaches for maintaining and/or improving older adults' health. The National Prevention Strategy, released in June 2011, provides a national vision and a useful framework for addressing several leading causes of disability and death in this population. The present review of local efforts discusses the various steps taken by the Los Angeles County Department of Public Health to address senior health issues through the use of the Strategy's recommendations. From promoting linkages between clinical care and community-based preventive services to the use of faith-based organizations for delivery of selected clinical preventive services to building the capacity for accommodating an age-friendlier environment (i.e., focusing on safer physical environments to prevent falls and to promote social interactions, or food procurement policies that address food insecurity/quality), lessons learned

about these local initiatives will be shared with the conference audience.

#### **DISCUSSANT**

L. Anderson, *CDC, Atlanta, Georgia*

This presentation will discuss the implications of the panel presentations.

#### **MEASURING OUTCOMES AND SELECTING EFFECTIVE INTERVENTIONS TO ADVANCE THE NATIONAL PREVENTION STRATEGY**

S. Wallace, *UCLA School of Public Health, Los Angeles, California*

The National Prevention Strategy (NPS) has the goal of increasing the number of Americans who are healthy at every stage of life through promoting prevention and wellness. Tracking progress towards meeting that goal requires information about progress towards the specific outcomes identified as indicators of meeting the goal. It also requires documenting the most effective strategies that are used to make that progress. The NPS lists a wide array of outcome measures, many of which are aligned with Healthy People 2020. This presentation will provide information about how these outcome measures can be relevant to the older population. It will then provide an overview of how to identify effective interventions that promote one of the NPS strategies – increasing the use of clinical preventive services. Using the RE-AIM framework, we will show how criteria in addition to effectiveness can enhance the selection of interventions that maximize clinically effective dissemination.

#### **EASTER SEALS PROJECT ACTION**

M. Leary, *Easter Seals, Washington, District of Columbia*

Wellness, prevention, and transportation are not three words we are used to seeing together. However, transportation resources that are available, easy to use, accessible, and affordable are increasingly recognized as essential community attributes to support older adults' ability to age in place. The National Prevention Strategy identifies empowered people, healthy & safe community environments, and clinical and community preventive services as three key Strategic Directions that are facilitated by access to transportation. The health-in-all-policies perspective suggests the importance of connecting transportation to prevention efforts. Easter Seals is engaged in ongoing work at the intersection between health/wellness and access to transportation. In this presentation, Easter Seals will describe our community assistance activities that field support for community coalition building efforts, best practices in coordinating transportation, and emerging models in mobility planning, as well as ways to assess impact through a health/transportation/prevention lens.

#### **SESSION 2485 (PAPER)**

#### **GENDER, RACE, AND DISCRIMINATIONS AMONG OLDER WORKERS**

#### **THE HOME CARE AIDE JOB: IDEAL WORK OR EXPLOITATION FOR OLDER, FEMALE WORKERS?**

S. Butler, *University of Maine, Orono, Maine*

The need for personal assistance services is increasing as our population ages and is expected to double in the first half of this century. People's preference for remaining at home has led to a particular demand for community-based care. Older women often fill these positions: nearly nine in ten home care aides are women and over 50 percent are age 45 and older. On one hand, this work could be seen as ideal for older workers as it is flexible and allows for active community engagement. On the other hand, the low wages and gendered nature of the work make it

fertile for exploitation of women, who have often spent years providing uncompensated family care. Through in-depth interviews with 31 home care aides (97.7% female) age 63 to 80, this study sought to better understand the costs and benefits of the personal care job from the perspective of the older worker. Interview transcripts were analyzed for recurring themes regarding lifetime employment, caregiving, financial security, and perspectives on personal care work as an older worker. Most study participants came to personal care work later in life after years of raising children and working a number of low-wage jobs. Many struggled to meet their basic needs, and a number received government assistance. They considered patience to be the most important quality needed to do personal assistance work and felt that older workers were more likely to have that quality. Study findings will be related to current workforce issues in long-term care.

#### **AGEISM AT WORK AND ITS IMPACT ON HEALTH, JOB SATISFACTION AND LABOR FORCE PARTICIPATION**

L.A. Marchiondo<sup>1</sup>, E. Gonzales<sup>2</sup>, *1. Psychology, University of Michigan, Ann Arbor, Michigan, 2. Washington University in St. Louis, St. Louis, Missouri*

**Objectives.** Researchers readily apply modern discrimination theory to studies of racism and sexism and their impact on employee health and behavior; its application to investigations of workplace age discrimination is scant. Given the burgeoning aging workforce, we examined how ageism undermines mental health, job satisfaction, and retirement expectations and behaviors. Selective incivility theory guided this investigation. **Methods.** Data were drawn from the Health and Retirement Study. We selected participants who worked full-time in 1998, participated in all six waves between 1998 and 2008, and completed all variables of interest: ageism, labor force status and expectations, job satisfaction, mental health, and control measures ( $N = 5,909$ ). We utilized cross-sectional linear regressions, bivariate analyses, and longitudinal fixed effects models. **Results.** Men, non-Caucasians, and less educated employees reported higher ageism at work. Workplace ageism strongly and positively related to indicators of impaired mental health, the global mental health measure (CESD), and job dissatisfaction. It also predicted plans to stop work completely, to reduce work hours, and to become self-employed (versus remaining employed full-time). Employees who experienced more ageism tended to change employment. **Implications.** Ageism's effects extend beyond outcomes such as decreased promotion, hiring, and training. Ageism damages targets' mental health and job satisfaction, and decreases labor force participation in later life. Interventions, such as stereotype education, are needed to reduce ageism at work. Such interventions may promote occupational health and, in turn, foster organizational commitment and inter-generational knowledge and relationships.

#### **RACIAL/ETHNIC INEQUALITY AMONG OLDER WORKERS: FOCUSING ON WHITES, BLACKS, AND LATINOS WITHIN THE CUMULATIVE ADVANTAGE/DISADVANTAGE FRAMEWORK**

E. Choi, *School of Social Work, University of Pittsburgh, Pittsburgh, Pennsylvania*

The experience of older minority workers may differ from that of older Whites because of the persistent racial/ethnic differences among older workers, especially in finance, health, career patterns, and education. However, our knowledge of older minority workers is, at best, fragmentary. Thus, this study aims to examine what contributes to older minorities' labor market participation and whether these factors differ from those of older Whites. Cumulative advantage/disadvantage (CAD) theory provides the conceptual framework, emphasizing the process by which the social system generates inequality and how unfavorable positions in early life influence the accumulation of disadvantages in later age. Using the 2004 and 2008 Health and Retirement Study datasets, this study uses the work status (working or retired) of individuals age

62 or over as the outcome. Variables of interest include financial status, health, education, and career patterns (employment stability and job types). Analytic plans include 1) stratifying the datasets into Whites, Blacks, and Latinos separately, 2) analyzing the data with probit analysis, and 3) comparing the factors among the racial groups. The results show stark differences in the factors by race. The three factors—health, the meaning of work, and employers' negative attitude toward older workers—which significantly predict Whites' labor market participation after age 62, are not significant to older Blacks and Latinos. Instead, to older minorities, employment stability (job tenure) is significantly and negatively related to their chance to work. To conclude, as CAD theory argues, minorities' staying in the labor market beyond age 62 does not simply result from individual preference per se but from social structures, which reflect underlying racial inequality within older workers.

#### **OLDER WOMEN AND FLEXIBLE EMPLOYMENT ACROSS THE LIFE COURSE: STEREOTYPES AND PRACTICES**

E.M. Brooke<sup>1</sup>, P. Taylor<sup>2</sup>, R. Williams<sup>3</sup>, E. Lynn<sup>4</sup>, *1. Business Work and Ageing Centre for Research, Swinburne University of Technology, Melbourne, Victoria, Australia, 2. Monash University, Churchill Campus, Victoria, Australia, 3. Monash University, Churchill Campus, Victoria, Australia, 4. Monash University, Churchill Campus, Victoria, Australia*

This paper is based on an analysis of qualitative data collected in an Australian Research Council research project, Retiring Women: Understanding older female work-life transitions. Structured key informant interviews were undertaken with a purposefully selected sample of 95 managers and key external stakeholders in three sectors: the tertiary education, state and emergency services and banking sectors. The paper aims to assess demographic, organisational and broader industry sector influences which pattern organisational flexibilities. Themes were drawn from a comparative review of responses of organisational stakeholders across sectors. The paper develops an organisational conceptual framework based on the intersections between age and gender stereotypes and flexibilities across three sectors. Age and gender stereotypical organisational responses were classified along an axis from 'age free' and 'gender free' practices to 'sleeper' attributions. 'Sleeper' stereotypes occurred within the state services and higher education sectors concerning expectations of retirement, physical work limitations, caring responsibilities and intergenerational conflict. Barriers of 'sleeper' age and gender stereotypes were predominant in tertiary education and state services sectors which exhibited lower engagement with the axis and dimension of collective 'welfarist' responses versus discretionary practices, as in the banking sector. In this sector rationalisation and control of flexibilities through discretionary practices were based in a business case and often coded as equity challenges. The framework classifies intersections between age, gender and organisational flexibilities utilising these axes. The findings indicate how workplace accommodations through flexibilities can provide support for the continued attachment of older women in their careers along the life course.

#### **EVERYDAY AGE DISCRIMINATION AT WORK: INCIDENCE AND EFFECTS ON PSYCHOLOGICAL WELL-BEING AND JOB SATISFACTION**

P. Taylor, C. McLoughlin, *Monash University, Churchill, Victoria, Australia*

The prominent public policy push in many developed nations focusing on increasing the labor force participation of older workers and prolongation of working lives raises questions about barriers to said participation. Ageism in employment is considered by many commentators to be a critical barrier. Building on a structural model configured from case study research completed with four organizations in 2008, this paper reports on the refinement and verification of a structural equation model using survey data drawn from a nationally representative



sample (n=3200), collected in 2011, describing the relationship between respondents' experiences of everyday age discrimination and reported psychological well-being and job satisfaction. Drawing on the learnings of organizational studies investigating the changing nature of racial discrimination in the workplace, a novel approach to the measurement of age discrimination manifested in subtle yet significant everyday behaviors offers a previously unexplored avenue to understanding agism, particularly in context of purported under-reporting of age discrimination, amongst other 'isms', in the workplace. This paper reports on differences in the experience of age discrimination across age groups and gender. To better understand how organizations' characteristics, including the provision of training and management communication, and individual characteristics, including perceived job insecurity and the meaningfulness of work interact to influence job satisfaction and psychological well-being, the relative importance of these and other factors were compared across age groups and gender. This statistically robust model provides justifications for nuanced organizational and public policy responses considering the age and gender of recipients of discriminatory attitudes.

## **SESSION 2490 (PAPER)**

### **HEALTH PROMOTION AND EFFECTS OF RACE/ETHNICITY AND INTERGENERATIONAL CORRELATES OF HEALTH**

#### **EFFECTS OF RACE/ETHNICITY ON HEALTH OUTCOMES AMONG OLDER AMERICANS**

C.E. Miyawaki, *School of Social Work, University of Washington, Seattle, Washington*

Social isolation has been found to be associated with negative health outcomes. However, it is unknown whether this association differs by race/ethnicity and age. This study aims to examine how the effects of social isolation on mental and physical health differ among black, Hispanic and white older adults in the United States. Building on the work of Cornwell and Waite (2009), the author used multi-stage survey data from a nationally-representative sample of 3,005 community-residing adults, aged 57-85 from the National Social Life, Health, and Aging Project. Tests for association were conducted on health indicators by age, gender, marital status, education, and race/ethnicity separately. Multivariate logistic regression models were used to test the effects of social isolation on mental and physical health exclusively and separately among black, Hispanic and white older adults. Results show that overall social isolation is a strong predictor of mental and physical health and differs by age, marital status, education, and race/ethnicity, and mental but not physical health by gender. Social isolation significantly influences mental and physical health among white older adults and is significant for physical and marginally significant for mental health for black older adults. Among Hispanic older adults, it has a marginally significant association with mental health but unrelated to physical health. These findings point to the need for further research on what may buffer Hispanic older adults from social isolation compared to the other racial groups. It also suggests some implications for practice, such as more targeted assessment and intervention by racial groups.

#### **BECOMING AMERICA'S HEALTHIEST HOMETOWN: FINDINGS FROM A POPULATION HEALTH SURVEY OF SENIORS LIVING IN THE VILLAGES, FLORIDA**

C. VandeWeerd, J. Corvin, D. Petersen, A.R. Williams, E. Sussman, *University of South Florida, Tampa, Florida*

With the rise of the Baby Boomers, the proportion of older adults in US has risen dramatically. While much of the literature focuses on negative aspects of aging and disease burden, attention to healthy aging is lacking. To shift attention to positive models of aging, USF Health, in partnership with The Villages, an active adult (55+) retirement com-

munity, launched a population-based needs assessment to develop a comprehensive understanding of the physical, mental, emotional, social and environmental health factors which affect health and wellness. This study employed a community-driven, mixed methods approach. During the formative research phase, 59 focus groups (n=491) were conducted with residents. Emergent themes relating to health and wellness informed the development of a comprehensive cross-sectional survey. This survey, administered to all Village residents (n=94,500), examined a series of broad, health related domains via well established, short, high salience instruments. Domains measured included mental health (MHI-5 & PHQ); health behaviors (such as drinking [AUDIT], smoking [ASSIST], medication compliance [SMAQ] and physical activity [IPAQ]); quality of life [WHOQOL]; access to services [BFRSS sub-scale]; and social support/cohesion [Sampson social cohesion scale]. Data was analyzed using SPSS, controlling for age, gender, race, to identify differences in health status and quality of life indicators, while assessing the role of social support and social cohesion. Findings yield important similarities in the aging process (i.e. rates of conditions), and indicate important differences between Village residents and samples nationally. Recommendations for change in public health policy and practice are suggested in light of study findings.

### **COMMUNITY-BASED INNOVATIONS TO INCREASE THE UPTAKE OF CLINICAL PREVENTIVE SERVICES BY OLDER ADULTS AND REDUCE HEALTH DISPARITIES**

K.G. Kietzman, S. Wallace, R. Leos, T. Sadegh-Nobari, A.V. Parks, *UCLA Center for Health Policy Research, Los Angeles, California*

Aging adults are at increasing risk of a number of diseases that can be prevented or treated early through clinical preventive services (CPS) such as influenza vaccinations and colorectal cancer screening. We analyzed data from the 2009 California Health Interview Survey (CHIS) to assess utilization rates of CPS by older adults and across different racial and ethnic groups. We also conducted 43 stakeholder interviews with providers from aging services, community health centers, public health agencies, and other community settings such as pharmacies and YMCAs to identify strategies that increase uptake of CPS by older adults. Program administrators, planners, and front line staff were asked about their involvement in the provision of CPS through engagement, delivery, and/or follow up activities. CHIS data revealed that among Californians aged 50 years and older, 50% had not received a flu shot within the past 12 months and 22% had never been screened for colorectal cancer. Furthermore, these utilization rates varied by race/ethnicity: 57% of African Americans and 53% of Latinos had not received the flu vaccine in the past year, as compared to 49% of Whites and 42% of Asians. Nearly twice as many Latinos (33%) than Whites (18%) reported they had never been screened for colon cancer. Community stakeholders identified 14 effective strategies for increasing CPS uptake, including cross-sector collaborations and expanded program efforts. Two case studies from California highlight promising practices. Extending the provision of CPS to community settings has the potential to increase uptake among older adults and reduce health disparities.

### **PERSONAL EMERGENCY RESPONSE SYSTEM AND FALLS EDUCATION: OUTCOMES FROM A COMBINED INTERVENTION**

L. Bakk<sup>1,2</sup>, A.T. Woodward<sup>1</sup>, J. McGuire<sup>3</sup>, 1. *Michigan State University, East Lansing, Michigan*, 2. *State University of New York, Brockport, Brockport, New York*, 3. *Area Agency on Aging 1-B, Southfield, Michigan*

While Older Americans Act (OAA) community care management programs can help foster independence and delay institutional placement, waitlists for services often exist because of insufficient funding. A technological response to help older adults live independently is a Personal Emergency Response System (PERS). While having a PERS

has been associated with positive outcomes, the program is often underutilized because of cost. Through alternative funding sources and collaboration with provider agencies, a southeast Michigan Area Agency on Aging provided a PERS at no cost for one year and falls prevention literature to low-income, community-based older adults (n=83) waiting to receive care management services. This longitudinal study examined how the provision of a PERS and basic falls prevention education can impact multiple outcomes. Data were collected via telephone interview at baseline, 6 and 12 months, and included measures of stress, anxiety, falls risk, and hospital admissions. Analysis was conducted using mixed regression models. Results indicated that respondents who maintained the PERS for one year and received the falls prevention materials were significantly less likely to report feelings of stress and anxiety over time. There was a significant improvement in the mean score tabulated from 14 falls risk measures. Additionally, hospitalizations due to falls decreased. This study has distinct implications for practice. Because of the demonstrated effectiveness in reducing stress, anxiety, falls risk, and hospitalizations, this combined intervention could be considered for at-risk older adults in need of care management services, particularly in our current economic climate where waitlists are more likely to exist.

### **INTERGENERATIONAL CORRELATIONS OF HEALTH AMONG OLDER ADULTS: EMPIRICAL EVIDENCE FROM INDONESIA**

Y. Kim<sup>1</sup>, B. Sikoki<sup>2</sup>, F. Witoelar<sup>3</sup>, J. Strauss<sup>1</sup>, 1. *Economics, Univ of Southern California, LOS ANGELES, California*, 2. *Survey Meter, D.I. Yogyakarta, Indonesia*, 3. *World Bank, Washington DC, District of Columbia*

It is widely believed that family background has a significant influence on children's life. The vast majority of the existent literature has focused on the relationship between parents' education and income and the education and income of their children. Surprisingly, however, much less work has been done on the intergenerational transmission, or correlations of health. The main objective of this paper is to examine the correlations of health across generations using the Indonesia Family Life Survey (IFLS). We take advantage of the richness of IFLS and examine several health measures of respondents, including self-reports and biomarkers. As measures of health of both parents, IFLS has information on whether they are dead at the time of the last wave in 2007, their general health status and whether they have difficulties with any ADLs at the time of the survey or just before death. The findings suggest strong intergenerational correlations between the measures of parental health, schooling, and the health of their adult children. We also examine how these intergenerational correlations might change for respondents born in the more developed parts of Indonesia compared to the less developed areas. Interestingly, these health associations are much lower for respondents who were born in Java or Bali. These are areas of Indonesia that have experienced the most rapid economic growth over the past 40 years. This suggests that being born and growing up in developed areas, which may have better health infrastructure, substitutes for the influence of parental health.

### **SESSION 2495 (PAPER)**

#### **INTERGENERATIONAL RELATIONS AND CAREGIVING**

#### **INTER-GENERATIONAL CONFLICT AMONG LATER LIFE CANADIAN PARENTS: THE FAMILY TIES THAT BIND AND DIVIDE**

B.A. Mitchell, Y. Lai, *Gerontology, Simon Fraser University, Vancouver, British Columbia, Canada*

Inter-generational conflict (IC) is commonly defined as the frequency, degree, and the severity of problems experienced within parent-child

relationships. High levels of IC are assumed to be particularly worrisome because of the potential to create a number of negative outcomes such as lowered family solidarity and a reduction in support exchanges. Previous studies have typically focused on younger-aged families, especially those with teenaged or adolescent children. Cultural variations have also not received much comparative analysis, despite continuing high levels of immigration to Canadian cities (especially from Asian societies). To fill these research gaps, the goal of this paper is to critically examine both predictors and subjective perceptions of IC in ethnically diverse aging families using a mixed-methods approach. Guided by a life course perspective (e.g., Elder, 1991; Hagestad, 2003; Marshall, 1997, Mitchell, 2007) and a generational stake hypothesis (Bengston, 1993), data are drawn from a study of 490 parents (with a mean age of 58) with at least one young adult child (between the ages of 18 and 35) living in Metro Vancouver, British Columbia. Respondents self-identify as primarily belonging to one of four ethnic groups: British-, Southern-European-, South Asian-, and Chinese-Canadian. Results reveal that a significant minority of parents report problematic levels of IC. Moreover, there is diversity in experiences by ethno-cultural heritage, immigration status, value congruence, and other family developmental and contextual factors. Findings are also discussed in relation to community-level issues and several practical applications are highlighted (i.e., for prevention and intervention initiatives).

#### **UNDERSTANDING FAMILY CAREGIVERS' USE OF ONLINE CAREGIVING INFORMATION**

H. Li, *School of Social Work, University of Illinois, Urbana, Illinois*

Internet is a powerful tool that people may use to gather health information. This study describes caregivers' use of online caregiving information and identifies caregiver factors related to their use of the information. Data used for this analysis were extracted from the 2009 Caregiving in the US survey (NAC & AARP, 2009). The sample of this study included 998 caregivers who took care of an older adult 60 years or older and lived outside of an institution. A logistic analysis was used to identify factors that related to caregivers' use of online caregiving information (users vs. non-users). In the sample, little over one half of the caregivers (52.2%) searched online for caregiving information. Caregivers looked at information about care receivers' conditions or treatments (77.0%), available services for care receivers (53.6%), or how to perform caregiving tasks (23.3%). Only 10 percent of caregivers looked at information about caregiver services. The results from a logistic regression analysis show that caregivers who received at least some college education (OR=3.23, p<.0001), reported a higher level of household income (OR=1.98, p<.0001), took primary caregiving responsibility (OR=1.5, p=.003), experienced higher levels of strain (OR=1.11, p<.0001), and were in need for community services (OR=2.45, p<.0001) were more likely to use online caregiving information. Compared to their unemployed counterparts, employed caregivers were less likely to use online caregiving information (OR=.64, p=.007). Study findings can be used by health care professionals and community service providers in developing and delivering online information and educational services to diverse caregivers.

#### **EMOTIONAL TIES BETWEEN OLDER PARENTS AND ADULT CHILDREN IN CHINESE IMMIGRANT FAMILIES: WHAT MATTERS FOR OLDER IMMIGRANTS?**

M. Guo<sup>1</sup>, J. Liu<sup>1</sup>, I. Chi<sup>2</sup>, 1. *University of Iowa, School of Social Work, Iowa City, Iowa*, 2. *University of Southern California, School of Social Work, Los Angeles, California*

Family relationships play a vital role in older immigrants' life given that family reunion is the main route to the U.S. for many older immigrants. Compared to the family lives of other older Americans, families of older immigrants are often characterized by closer geographically proximity and greater interdependence. Understanding what factors contribute to close family relationships among older immigrants appears

to be of key importance to promote the well-being of the rapidly increasing older minorities in the US. Focusing on older Chinese immigrants, one of the fastest growing older minority groups in the US, the present study explored the predictors of close parent-child relationships in a sample of 156 older Chinese immigrants and their 258 adult children in Los Angeles in 2010. The results of multilevel analyses showed that overall, older parents in the study felt closer to married children, but less close to the eldest child in the family. Although the actual monetary and instrumental support provided by the children were associated with closer parent-child relationships reported by the parents, perceived filial piety of the children, that is, parents' perception of their children being respectful and devoted to the parents, was the most significant predictor of their positive assessment of their relationship with the child. The finding remained the same when the parents' demographic characteristics and socioeconomic status were considered. The finding suggests that the maintenance of traditional cultural values in immigrant families seems to be central to close family relationships among older Chinese immigrants.

### **VOLUNTEERING AND CAREGIVING AMONG OLDER PEOPLE: INFLUENCES OF PERSONAL RESOURCES AND PERSONAL NETWORKS**

H. Shen, *University of Missouri-St. Louis, School of Social Work, St. Louis, Missouri*

Among various types of productive activities, volunteering and caregiving are both helping behaviors occurring within different social contexts. Existing studies have documented factors that predict older people's involvement in volunteering and caregiving. Little emphasis, however, has been placed on the dynamics between these two helping behaviors. With the theoretical guidance of the Resource and Strategic Mobilization model (RSM), the present study aims to elucidate the effects of personal resources (financial and physical) and personal networks (family and social) on whether an older adult volunteers, provides care, or performs both activities. Applying multinomial logistic regression models, findings from 8,332 community-dwelling older adults (55+) who performed at least one helping behavior in the 2004 Health and Retirement Study showed that (1) personal resources (income, assets, no functional limitations, no chronic health conditions and no cognitive conditions) and social networks (religious attendance and social visits) had no influence on whether people only volunteered or performed both helping behaviors. It was the increase of family demands (number of grandchildren, parents living nearby, and spouse with care needs) that raised older people's chances to take on the caregiving roles in addition to volunteering work. (2) Older people were more likely to perform both behaviors than to only provide care if their social networks were larger and if they had no functional limitations. As the RSM predicts, the diverse contexts of older persons, as indicated by personal resources and networks, matter. Further implementation of factors interacting with older people's helping behaviors will be discussed.

### **SESSION 2505 (SYMPOSIUM)**

#### **NUTRITIONAL INTERVENTIONS IN AGING: CALORIE RESTRICTION MIMETICS - PROMISE AND PITFALLS**

Chair: *D. Ingram, Pennington Biomedical Research Center, Baton Rouge*

Co-Chair: *D.A. Rivas, Tufts University, Boston, Massachusetts*

Caloric restriction (CR) has been a consistent and productive topic for many years at the annual meeting of the GSA. Considerable progress has been made in identifying possible mechanisms for the anti-aging benefits of CR. Interest in the model has generated long-term studies in long-living nonhuman primates and short-term studies in humans. Results emerging from these studies indicate potential health benefits and attenuation of many aging processes. However, application of a strict long-term regimen of CR as an intervention in humans would

likely not be feasible. To this end, a new field of CR mimetics is emerging for which pharmaceutical and nutraceutical interventions are targeted toward key signaling pathways involved in CR. The goal of this symposium will be to present the latest information on the development of CR mimetics, the promise and the pitfalls.

### **INHIBITION OF GROWTH SIGNALING PATHWAYS TO MIMIC FASTING IN DIFFERENTIAL STRESS RESISTANCE/SENSITIZATION**

V. Longo, *Gerontology, USC, Los Angeles, California*

Calorie restriction or inhibition of growth signaling pathways results in extended life span but also protection against a range of pathologies including cancer. In fact, a large portion of CR or growth hormone receptor (GHR) signaling deficient rodents die without developing obvious age-related diseases suggesting these interventions/mutations may promote similar protective responses. We have previously described the effect of the Tor/S6K and Ras/AC/PKA pathways in promoting aging and stress sensitization in yeast and their role in the anti-aging effects of calorie restriction. Here, we investigate the effect of fasting cycles and growth hormone receptor mutations, both of which result in severe IGF-I deficiency, on protection of mice and normal cells against, and sensitization of cancer cells to stress. Using various mouse models with altered IGF-I signaling we provide evidence for the role of reduced serum glucose and IGF-I in the differential protective/sensitizing effects of fasting. Drugs that block the GHR pathway have the potential to mimic the effect of fasting in this differential regulation of protection/sensitization in normal and malignant cells.

### **MEDICINES THAT MIMIC CALORIE RESTRICTION: HOW CLOSE ARE WE?**

A. Gomes<sup>1,2</sup>, N. Dioufa<sup>1</sup>, N. Price<sup>1</sup>, A. Rolo<sup>2</sup>, E. Mercken<sup>3</sup>, C. Palmeira<sup>2</sup>, R. De Cabo<sup>3</sup>, D.A. Sinclair<sup>1</sup>, *1. Pathology, Harvard Medical School, Boston, Massachusetts, 2. University of Coimbra, Coimbra, Portugal, 3. NIA/NIH, Bethesda, Maryland*

Advances in understanding the molecular pathways underlying the benefits of calorie restriction (CR) have led to the testing of molecules in animal models and in Phase II clinical trials in humans. Questions that remain unanswered include: Will the success in rodents translate to humans? Will fertility be negatively affected? Will CR mimetics be safe for long-term human consumption? How does resveratrol work? In this talk, I will present recent findings addressing these questions. These include a mechanism of action for SIRT1 activation, the effects of resveratrol in an adult-inducible SIRT1 knockout mouse, an update on SIRT1 activating compounds (STACs) in rodents and humans, and screens for new CR mimetics that promote health, fertility, and lifespan.

### **SESSION 2510 (SYMPOSIUM)**

#### **CONSTRUCTING MEANING IN LATER LIFE: QUALITATIVE RESEARCH THAT CELEBRATES, EXAMINES AND TEACHES LIFE LESSONS**

Chair: *J.R. Smith, Graduate School of Social Service, Fordham University, New York, New York*

Discussant: *P. Stafford, Indiana University, Bloomington, Indiana*

This symposium brings together qualitative research projects that examine meaning making in later life. We examine the narratives of African-American adults who are pursuing education in later life, the responses of graduate students to elders' immigration stories and the songs of nursing home residents. Through narrative analysis, grounded theory and ethnography, the panel demonstrates the ways in which qualitative methodologies elicit valuable forms of expression, revealing that elders continue to pursue meaningful lives through education, creative expression and dissemination to future generations. The discussant, an

anthropologist and gerontologist, has expertise in nursing home ethnography and the development of elder communities.

### **HOW ELDERLY CREATE MEANING THROUGH SONG AND SELF-PRESENTATION IN A NURSING HOME**

T.A. Allison, 1. *University of California, San Francisco, San Francisco, California*, 2. *San Francisco VA Medical Center, San Francisco, California*

This presentation examines how institutionalized elders create meaning in and present their lives through newly composed songs. In one highly rated nursing home, the resident elders' artistic output includes paintings, sculptures, concerts, needlework, and even a commercially released compact disc with an accompanying documentary. The CD, "An Island on a Hill," and film, "A 'Specially Wonderful Affair,'" serve as permanent legacy. The songs offer a narrative of the elders' lives, including their cultural heritage, holiday celebrations, important life events and reflections on their age. The September 11th attacks, occurring in the middle of the documentary production, dramatically framed these gentle reminiscences within the elders' visceral and intellectual reactions to the devastation around them. Through song and accompanying narrative, these works serve as a record of the ways in which institutionalized elders make meaning in their lives, continue to learn, and engage in the world around them.

### **I PUT MY FEARS BEHIND ME: AFRICAN AMERICAN PERSPECTIVES ON LEARNING OPPORTUNITIES LATER IN LIFE**

R.B. Meraz Lewis, *Leadership and Counseling, Eastern Michigan University, Ann Arbor, Michigan*

In this paper, the author explores the experiences of African Americans who have pursued education later in life. There is a growing body of literature on older adult learning; however, there is a dearth of research specifically focusing on the lifelong learning experiences of older minorities. Findings for this qualitative study were synthesized through thematic, narrative analysis of in-depth individual interviews with ten African American women and men who took part in both formal and informal learning experiences once they were over the age of 50. Participants in the study range in ages from 50 to 85 years old. The analysis reveals how aspects of the life stories participants tell about themselves provide insight into their sense of self (Kaufman, 1986) and how pursuing learning later in life helps individuals negotiate later life transitions as well as post retirement identities.

### **THIS IS WHAT I LEARNED FROM YOU**

T.M. Maschi, J.R. Smith, *Graduate School of Social Service, Fordham University, New York, New York*

This presentation examines how social work research students responded to the oral history interviews they conducted with older adults. The students (n=24) were trained by their instructor in the conducting of oral histories using a semi-structured interview guide about their experience before, during and after immigration. Students analyzed their individual findings using thematic analysis and presenting findings to the class (Padgett, 2008). Two trained qualitative researchers identified the collective themes that the students presented in response to the stories they collected from the older adults who had immigrated to this country. Preliminary results of the students' work showed how they were collectively affected by the older adults' relationship to their country of origin and the cultural sources of resilience they demonstrated in response to prejudice/discrimination. The paper illustrates how students' understandings of resilience can be framed by conducting narrative/oral analysis projects among older adults of diverse cultural backgrounds.

## **SESSION 2515 (SYMPOSIUM)**

### **HEALTH BEHAVIOR CLUSTERS: EVIDENCE AND OUTCOMES**

Chair: R.A. Pruchno, *New Jersey Institute for Successful Aging, University of Medicine & Dentistry School of Osteopathic Medicine, Stratford, New Jersey*

Discussant: T. Prohaska, *University of Illinois at Chicago, Chicago, Illinois*

Numerous studies reveal that adherence to individual health behaviors increases longevity and promotes better quality of life, yet the preponderance of evidence comes from studies examining individual health behaviors in isolation of one another. Although consistently research finds that physical inactivity, excessive alcohol use, cigarette smoking, and an unhealthy diet, are each linked with similar negative health outcomes, questions remain about the extent to which health behaviors cluster and whether they have additive or synergistic effects on outcomes. The extent to which health behaviors cluster has important implications for understanding the predictors of health behaviors as well as their outcomes, and begs development of new research questions, methods, and theory. Issues such as which behaviors cluster and for which segments of the population they cluster become salient. The extent to which health behaviors cluster also has implications for whether interventions should focus on multiple behaviors or single health behaviors to improve health outcomes. This symposium will address the following questions: (1) To what extent is there evidence of clustering of health behaviors among older adults? (2) Are people who adhere to multiple health behaviors more likely to experience better health outcomes than those who adhere to fewer health behaviors? and (3) Are some health behavior clusters more closely associated with better health outcomes than others? Discussion will focus on the implications of clustering for theory, methods, and intervention.

### **ADHERENCE TO CLUSTERS OF HEALTH BEHAVIORS AND SUCCESSFUL AGING**

R.A. Pruchno<sup>1</sup>, M. Wilson-Genderson<sup>2</sup>, 1. *New Jersey Institute for Successful Aging, University of Medicine & Dentistry School of Osteopathic Medicine, Stratford, New Jersey*, 2. *Virginia Commonwealth University-School of Medicine, Richmond, Virginia*

With evidence that genetic influences account for only 20% - 25% of individual variability in successful aging, attention has turned to identifying how modifiable behaviors with strong associations to morbidity, mortality and health care costs influence successful aging. Using data from 5,688 persons aged 50-74 we investigated the relationship between adherence to recommendations regarding five health behaviors (exercise, alcohol, smoking, diet, and BMI) and successful aging. Results indicated that 4.9% of panelists adhered to none of the recommended health behaviors; 2.8% adhered to all five. Most common was adherence to one (28.4%), two (31.4%) or three (22.1%) health behaviors. As the number of adherent behaviors increased so too did the likelihood of aging successfully, yet adherence to some health behavior clusters was more closely associated with successful aging than adherence to others. These findings suggest that there may be multiple mechanisms by which health behaviors influence successful aging.

### **RACIAL AND ETHNIC DIFFERENCES IN THE CORRESPONDENCE AMONG HEALTH BEHAVIORS**

J. Newsom<sup>1</sup>, N. Huguet<sup>2</sup>, A.R. Quinones<sup>3</sup>, C.L. Nagel<sup>3</sup>, M.S. Kaplan<sup>2</sup>, B. McFarland<sup>3</sup>, 1. *Institute on Aging, Portland State University, Portland, Oregon*, 2. *School of Community Health, Portland State University, Portland, Oregon*, 3. *Oregon Health & Science University, Portland, Oregon*

Prior work has suggested that health behaviors (i.e., smoking, exercise, and alcohol consumption) have low correspondence. Individuals

who engage in one healthy behavior are only slightly more likely to engage in another. Common social stressors, cultural influences, or socioeconomic factors may lead to greater clustering of healthy behaviors within race/ethnic groups. This hypothesis was investigated in the Health and Retirement Study among ages 50 and older (N=11,909). Correlations among behaviors were significant but small. Associations were slightly higher among African Americans (average  $r^2=.025$ ) and Latinos (average  $r^2=.025$ ), as compared to Whites (average  $r^2=.015$ ). Greater clustering was due primarily to a greater association between smoking and alcohol consumption among African Americans ( $r^2=.060$  vs.  $r^2=.017$ ,  $p<.05$ ) and between exercising and alcohol consumption among Latinos ( $r^2=.045$  vs.  $r^2=.012$ ,  $p<.05$ ). Results suggest only modest race/ethnic differences in clustering among health behaviors, which may be due to differences in social stressors or resources.

### **LONGITUDINAL ANALYSIS OF INDIVIDUAL, COMBINED, AND ADDITIVE EFFECTS OF LIFESTYLE BEHAVIORS ON COGNITION**

A. Eisenstein, T. Prohaska, *Center for Research on Health and Aging, University of Illinois at Chicago, Chicago, Illinois*

This paper examines individual, combined, and additive effects of lifestyle behaviors including physical, social, and mentally-stimulating activities, smoking, and alcohol consumption, on cognitive performance in a nationally representative sample of older adults. Bivariate and multivariate associations between the 5 lifestyle behaviors and cognitive measures were conducted. Multivariate analyses included a behavior clustered approach as well as a lifestyle-behavior index as the independent variables. Analyses were repeated with and without demographic and health-related covariates. At the bivariate level, mentally-stimulating activity, alcohol consumption, and the behavioral index had significant positive associations with cognitive performance 7-years later. In the combined model, when controlling for all behaviors, mentally-stimulating activity and moderate alcohol consumption remained significant positive predictors of cognitive performance both with and without the covariates. Findings suggest that cognitive activity and moderate alcohol consumption, more than any other behavior or a combination of behaviors, may result in promoting cognitive health over time.

### **SESSION 2520 (SYMPOSIUM)**

#### **LESSONS LEARNED: A RETROSPECTIVE LOOK AT CULTURE CHANGE**

Chair: G. Doll, *Kansas State University Center on Aging, Manhattan, Kansas*

Discussant: P. Reed, *Pioneer Network, Chicago, Illinois*

Culture change, or the movement to create person-centered care in nursing homes, has likely reached a tipping point with virtually every administrator at least recognizing the intent of the concept. Early adopters were motivated by intrinsic factors—they were leaders who felt passionately that person-centered care was a moral imperative. More recently, adoption has been also supported by extrinsic factors, such as the new MDS 3.0, various state initiatives to incentivize the adoption of culture change practices and code changes. This session provides information on the implementation of person-centered care practices gleaned from the work of five researchers who have been exploring the field for 10-15 years. They will examine contributing factors as well as barriers to the successful adoption of person-centered care. The first session will be an historical perspective of the roots of culture change, from initiatives like “untie our elderly” to beginnings in the SCU movement of the 1980’s to changes in other areas of healthcare. The second session is a ten-year longitudinal examination of deep change in a case study involving three nursing homes. The historical issues in organizational and environmental changes and the challenges with regulatory language comprise the third session. Believing that culture change has addressed the “three plagues” of nursing home life unevenly, the fourth

presenters propose a way of shifting the traditional frame of elders as “objects of care” to “human actors with expertise” in care. Change in the Pioneer Network values will be reviewed and current approaches will be highlighted.

### **THE PLAGUE OF HELPLESSNESS AND THE MEANING OF CARE IN LTC CULTURE CHANGE (CC) EFFORTS**

R.A. Siders, D. Dannefer, *Case Western Reserve University, Cleveland, Ohio*

The identification of the “three plagues” of NH life – boredom, helplessness, and loneliness – remains foundational to CC in LTC. Yet, even ambitious and thorough CC efforts have addressed these unevenly. Specifically, helplessness has received much less attention than have loneliness and boredom. Applying self-determination theory, each of the three plagues corresponds to the violation of a basic human need. For helplessness, the corresponding need is competence. We review the reasons for inattention to helplessness, and propose a way of addressing this undeveloped dimension by focusing on the structural constraints embedded in “role of the resident”, especially regarding the unexamined issue of how residents themselves define care. We depart from previous research by reframing the position of elders, not as “object of care” but as “human actors with expertise” in the matter of care, present data from 40 resident interviews focused on the meaning of care, and consider implications for CC.

### **THE ROAD BACK: A LONGITUDINAL LOOK AT THREE HOMES ENGAGED IN CULTURE CHANGE**

G. Doll, *Kansas State University Center on Aging, Manhattan, Kansas*

This longitudinal case study uses Schein’s model of culture to measure deep change in three homes, one traditional, one innovative and a third somewhere in between, as they attempted to adopt culture change practices. The study showed that the deepest level of culture (assumptions) told a different story than what was revealed by the superficial level of artifacts (the level typically used to measure culture change). Three main themes emerged: 1) Staff know what is best for residents. 2) Homes are guided by their perception of their role in the community. 3) Learning styles predict different types of culture change progress. A return to the three homes eight years later showed that while all three had made attempts to install culture change, only one was partially successful in maintaining deep change. Participants will learn how to measure deep change and identify the determinants of culture change success.

### **THE EMERGENCE OF A “NEW PLACE” IN LONG-TERM CARE**

M.L. Kaup, *ATID, Kansas State University, Manhattan, Kansas*

Nursing facilities must adhere to several layers of regulatory structure. Both traditional models of skilled care and newer “culture change” household models fall under the exact same guidelines. Many household models, however, have specifically re-designed their organizational structures and HH environments to abandon the previously held assumptions of the medical nursing home models of care. This raises the question about the continued “fit” between the regulations and these household models; a question that has not been ignored by regulators at the federal level. This presentation will highlight the outcomes of a case study of three long-term care settings that have organized under the concept of a “household.” The discussion focuses on how organizations and their environments have been redesigned, and how staff perception of their role within their place of work is impacted by highly structured rules, group dynamics, and environmental conditions operating around them.

## PERSON-CENTERED CARE: IT'S BEEN A LONG TIME A-COMING

M. Calkins, *IDEAS, Kirtland, Ohio*

While many organizations and publications refer to the “new” model of care variously known as culture change or person-centered care, it has clear roots in the Nursing Home Reform Act of OBRA '87 and the early special care unit movement for dementia care settings. This session traces the evolution of Person-Centered Care, relating it to change initiatives in other areas of health care, and making the argument that person-centered care principles, such as “know the person” and “put the person before the task”, are descendents of the therapeutic goals (e.g., “Continuity of Self”) articulated by early dementia care researchers. From a regulatory perspective, most of the new components of MDS 3.0 also reflect a continued evolution of the same principles.

## THE LANDSCAPE OF CULTURE CHANGE AND PERSON-CENTERED CARE: APPROACHES, PROGRESS AND NEW DIRECTIONS

P. Reed, *Pioneer Network, Carmichael, California*

For over 15 years, the culture change movement has pushed the field of long-term care to radically transform organizational values to return control over everyday life to residents. Truly engaging residents to promote choice and enhance quality of life requires more than a discrete clinical intervention, but rather must include fundamental changes to the entire system of care and everyday living. The Pioneer Network has served as a leading national voice for culture change, monitoring progress and assessing the range of emerging innovative approaches. While estimates show that only 3-10% of nursing homes have adopted deep transformational approaches to culture change, the concept is widely recognized and growing in adoption. This session will use available data to detail the current state of culture-change, describe key culture change values and highlight several national approaches, with a focus on resident and organizational outcomes.

## SESSION 2525 (SYMPOSIUM)

### LET'S GET PHYSICAL! SOCIOEMOTIONAL AND COGNITIVE PATHWAYS TO HEALTHY AGING THROUGH PHYSICAL ACTIVITY

Chair: *T. Sims, Psychology, Stanford University, Stanford, California*

Co-Chair: *N. Notthoff, Psychology, Stanford University, Stanford, California*

Discussant: *D. Park, University of Texas at Dallas, Dallas, Texas*

Few older adults meet the American Heart Association recommendations for physical activity, even though the health benefits of exercise are well-established, including improvements to physical health (e.g., reduced risk of cardiovascular disease), cognitive fitness (e.g., maintenance of cognitive function), and psychological health (e.g., greater emotional well-being). The aim of this session is to elucidate some specific mechanisms through which physical activity may promote healthy aging and the psychological factors that may influence its effectiveness. Voss and colleagues present evidence that in older adults, higher levels of physical fitness are associated with greater functional integration of subcortical and prefrontal structures with the collective brain network, which relates to enhanced cognitive performance. Puterman and colleagues discuss how physical activity in combination with emotion regulation and social connection predict longer leukocyte telomere length in heart disease patients, and how these factors mitigate depression-telomere length associations. Sims and colleagues present findings showing that the positive association between vigorous physical activity and emotion depends on the value people place on high arousal positive states. Finally, Notthoff and colleagues present evidence that amygdala activation when viewing emotionally-framed vs. neutral information about walking predicts increases in subsequent physical activity among older adults. Together, these studies suggest

that the path from physical activity to healthy aging is dependent on cognitive and emotional processes, including related neural networks, socioemotional functioning, and emotional goals. Ultimately, this research can enhance the effectiveness of interventions and policies aimed at optimizing physical activity levels and improve cognitive and affective functioning among older adults.

## THE RELATIONSHIP OF AEROBIC FITNESS TO BRAIN NETWORK ARCHITECTURE IN HEALTHY OLDER ADULTS

M.W. Voss<sup>1</sup>, C. Wong<sup>2</sup>, A.N. Szabo<sup>2</sup>, P.L. Baniqued<sup>2</sup>, J.H. Burdette<sup>3</sup>, E. McAuley<sup>2</sup>, P. Laurienti<sup>3</sup>, A. Kramer<sup>2</sup>, *1. Psychology, The University of Iowa, Iowa City, Iowa, 2. The University of Illinois at Urbana-Champaign, Urbana, Illinois, 3. Wake Forest University, Winston-Salem, North Carolina*

We have shown aerobic fitness is associated with enhanced Default Mode Network (DMN) connectivity in parietal, temporal, and frontal regions disconnected from the DMN with age. Here we used a data-driven approach combined with traditional methods to examine the association of fitness with brain connectivity in 44 older adults (mean 65.6 yrs). Greater aerobic fitness was associated with greater connectivity of the dorsal medial amygdala and anterior hippocampus with the posterior cingulate cortex ( $r=.28$  and  $.36$  respectively,  $p<.05$ ), a hub of the brain and the DMN, and with greater connectivity between the dorsal medial amygdala and dorsomedial thalamus ( $r=.43$ ,  $p<.05$ ), a relay station in cortico-limbic and executive function pathways. Results suggest fitness is associated with the amygdala playing a more central role in core brain networks. After attending this session, participants will have learned how functional connectivity methods with MRI can be used for modeling brain function and healthy aging.

## A MULTISYSTEM PROTECTIVE PROFILE MODERATES THE DEPRESSION – LEUKOCYTE TELOMERE LENGTH ASSOCIATION

E. Puterman<sup>1</sup>, E. Epel<sup>1</sup>, J. Lin<sup>1</sup>, E. Blackburn<sup>1</sup>, J. Gross<sup>3</sup>, M. Whooley<sup>1,2</sup>, B. Cohen<sup>1,2</sup>, *1. University of California, San Francisco, San Francisco, California, 2. San Francisco VA Medical Center, San Francisco, California, 3. Stanford University, Stanford, California*

Immune cell senescence, indexed by short leukocyte telomeres (LTL), is associated with major depressive disorder (MDD). Healthy emotion regulation, strong social connections, and high levels of physical activity have independently been associated with longer telomeres, but little is known about their combined effects, nor their potential to moderate the MDD-LTL association. LTL, using quantitative PCR assay, was measured in 954 patients with stable heart disease in the Heart and Soul Study. Principal component analysis revealed one factor for social connections (Cohen et al., 1985), physical activity (Krauss et al., 2010), and emotion expression (Gross & John, 2003). A high profile score predicted longer LTL ( $\beta = .09$ ,  $p = .003$ ), whereas each individual factor did not. The profile score moderated the MDD-LTL association, such that only at  $-1SD$  or lower, was MDD significantly related to LTL. MDD associations with biological outcomes should be examined within a psychosocial and behavioral context.

## EMOTIONALLY-SALIENT HEALTH MESSAGES INCREASE WALKING: EVIDENCE FROM NEUROIMAGING

N. Notthoff<sup>1</sup>, G.R. Samanez-Larkin<sup>2</sup>, L. Carstensen<sup>1</sup>, *1. Department of Psychology, Stanford, Stanford, California, 2. Vanderbilt University, Nashville, Tennessee*

Older adults are the most sedentary age group. Failure to effectively communicate health information may play a role. In two experiments ( $n_1=59$ ;  $n_2=86$ ), we observed that promoting the benefits of walking (positive framing) more effectively increased walking than emphasizing the negative consequences of not walking (negative framing) ( $t(58)=2.291, p<0.05$ ;  $t(2274)=15.548, p<0.01$ ). In a third study,

we examined the mechanisms through which these framing effects may operate. 22 younger adults, ages 22–35 (M=27) and 16 older adults, ages 65–83 (M=74) underwent fMRI while viewing information about walking. Amygdala activation when viewing emotionally-framed compared to neutral messages was greater in older compared to younger adults and was associated with increased walking in the following week in both age groups. These findings point to cognitive mechanisms through which subtle differences in communicating health information may influence health behaviors.

### **IS VIGOROUS ACTIVITY FOR EVERYONE? THE INFLUENCE OF IDEAL AFFECT ON THE EMOTIONAL BENEFITS OF PHYSICAL ACTIVITY ACROSS THE LIFE SPAN**

T. Sims, C.L. Lowdermilk, J.L. Tsai, *Psychology, Stanford University, Stanford, California*

National campaigns promoting healthy aging often focus on older adults engaging in energizing, invigorating activities. This may be partly due to the relationship between vigorous activity and emotional well-being. However, this association may depend on how much people want to feel energized, full of vigor, and other high arousal positive states (ideal HAP). In study 1, we surveyed approximately 500 people across the life span in which they reported their ideal HAP, how often they engaged in mild, moderate and strenuous activities, and how positive they typically felt. Across the life span, the positive association between activity intensity and positive affect was moderated by ideal HAP. In study 2, we followed a subsample of these participants using experience sampling. Within individuals, feeling activated during exercise was positively associated with feeling happy, which also depended on ideal HAP. We discuss implications of ideal affect in aging populations for healthy outcomes.

## **SESSION 2530 (SYMPOSIUM)**

### **LIFE COURSE PREDICTORS OF LATER LIFE WELL-BEING AND HEALTH**

Chair: M. Ardel, *Sociology and Criminology & Law, University of Florida, Gainesville, Florida*

Discussant: R. Settersten, *Oregon State University, Corvallis, Oregon*

This symposium investigates life course predictors of physical, psychological, and subjective well-being during the later years of life by analyzing several longitudinal or comparative samples. The first presentation examines college predictors of subjective well-being at midlife. Among members of the 1956 birth cohort from the Rochester Adult Longitudinal Study, college scores on autonomy, generativity, and ego integrity were most predictive of overall satisfaction in midlife, whereas identity and intimacy were more important predictors for the 1947 cohort. The second presentation compares three groups of older adults (N=430) who survived the Holocaust as children or young adults. Those who immigrated after the war to Israel tended to score highest on social capital, followed by immigrants to the US, and those living in Hungary. Staying in Hungary under continued threat of anti-Semitism had a negative impact on successful aging. The third presentation combines two longitudinal studies of 243 male Harvard graduates and 393 working-class men to analyze the long-term effects of childhood adversity. Experience of childhood adversity was negatively related to generativity in midlife. Generativity, in turn, tended to predict aging well. The last presentation explores antecedents of both dementia and sustained cognitive competence at age 90 of the 150 surviving men of the longitudinal Harvard study. Results show that apart from good vision and exercise, an excellent childhood relationship with mother predicted cognitive competence at age 90 and the absence of dementia. Overall, the studies indicate that earlier life events can have far reaching consequences for later life well-being and health.

### **A SEQUENTIAL ANALYSIS OF COLLEGE PREDICTORS OF MIDLIFE SATISFACTION AND SUBJECTIVE WELL-BEING**

S.K. Whitbourne, *Psychology, Univ. of Mass. Amherst, Amherst, Massachusetts*

Psychological well-being in midlife is typically studied using correlational cross-sectional data. Previous studies from the Rochester Adult Longitudinal Study investigating college predictors of well-being examined data from a 1947 birth cohort through the age of 54. The present paper will examine data from the 136 members of the 1956 birth cohort from the same college who were followed through age of 42 on measures of subjective well-being and life satisfaction. College scores on Autonomy vs. Shame and Doubt, Generativity vs. Stagnation, and Ego Integrity vs. Despair had the highest predictive relationships with overall satisfaction in mid-life in contrast to findings from the 1947 cohort, for whom identity and intimacy were more important predictors. In line with earlier investigations showing cohort/time of measurement differences between the 1947 and 1956 cohorts in psychosocial development, the present findings highlight the importance of replicating longitudinal analyses across cohorts.

### **TRAUMA AND THE LIFE COURSE IN A CROSS NATIONAL PERSPECTIVE**

E. Kahana<sup>1</sup>, B. Kahana<sup>2</sup>, L. Lovegreen<sup>1</sup>, *1. Case Western Reserve University, Cleveland, Ohio, 2. Cleveland State University, Cleveland, Ohio*

Holocaust survivors, who are alive today endured extreme trauma in childhood or young adulthood. How they fare as elders has been greatly impacted by the sociocultural milieu of their adult years along with attempts to craft meaningful lives after their victimization. We report data based on survivors who immigrated after the war to the US (n=150) or to Israel (n=150) and compare their life trajectories with survivors who continued to live in Hungary (n=120). Findings reveal that social capital and group identity differ greatly based on country of residence. Survivors living in Israel report greatest social capital followed by survivors in the US, with survivors living in Hungary a distant third. For the latter group, living under the cloud of antisemitism marred their adult years and impeded successful aging, manifesting in depressive symptoms during old age.

### **THE LONG-TERM EFFECTS OF CHILDHOOD ADVERSITY ON LATER LIFE WELL-BEING MODERATED BY GENERATIVITY**

S. Landes<sup>1</sup>, M. Ardel<sup>1</sup>, G.E. Vaillant<sup>2</sup>, *1. University of Florida, Gainesville, Florida, 2. Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts*

Prior studies confirm that after experiencing childhood adversity, resilient adults can recover and engage in generative growth. Utilizing a sample of 636 men from the Harvard Sample and Inner City Cohort of the 60-year longitudinal Study of Adult Development, this research explores the long-term effects of childhood adversity on individuals who either achieved or failed to achieve Erikson's psychosocial developmental stage of generativity in midlife. Men from an adversarial childhood were less likely than men from a non-adversarial childhood to achieve generativity in mid life. Generative men from both adversarial and non-adversarial childhoods had increased enjoyment of life and better adjustment to aging. The achievement of generativity in men from an adversarial childhood was also associated with decreased abuse of both alcohol and drugs. Results confirm positive later life outcomes for resilient individuals from both an adversarial and non-adversarial childhood who subsequently engaged in psychosocial growth.

## ANTECEDENTS OF COGNITIVE COMPETENCE AND DEMENTIA AT AGE 90: A PROSPECTIVE STUDY

G.E. Vaillant, *Harvard Medical School, Boston, Massachusetts*

**Abstract** This presentation examines antecedents of both dementia and sustained cognitive competence at age 90, using a prospective, intensive, multidisciplinary study of 150 surviving white male college sophomores repeatedly assessed from age 19 to 90, with little attrition. Measures included numerous prospectively gathered variables including assessment of childhood, dominant personality traits, and objective mental and physical health over time, smoking history, alcohol abuse, and depression. Cognitive status was assessed at age 80, and 90. Questionnaires were obtained every two years and physical exams every five years. Results showed that apart from the absence or presence of vascular risk factors, there were virtually no antecedent environmental variables associated with either clear cognitive competence at age 90 ( $n = 39$ ) or probable dementia ( $n = 38$ ). An excellent childhood relationship with mother, good vision, and exercise were the three best predictors of cognitive competence at age 90 and the absence of dementia.

## SESSION 2535 (SYMPOSIUM)

### ORDER AMIDST THE CHAOS: UNDERSTANDING AUTONOMY IN ASSISTED LIVING

Chair: *A. Frankowski, UMBC, Baltimore, Maryland*

Co-Chair: *R. Rubinstein, UMBC, Baltimore, Maryland*

Discussant: *M.M. Perkins, Emory University, Atlanta, Georgia*

In this symposium we examine how autonomy is supported, challenged, and thwarted in two assisted living (AL) settings: a sixteen person “progressive” AL that incorporates a large adult day program and an “affordable” AL recently purchased by a nursing home and housing forty-eight residents. Three distinctive threads run through our data: (1) management philosophy; (2) social interaction between residents, families, friends, and staff; and (3) physical and social environment. Our symposium reflects these themes. In our presentations we examine how: (a) an AL’s philosophy of autonomy socializes staff to balance residents’ risky choices with safety; (b) lying to residents moving into a dementia care unit undermines or enhances their autonomy; (c) freedom and control impact the comfort and well-being of AL residents; and (d) the physical setting and use of space inhibits or encourages independence. We conclude our symposium with (e) a theoretical discussion of autonomy as seen within the broader framework of contested discourse. Data for this presentation are drawn from a multi-year, NIA-funded ethnographic study of autonomy. Fieldnotes and interviews with residents, their families of choice, staff, and directors were team coded and analyzed using Atlas-ti software and grounded theory. These papers will inform policy and practice on how implementing autonomy in everyday life results in better quality of life and care for residents in AL.

### BALANCING RISK AND AUTONOMY IN ASSISTED LIVING: THE INTERPLAY OF PHILOSOPHY, MANAGEMENT, AND STAKEHOLDERS’ INVOLVEMENT

M.C. Nemeć, A. Frankowski, R. Perez, M. Brazda, *Center for Aging Studies, University of Maryland, Baltimore County (UMBC), Baltimore, Maryland*

Autonomy, as experienced through choice and independence, is critical for residents’ adjustment to, and satisfaction with, assisted living (AL). Research has shown that the expression of autonomy is positively associated with health and sense of well-being. AL residents want to exert control over their everyday lives; affording residents this control, however, allows them to make both good and bad choices. This presents a challenge to AL staff who want to keep residents safe and healthy, but at the same time feel they must honor risky choices. In this paper we examine how one small progressive AL balances risk with autonomy. Preliminary findings indicate that autonomy is

enhanced through the interplay of this community’s philosophy and mission, management style, staff members’ attitudes, and residents’ actions.

### FREEDOM BEHIND LOCKED DOORS: MANAGING AUTONOMY IN ASSISTED LIVING

A. Frankowski, J.K. Eckert, M.C. Nemeć, R. Perez, R. Hrybyk, C.R. Bennett, *UMBC, Baltimore, Maryland*

Environment is both physical and social. It is architectural as well as interactional, and includes the design of space, ambiance, purposeful arrangements of people and self-defined cliques, i.e., all the ways in which it is used and adapted by individuals and groups. In assisted living (AL), this also includes modifications to enhance the life of its residents: handrails, elevators, and walk-in tubs and the use of public spaces, e.g., the dining room, reception area, and front porch. In this presentation we compare and contrast two AL settings, one bordering on a medical model and the other fostering independence by design. We examine how autonomy is managed on an everyday basis by both residents and staff, how the use of space inhibits or encourages independence, and how residents’ exert control over their lives while living behind locked doors. We conclude with a discussion of best practices culled from our fieldwork.

### THEORIES OF AUTONOMY, CONTESTED DISCOURSE, AND THE INDIVIDUAL IN ASSISTED LIVING

R. Rubinstein, M. Brazda, *UMBC, Baltimore, Maryland*

Autonomy in assisted living (AL) derives from three structuring features: (1) the rules and regulations put into place as absolute by the state and by the management of each specific AL setting; (2) each AL setting’s philosophy on the need for and limits to individual behavior; and (3) individuals’ reactions to and interpretation of the rules and philosophy, and their enactment of specific individual needs and desires. In this paper we examine the third feature and analyze data from two AL settings to show how discourse about autonomy and its manifestations may be contested as stakeholders – residents, family, and staff – attempt to present an argument for either organizational or individual privilege. We also explore how ALs manage individual needs and privileges without infringing on the defined rights of others and discuss how they decide on the significance of privileges and needs of others in relation to those of the individual.

### ENABLING ROUTINE AUTONOMY: IDENTIFYING BOUNDARIES FOR CHOICE IN COLLECTIVE LIVING

L. Morgan, J.K. Eckert, R. Hrybyk, R. Perez, *Sociology & Anthropology, UMBC, Baltimore, Maryland*

Enabling autonomy for individuals is challenging in a collective setting, where organizational, regulatory, staffing and diverse resident needs often constrain its realization. This paper uses extensive fieldnotes to describe an operational boundary for autonomy in a small, progressive AL, where life revolves around a large, common room and autonomy is integral to the philosophy. For example, this AL permits residents wide behavioral choice, including unusual sleeping patterns and dietary behavior. Accommodations are made to address individual preferences, an approach possible in a smaller setting. However, behaviors are constrained when they intrude upon the comfort or peace of others. Proactive staff behavior addressed one resident resistant to showers. Response was also required for an accusation of theft against another resident, involving police. In these instances behavior of one resident impinged upon one or more others in negative ways, suggesting that its philosophy of autonomy is active within limits in daily life.



## **IT'S JUST FOR A LITTLE WHILE: THE ROLE OF LIES IN THE TRANSITION TO DEMENTIA CARE**

A.D. Peebles<sup>1,2</sup>, A. Frankowski<sup>2</sup>, C.R. Bennett<sup>1,2</sup>, R. Perez<sup>2</sup>, 1. *Doctoral Program in Gerontology, UMBC/UMB, Baltimore, Maryland, 2. Center for Aging Studies, UMBC, Baltimore, Maryland*

Residents of assisted living (AL) settings are often subjected to lies told by family and staff. These lies can be large or small, outright or committed by omission. In some cases, the so-called "therapeutic" lie is used to assuage the fears or anxieties of one or more residents, while other lies seem to be told for the sake of simplicity. This presentation examines the ways in which lies told to AL residents enhance or undermine resident autonomy. We focus on residents with dementia, and discuss the contexts in which lies are used by families and care providers. In particular, we explore lies surrounding the transition into a dementia care unit or dementia-specific section of these AL settings; residents are often told that the move is only temporary, when in fact it is permanent. The origin, effects, and life course of these types of lies are also discussed.

## **SESSION 2540 (SYMPOSIUM)**

### **PARTICIPATORY RESEARCH AND TRANSLATION OF INTERVENTION TRIALS NEAR THE END OF LIFE**

Chair: R.S. Allen, *The University of Alabama, Tuscaloosa, Alabama*  
Discussant: R. Blieszner, *Virginia Polytechnic Institute and State University, Blacksburg, Virginia*

This symposium presents data from the Legacy Intervention Family Enactment (LIFE) trial (R21NR011112). LIFE explored the experience and effectiveness of Retired Senior Volunteers in delivering a combination reminiscence and creative activity intervention called Legacy to palliative care patients and their family caregivers living in the community or residential care (i.e., assisted living or senior apartments). First, baseline data from 44 palliative care patients revealed the buffering influence of religious coping practices that involve "God" on the relation between physical symptoms and physical symptom burden as they influence symptoms of depression. Second, baseline dyadic concordance between palliative care patients and their family caregivers (N = 44) in the perception of physical and emotional symptoms and burden will be presented. Third, findings from a content analysis of qualitative data from a) focus groups (N = 3) regarding attractive and inhibiting aspects of the intervention as perceived by potential Retired Senior Volunteers, and b) individual interviews with volunteers (N = 6) who actively worked with LIFE intervention families will be described. Finally, outcome data regarding retention (64% of baseline participants at Time 1 and 86% of Time 1 participants at two-month follow-up) and success of retired senior volunteers as LIFE interventionists will be presented. In comparison with a contact control group, intervention patients experienced a decrease in emotional symptoms and burden and an increase in forgiveness while intervention caregivers experienced increased meaning in life. The discussant will address the potential for volunteer-driven psychosocial interventions in the community to advance translational science.

### **WITH OR WITHOUT GOD: THE BUFFERING EFFECT OF RELIGIOUS COPING STYLE ON DEPRESSION SYMPTOMS IN CHRONICALLY ILL OLDER ADULTS**

G. Harris, M.K. Eichorst, L. Miller, L.L. Dunn, P.A. Parmelee, R.S. Allen, *The University of Alabama, Tuscaloosa, Alabama*

The presence of a chronic illness in older adults often results in stress and other negative emotions. Hill's Biopsychosocial Model of Religious Involvement suggests that religious involvement mod-

erates the association between these stressful conditions and mental health. This study examines this relationship. Participants included 45 non-demented older adults with advanced, chronic illness. Eight regression analyses were conducted to examine one's religious coping style as a moderator of the effect of physical health on depression symptoms. Eight regression models were conducted with some model variation in religious coping style and inclusion of physical symptoms and physical symptom distress as indicators of physical health. Race/ethnicity was a covariate in each model. The results indicate that religious coping moderates the effect of physical symptom number and burden on depression symptoms and that greater engagement with religious coping styles that include involvement with God buffers the effect of physical health on one's depression symptoms.

### **PHYSICAL AND EMOTIONAL SYMPTOM BURDEN AND ADVANCED CHRONIC ILLNESS: DYADIC CONCORDANCE**

M.K. Eichorst<sup>1</sup>, R.S. Allen<sup>1</sup>, G. Harris<sup>1</sup>, C. Azuero<sup>1</sup>, L. Miller<sup>1</sup>, J.L. Shuster<sup>2</sup>, E. Kvale<sup>3</sup>, 1. *The University of Alabama, Tuscaloosa, Alabama, 2. Vanderbilt University, Nashville, Tennessee, 3. University of Alabama at Birmingham, Birmingham, Alabama*

For older adults with chronic conditions, a caregiver often acts as a health care advocate, reporting symptoms experienced by their loved one. While proxy reports are moderately accurate for physical symptoms, they are known to be poor for emotional symptoms, which account for some of the most frequently experienced symptoms at the end of life. Baseline dyadic concordance between palliative care patients and their family caregivers (N = 43; 58% Caucasian, 42% African American) in the perception of physical and emotional symptoms and burden was explored. When considering cognitive status and caregiver stress, palliative care patients and their caregivers were concordant in report of physical symptom number and burden. They also were concordant in report of number of emotional symptoms. However, patients reported significantly less bother from their emotional symptoms than did their caregivers. Discussion will consider caregiver stress as it relates to caregiver proxy report and the patient-caregiver relationship.

### **RETIRED SENIOR VOLUNTEER (RSVP) PERCEPTIONS OF COMMUNITY-BASED INTERVENTION IMPLEMENTATION WITH A CHRONICALLY ILL POPULATION AND THEIR CAREGIVERS**

C. Azuero<sup>1</sup>, E.L. Csikai<sup>1</sup>, E. Kvale<sup>2</sup>, P.A. Parmelee<sup>1</sup>, R.S. Allen<sup>1</sup>, 1. *The University of Alabama, Tuscaloosa, Alabama, 2. University of Alabama at Birmingham, Birmingham, Alabama*

One aspect of the LIFE study was to assess RSVPs' ability to implement a reminiscence and creative activity intervention with chronically-ill individuals and caregivers. Transcripts from pre-intervention focus groups and post-intervention interviews were analyzed using qualitative data techniques to understand RSVP's perceptions toward the intervention. Findings suggested the intervention was understood as a benefit to the care recipients and caregivers. RSVPs also expressed personal benefit from working with the families after implementation. At both time points, personal reflections from the RSVPs were noted and post-intervention reflections included desire for similar projects within their own families. Concerns about working with very sick individuals and going into strangers' homes were expressed but did not hinder involvement or enjoyment in the project. Volunteers provided recommendations for decreasing apprehension among future volunteers. These results suggested RSVPs can successfully implement an intervention, provide recommendations for improving its implementation and receive personal benefit from their efforts.

## PRELIMINARY EVIDENCE OF EFFICACY: THE LEGACY INTERVENTION FAMILY ENACTMENT (LIFE) TRANSLATION TRIAL

R.S. Allen<sup>1</sup>, E.L. Csikai<sup>1</sup>, L.L. Dunn<sup>1</sup>, J. DeCoster<sup>2</sup>, E. Kvale<sup>3</sup>, S. Qualls<sup>4</sup>, L. Burgio<sup>5</sup>, P.A. Parmelee<sup>1</sup>, 1. *The University of Alabama, Tuscaloosa, Alabama*, 2. *University of Virginia, Charlottesville, Virginia*, 3. *University of Alabama at Birmingham, Birmingham, Alabama*, 4. *University of Colorado at Colorado Springs, Colorado Springs, Colorado*, 5. *University of Michigan, Ann Arbor, Michigan*

LIFE explored the experience and effectiveness of Retired Senior Volunteers in delivering a combination reminiscence and creative activity intervention called Legacy to palliative care patients and their family caregivers living in the community or residential care (i.e., assisted living or senior apartments). Six Retired Senior Volunteers worked with intervention families; physical and emotional outcomes for these families were compared to a contact control group. Outcome data regarding retention (64% of baseline participants at Time 1; 86% of Time 1 participants at two-month follow-up) and success of retired senior volunteers as LIFE interventionists will be presented. In comparison with the control group, intervention patients experienced a decrease in emotional symptoms and burden and an increase in forgiveness while intervention caregivers experienced increased meaning in life. Moreover, this effective intervention showed preliminary evidence of successful translation as volunteer organizations facilitated the project and volunteers asked to work with more than one family.

## SESSION 2545 (SYMPOSIUM)

### SOCIAL SELF-REGULATION: MANAGING SOCIAL EXPERIENCES AND EMOTIONAL WELL-BEING IN OLDER ADULTHOOD

Chair: *S. Mejia, Human Development and Family Sciences, Oregon State University, Corvallis, Oregon*

Co-Chair: *H. Chui, Flinders University, Adelaide, South Australia, Australia*

Discussant: *M.K. Diehl, Colorado State University, Fort Collins, Colorado*

In older adulthood, maintaining emotional well-being is an essential component of healthy aging. Social relationships, which are actively constructed across the lifespan, scaffold emotional regulation efforts. However, inasmuch as social relationships are supportive, they can also negatively affect health and well-being through strain, which emphasizes the importance of maintaining an optimal social environment through ongoing regulation of self and others. Spanning distinct sampling intervals, measures of social interaction, and avenues for emotional regulation, this symposium brings together a collection of papers that investigate how older adults self-regulate through their social relations. Chui and Luszcz use data from the Australia Longitudinal Study of Ageing - Daily Life Time Sampling Study (ADuLTS) to investigate the link between neuroticism, social relations, and affect among the oldest old. Meji a and colleagues, using data from the 100-day Personal Understanding of Life and Social Experiences (PULSE) study, examine daily social contact satisfaction and response to perceived stress in the context of differing levels of neuroticism. Rohr and colleagues apply longitudinal data to investigate commonalities and differences between strategies to regulate the self through reciprocity, and regulate others through social support in response to stressful events. Hoppmann and colleagues consider relationship regulation across three generations in the Seattle Longitudinal Study, and investigate the degree to which parents and grandparents draw well-being from the developmental success of their adult offspring. The discussion by Manfred Diehl will integrate the four papers and focus on the ways in which the self and social relationships contribute to emotional well-being in later life.

### SOCIAL PARTNERS AND DAILY AFFECT IN THE OLDEST-OLD

H. Chui, M.A. Luszcz, *Psychology, Flinders University, Adelaide, South Australia, Australia*

Social relationships have major implications for individuals' psychological well-being. This study examined the associations between the presence of social partners and affective experience in the oldest-old in the Australian Longitudinal Study of Ageing - Daily Life Time Sampling Study (ADuLTS). Seventy-five individuals (M age = 88.65 years) were assessed for seven consecutive days. Presence of different social partners produced differential effects on positive (PA) and negative affect (NA). Presence of peripheral ties and other family members was associated with a higher level of PA. In contrast, the presence of a spouse or friends did not show any significant effect on affect. Individuals with a higher level of neuroticism reported a lower level of PA and a higher level of NA when they were with their spouses and other family members. Findings highlight the importance of the effects of situational and individual characteristics of relationships on affect in the oldest-old.

### PERSONALITY AND THE BENEFITS OF CLOSE RELATIONSHIPS: DAILY PERCEIVED STRESS, AFFECT, AND CONTACT SATISFACTION

S. Mejia<sup>1</sup>, S. Choun<sup>1</sup>, T. Pham<sup>2</sup>, R. Metoyer<sup>2</sup>, K. Hooker<sup>1</sup>, 1. *Human Development and Family Sciences, Oregon State University, Corvallis, Oregon*, 2. *School of Computer Science and Electrical Engineering, Oregon State University, Corvallis, Oregon*

Social interactions can both buffer or intensify the effects of stress on well-being. In older adulthood, where age-related vulnerabilities dampen stress response, maintaining positive relationships is an essential to sustain health and well-being. Older adults' social relationships are also expressions of personality, and the trait neuroticism is associated with higher levels of stress, and lower network satisfaction. Data from the 100-day Personal Understanding of Life and Social Experiences (PULSE) project was used to examine the interplay of personality on social relations and stress response. In this internet-based study, older adults reported daily social contact satisfaction, affect, and perceived stress. The effect of stress on affect varied significantly in the sample. Days of higher contact satisfaction attenuated the link between perceived stress and affect on that day. This effect was less present for individuals higher in neuroticism, suggesting that the benefits of social relations vary in part as a function personality.

### LEAN ON ME – OR ON OTHERS? THE INTERPLAY OF DAILY HASSLES, RELATIONSHIPS REGULATION, AND WELL-BEING

M.K. Rohr<sup>1</sup>, J. Wagner<sup>2</sup>, F.R. Lang<sup>1</sup>, 1. *Institut of Psychogerontology University Erlangen-Nuremberg, Erlangen, Germany*, 2. *Humboldt University, Berlin, Germany*

The experience and appraisal of adverse life events are embedded within one's social context. In the face of daily hassles and stressful events, social contacts may either serve as buffer or increase one's vulnerability which is why individuals proactively strive to mold their social world. The current study examines two exemplary regulatory efforts: On the one hand, it concentrates on perceived social support as a more other-focused strategy; on the other hand, general reciprocity is assessed to capture more self-focused regulatory efforts. Commonalities and differences between these two strategies and their consequences for health and well-being are examined. For that purpose a longitudinal web-based study was conducted encompassing three measurement points 7 weeks apart from each other (N = 390). Preliminary results point to differential trajectories of self- and other-focused regulation and highlight age-specific patterns. Results will be discussed on the background of theories on emotion- and relationship regulation.

## OFFSPRING SUCCESS IS ASSOCIATED WITH PARENTAL AND GRANDPARENTAL HAPPINESS: INTERGENERATIONAL EVIDENCE FROM THE SEATTLE LONGITUDINAL STUDY

C.A. Hoppmann<sup>1</sup>, D. Gerstorff<sup>2</sup>, S.L. Willis<sup>3</sup>, K. Schaie<sup>3</sup>, 1. *Univ. of British Columbia, Vancouver, British Columbia, Canada*, 2. *Humboldt University, Berlin, Germany, Germany*, 3. *University of Washington, Seattle, Washington*

Well-being is systematically linked between close others such as family members. Based on developmental notions of generativity, we examined the extent to which parents and grandparents draw happiness from seeing their adult offspring thrive. We used cross-sectional data obtained independently from three generations belonging to the same family as assessed in the Seattle Longitudinal Study (M ages: 32 years for children, 58 years for parents, and 89 years for grandparents). Results revealed that parents and grandparents whose offspring show high professional accomplishments (education, occupational prestige) reported increased levels of happiness, even after controlling for own age, income, education, and professional success. Our findings extend studies using individual data and are in line with research on generativity to suggest that parents and grandparents who perceive that they are leaving a lasting legacy by having fostered the developmental success of the next generations may benefit themselves in terms of greater happiness.

## SESSION 2550 (SYMPOSIUM)

### SOCIAL SUPPORT NETWORKS AND LONELINESS; TWO SIDES OF THE SAME COIN?

Chair: *M.J. Aartsen, Faculty of Social Sciences, VU-University, Amsterdam, Netherlands*

Co-Chair: *P. Martin, Iowa State University, Ames, Iowa*

Loneliness is a detrimental negative emotional feeling stemming from a mismatch between the social relationships one has and one wants to have. By providing support and/or by providing social bonding, the network contributes to well-being and reduced levels of loneliness. In the symposium we will address the question to what extent social support and loneliness are empirically or conceptually different concepts. This symposium brings together two recent studies on loneliness from the Longitudinal Aging Study Amsterdam (The Netherlands) and two recent studies of the Georgia Centenarian Study (USA). In the first presentation, cohort differences in loneliness after divorce are described for 55-65 year old Dutch people. The next presentation focuses on the Wenger typology of support networks and discusses whether a relation between loneliness and support differs across the different network types. Next, the question whether support and loneliness are conceptually different is assessed by conducting confirmatory factor analyses based upon the literature for known assessments of loneliness, social provisions, and depression. Further, the influence of Loneliness and Social Provisions on Life Satisfaction through Depression is examined.

### ASSOCIATIONS BETWEEN LONELINESS AND SUPPORT IN 5 TYPES OF SOCIAL NETWORKS: FINDINGS FROM LASA

M.J. Aartsen, T.G. van Tilburg, *Faculty of Social Sciences, VU-University, Amsterdam, Netherlands*

Social support and loneliness are often correlated, leading to the idea that support and loneliness may be two sides of the same coin. Some argue that it is not the amount but rather the quality of support that counts. In this presentation we will go one step further by taking into account the composition of the support network. With Latent Class Analyses, 5 types of network were distinguished in a subsample older adults with partner (N=1969), based on differences in network size and proportion of children, other family members, friends and neighbors. Correlations between amount of support and loneliness differed con-

siderably across the network types. Social loneliness is related to amount of instrumental and emotional support received, most notably for people with large, friend oriented networks. Emotional loneliness is correlated with emotional support only if there is a substantial proportion of non-kin, or if the network is small and consists mainly of children.

### LONELINESS AFTER DIVORCE: A COHORT COMPARISON AMONG 55-65-YEAR OLD DUTCH PEOPLE

T.G. van Tilburg<sup>1</sup>, M. Aartsen<sup>1</sup>, S. Van der Pas<sup>2</sup>, 1. *Dept. of Sociology, VU University Amsterdam, Amsterdam, Netherlands*, 2. *VU University Medical center, Amsterdam, Netherlands*

Divorced people have a high risk of loneliness. The stigma attached to divorce has declined over the past ten years, and societal norms and regulations have become more customized to divorce. Therefore, divorcees in recent birth cohorts may have better opportunities to realize satisfying relationships than divorcees in earlier cohorts. We test the hypothesis that intensity of loneliness among divorcees has decreased over time on data collected in 1992 and 2002. The study revealed that in 1992 divorcees were more emotionally and socially lonely than married respondents. In 2002 divorcees were less socially lonely than divorcees in 1992 and no longer differed from married respondents. Divorcees have improved their networks, which contributes to less loneliness. The social position of divorcees has changed which may lead to an increase in the societal acceptance of divorce.

### THE INFLUENCE OF LONELINESS AND SOCIAL PROVISIONS ON LIFE SATISFACTION MEDIATED THROUGH DEPRESSIVE SYMPTOMS: FINDINGS FROM THE GEORGIA CENTENARIAN STUDY

G. Randall<sup>1</sup>, P. Martin<sup>2</sup>, L. Poon<sup>3</sup>, 1. *Family & Consumer Sciences, Bradley University, Peoria, Illinois*, 2. *Iowa State University, Ames, Iowa*, 3. *University of Georgia, Athens, Georgia*

We tested a mediation model with four latent variables using cross-sectional data from 160 adults ages 98 to 100. Loneliness (LONE) and Social Provisions (SPS) predicted Life Satisfaction (LS) through Depressive Symptoms (DEP). Analyses controlled for residential status, education, functional health, and marital status. SEM analyses were conducted with Mplus Version 6.1; overall model fit was assessed by the MLM  $\chi^2$  statistic that is robust to non-normality of measures. Indirect effects (IE) were calculated using the bias-corrected bootstrap resampling method to produce point estimates and 95% Confidence Intervals. The model fit the data well,  $\chi^2(df=113) = 125.69, p = .20, CFI = .97, RMSEA = .03, and SRMR = .06$ , supporting mediation. One total IE was found for LONE on LS through DEP, 95% CI [-.58, -.10]. The IE from SPS to LS was not significant, 95% CI [-.23, .12]. The implications of the differential relationships of the predictors on LS are discussed.

### THE FACTOR STRUCTURE OF LONELINESS, SOCIAL PROVISIONS AND DEPRESSION: FINDINGS FROM THE GEORGIA CENTENARIAN STUDY

P. Martin<sup>1</sup>, G. Randall<sup>2</sup>, L. Poon<sup>3</sup>, 1. *Iowa State University, Ames, Iowa*, 2. *Bradley University, Peoria, Illinois*, 3. *University of Georgia, Athens, Georgia*

We tested a measurement model for Loneliness (LONE), Social Provisions (SPS), and Depression (DEP) in a sample of 160 very old adults ages 98 and older. SEM analyses were conducted with Mplus Version 6.1; the overall model fit was assessed by the MLM  $\chi^2$  statistic that is robust to non-normality of measures. One of the known six indicators for SPS did not load significantly on the latent factor (Opportunity for Nurturance) so it was deleted from further analyses. Second, a measurement model including the three correlated latent variables fit the data well:  $c2(df=41) = 46.87; p = .25; CFI = .98; RMSEA = .03; SRMR = .07$ ; all factor loadings were significant. The latent variable LONE correlated significantly with SPS ( $r = -.37, p \leq .001$ ) and DEP ( $r = -.68, p \leq .001$ )

but SPS did not correlate significantly with DEP ( $r = -.15$ ,  $p = .39$ ). Implications of the factor structure and the overall latent variable associations are discussed.

## SESSION 2555 (PAPER)

### DISCOVERY EXCHANGE: TRANSITIONS IN WORK AND RETIREMENT

#### GOING IT ALONE—SELF-EMPLOYMENT IN LATER LIFE

S.E. Rix, D. Baer, *Public Policy Institute, AARP, Washington, District of Columbia*

Recent surveys reveal a sizable proportion of pre-retirees expressing interest in working for themselves in retirement, which some policymakers and older worker advocates view as a way of fostering longer working lives to the benefit of the economy and future retirees. This can be especially important for the unemployed or those with insufficient retirement income, such as part-time workers. Using data from an AARP of 5,027 current and recent older workers and jobseekers, the American Community Survey, and other sources, this presentation will report on self-employment trends at upper ages; the role of self-employment in keeping older Americans in the workforce longer; and the characteristics of and employment experiences of self-employed older workers compared to their wage and salary counterparts. It will discuss survey findings on the role that self-employment played in getting older Americans back to work in the recent recession, as well as the current and anticipated retirement financial well-being of older self-employed workers. Although self-employment can be a response to job loss, the proportion of older workers who were self-employed fell during the recession and its recent aftermath. Yet, according to the AARP survey, some older workers reported going into business for themselves as a result of the recession. Implications of the findings for workers and policy will be discussed.

#### EMPLOYMENT EXPERIENCES OF OLDER WORKERS IN THE CONTEXT OF SHIFTS IN THE NATIONAL ECONOMY

K.E. Cahill<sup>1</sup>, M. Pitt-Catsouphes<sup>1</sup>, T.K. McNamara<sup>1</sup>, M. Valcour<sup>2</sup>, *1. Sloan Center on Aging and Work at Boston College, Chestnut Hill, Massachusetts, 2. EDHC Business School, Nice, France*

The existing literature on the determinants of employment experiences focuses on family, organization, and societal systems. The role of the broader macroeconomy as a driving force of employee experiences has largely been unexplored. This paper uses the Age and Generations (A&G) dataset, a survey of more than 2,000 employees from nine large organizations that, fortuitously, took place just prior to and immediate following the onset of the 2007-2009 recession. We examine the extent to which job satisfaction, employee engagement, and satisfaction with work-family balance are influenced by changes in the national macroeconomy, focusing on the experiences of older workers relative to others. We find that, across all workers, the state of the macroeconomy is a statistically significant determinant of job satisfaction and satisfaction with work-family balance. When the macroeconomy performs poorly employees tend to report lower levels of job satisfaction and higher levels of satisfaction with work-family balance, suggesting that employees' job- and family-related attitudes are influenced by factors beyond the immediate job and family domains. An examination of workers by age reveals that those aged 40-54 years and those aged 55 years and older report higher engagement scores compared with younger workers, regardless of the current state of the macroeconomy. Older workers' employment experiences are also less influenced by fluctuations in housing prices compared with younger workers. One implication of our findings is that the macroeconomy constitutes an influential context which may shape the effects of managerial decisions and policies on employees' attitudes toward work and the work-family interface.

### INSIGHTS INTO THE EXPERIENCES OF OLDER WORKERS AND CHANGE: THROUGH THE LENS OF SELECTION, OPTIMIZATION, AND COMPENSATION

C. Unson<sup>1</sup>, M. Richardson<sup>2</sup>, *1. Public Health, Southern Connecticut State University, New Haven, Connecticut, 2. Management School, University of Waikato, Hamilton, New Zealand*

**Purpose:** The study explored the lived experience of older workers in paid or unpaid employment performed in the second half of life. We examined their goals, the barriers they faced, and their optimization and compensation strategies. **Method:** Thirty open-ended interviews (12 in the US and 18 in New Zealand) were conducted, recorded, transcribed verbatim, and analyzed for themes. **Results:** Respondents' most frequently selected goals were to help others, to obtain work satisfaction, and acquire knowledge. Seventy-five per cent of respondents in paid employment had earning an income as a goal. Barriers to finding and maintaining work included difficult tasks, problems with co-workers and management, lack of self-confidence, health/physical limitations, ageism and stereotyping. The optimization strategies included drawing on past experience, assessing skills, seeking careers/organizations that fitted their values and a willingness to accept lower pay or unpaid work. Attitudinal strategies also included focus and persistence, optimism, and positive attitudes towards change. The compensation strategies they reported were on-the-job training, help from co-workers, clients/customers; friends and family social support, and professional networks. Management practices they considered helpful were flexible work schedules, supervisor's patience, and formal recognition of the value of older workers. **Conclusion:** This study sought to address this issue using the Selection-Optimization-Compensation framework to examine the experiences of encore workers and the strategies they employed to manage change, including the organizational practices that optimized their chances of doing so successfully.

#### TYPE AND DURATION OF WORKING-LIFE NON-EMPLOYMENT SPELLS PREDICT COGNITIVE FUNCTION IN OLD AGE

A.K. Leist<sup>1,2</sup>, M. Avendano<sup>2,3,4</sup>, F.J. van Lenthe<sup>2</sup>, M. Glymour<sup>4</sup>, J.P. Mackenbach<sup>2</sup>, *1. University of Luxembourg, Walferdange, Luxembourg, 2. Erasmus Medical Center, Rotterdam, Netherlands, 3. London School of Economics and Political Science, London, United Kingdom, 4. Harvard School of Public Health, Boston, Massachusetts*

**Background.** Non-employment periods during working life may hinder the development of cognitive reserve but may also provide time for engaging in cognitively stimulating non-work-related activities. This study examines whether different types of non-employment periods during working life predict cognitive function in old age. **Methods.** Cognitive function of 18,419 participants from 13 countries in the Survey of Health, Ageing, and Retirement in Europe (age 50-73) was assessed in 2004 and 2006. Type and duration of non-employment spells were derived from complete work histories reported in 2008. **Results.** Non-employment spells due to sickness, unemployment or homemaking predicted higher odds of cognitive impairment (for sickness: odds ratio (OR) = 1.73, 95 % confidence interval (CI) = 1.53 to 1.96), whereas spells due to training, retirement and maternity leave were associated with lower odds of cognitive impairment (for training: OR = 0.54, 95 % CI = 0.44 to 0.66). Longer non-employment periods in sickness were associated with higher odds of impairment, while longer non-employment periods in training were associated with lower odds of cognitive impairment. Adjustment for early life factors such as childhood socioeconomic status, school performance, and education attenuated but did not eliminate associations between non-employment spells and cognitive function. Late-life factors such as occupation, income, wealth, and health mediated part of the associations between non-employment spells and cognitive function. **Discussion.** The association between non-employ-

ment and later cognitive impairment varies according to the type of activity during periods of non-employment. Cognitively demanding activities such as training during non-employment periods might prevent cognitive impairment.

### **NARRATIVES ON THE EXPERIENCE OF RETIREMENT TRANSITION: PERSONAL CONTROL, SOCIAL RESOURCES AND CONTINUITY OF ‘SELF’**

M. Suzanne, B. Heaven, *Institute of Health & Society, Newcastle University, Newcastle upon Tyne, United Kingdom*

The once stable and predictable pattern associated with ageing and retirement is changing and it is argued that greater opportunities exist for people retiring today. Such options are, however, socially structured. In the UK and elsewhere, significant polarisation has emerged between affluent early retirees and disadvantaged older workers, those forced to retire early on grounds of ill-health and those working beyond state pension age resulting in increasing social and economic inequalities in later life. This qualitative study examined the factors influencing retirement transition experiences. Participants were 45 men and women aged 53-77 from manual and non-manual social classes living in urban and rural areas in North East England. Data were collected via focus groups and individual interviews and analysed thematically using the constant comparison method. Three inter-related categories influenced experiences of the transition into retirement. Firstly, mode of transition – the degree of control over the retirement transition was more important than whether the transition was planned, gradual or sudden. Secondly, individual, family and community resources – including finances, partner status, health status, community facilities – influenced quality of life and the extent to which individuals could remain engaged with society and maintain an ‘active retirement’. Thirdly, narratives emphasised the ways in which participants actively engaged in identity construction most strongly manifest by discourses around continuity of ‘self’ and meaningful social role(s). Conclusions: individuals constructed active and productive identities, but the extent to which they could do so successfully was structured by the level of resources available to them.

### **WORK-RETIREMENT DECISIONS: DO PEOPLE RETIRE IN COUPLES?**

P.H. Jensen, *Aalborg University, Aalborg, Denmark*

Most retirement studies examine the work-retirement transition as an outcome of an individual decision. Choices are highly influenced by the broader social context, however, and this paper analyses how the composition of the household and family relations impact retirement decisions. More specifically, the paper hypothesises that spouses synchronise their retirement. The study is based on unique Danish register data covering the entire national population. The data cover information (pertaining both to the retiree and their spouse) regarding age, health, socioeconomic position, education level, gross income, and the number of (own) children living in the household. The study covers all cohabiting women and men living in Denmark who were 59 years of age in 1996. This population is followed longitudinally until 2004. A total of 20,179 men and 20,064 women are included in the analysis. Cross tabulations and logistic regression analysis have been applied in the analysis. After attending this session, participants will be able to identify major contextual factors affecting decisions to leave the labour market. For instance, the study reveals how men with their own children living in the household tend to postpone retirement, while this factor is of no importance for women. Conversely, women are highly affected by their spouse’s gross income when retiring, whereas spousal income is of no importance to men when they are deciding when to retire.

## **SESSION 2560 (PAPER)**

### **PSYCHOLOGICAL WELL-BEING ACROSS THE LIFE COURSE**

#### **THE NATURE AND CORRELATES OF SELF-ESTEEM TRAJECTORIES IN LATE LIFE**

J. Wagner<sup>1</sup>, D. Gerstorff<sup>2</sup>, M.A. Luszcz<sup>2</sup>, 1. *Psychological Methods, Humboldt-University of Berlin, Berlin, Germany*, 2. *Flinders University, Adelaide, South Australia, Australia*

Is it possible to keep a positive view on the self up until very old age? Previous empirical research is inconsistent, supporting the theses of substantial self-esteem decrease in late life as well as the countertheses of relative stability well into old age. Based on longitudinal data of the Australian Longitudinal Study of Aging (N = 1,215; age 65 – 103, at first occasion; M = 78.8 yrs., SD = 5.9, 45% female) we explore intraindividual trajectories of self-esteem development across up to 18 years. In addition, we include conditional factors to explain interindividual differences in intraindividual change. Results illustrated an age-related and mortality-related (i.e., time-to-death) decrease of self-esteem; however, based on the standard deviations the amount of decrease appeared to be very small. In addition, self-esteem development illustrated substantial interindividual differences in initial levels and change trajectories. Particularly, individuals with lower subjective health and higher external control reported lower self-esteem. The authors discuss potential conditions and challenges for late-life changes in self-esteem.

#### **NATIONAL VARIATION IN COGNITIVE LIFE CYCLE DEVELOPMENT**

V. Skirbekk<sup>1,3</sup>, D. Weber<sup>1,3</sup>, V. Bordone<sup>1,2,3</sup>, 1. *World Population Program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria*, 2. *Research Institute Human Capital and Development, Vienna University of Economics and Business (WU), Vienna, Austria*, 3. *Wittgenstein Centre for Demography and Global Human Capital, Vienna, Austria*

Cognitive abilities are key determinants of productivity and well-being. This study highlights the importance of considering also national (and not only individual) influences on cognitive skill trajectories over the life course. We focus on the cognitive performance of the nationally representative cohorts born between 1944 and 1952 in eight countries: Belgium, England, France, Germany, Japan, the Netherlands, Sweden, and the United States. The cohorts are tested in their teens (with standardized tests from the International Association for the Evaluation of Educational Achievement (IEA)) and again when they are in their fifties (with harmonized tests from ELSA, HRS, JSTAR, and SHARE surveys). The results show substantial changes in the ranking of the countries over this 40-year period. For instance, Sweden and the USA are in a better ranking position at older ages compared to their performance in their teenage years, while Japan worsens its relative position in the country ranking.

#### **DOMAIN-SPECIFIC ENGAGEMENT: AGE-GRADED ADJUSTMENTS AND WOMEN’S SPECIAL INVOLVEMENT**

J. Shane, J. Heckhausen, *Psychology and Social Behavior, University of California, Irvine, Irvine, California*

The Motivational Theory of Life-Span Development (Heckhausen, Wrosch, & Schulz, 2010) addresses individual agency across the life span by investigating how individuals use primary and secondary control strategies to attain goals in important domains of life. Control opportunities in the major domains of life change across the adult life span. Also, individuals vary in their general and domain-specific primary (i.e., investment of thought and effort) and their general secondary control strategies (i.e., goal disengagement/adjustment and self-protection). The present study examines age-graded and gender differences in both

domain-general and domain-specific primary control strategies and general secondary control strategies, as well as these control strategies contribution to predicting important outcomes in the Midlife in the United States (MIDUS I and II) dataset. Domain-specific primary control strategies are examined in the health, work, marriage/close relationship, relations with children, contributions to others, finances, sexual aspects, and overall life domains. The results illustrate that age is positively associated with general secondary control strategies, including a shift away from domain-specific primary control strategies in work, sexual aspects, and relations with children, and toward domain-specific primary control strategies in marriage or close relationships, contributions to others, and life overall. Women report significantly more general secondary control strategies and significantly more primary control strategies for contributions to others, relations with children, work, finances, and life overall, while men report significantly more primary control strategies for sexual aspects. In addition, domain-specific primary control strategies play a significant and unique role in predicting the respective domain-specific outcomes.

### **ATTACHMENT STYLES OF YOUNG AND ELDERLY WOMEN IN RELATION TO HEALTH AND WELL BEING**

V. Cicirelli, *Psychological Sciences, Purdue University, West Lafayette, Indiana*

According to attachment theory, both late adolescence and old age are periods when life changes increase demands on the attachment system. Individuals may move to different locations, are separated from attachment figures, and face many new distressing situations and problems where they need security and comfort. The present study compared young and older women with secure and dismissing attachment styles. Hypotheses were that the young have better health and well being than the old; and those with secure attachment styles have better health and well being than those with dismissing styles. Participants were 165 young college women and 89 older women (mean age = 75.1 years) in independent living facilities; 142 had secure and 112 had dismissing attachment styles. A 2 (young, old) X 2 (secure, dismissing) MANOVA was used, with measures of health, stress, social support, and well being as dependent variables. Main effects of age group ( $p < .01$ ) and attachment style ( $p < .02$ ) were significant, but not their interaction. In univariate analyses, older women reported significantly ( $p < .05$ ) better physical health, less stress, greater social support, and less depression than the young. Participants with secure attachment styles reported significantly ( $p < .05$ ) better mental health, greater self esteem, and greater internality than those with dismissing styles. Although the hypothesis regarding secure attachment styles was supported, the hypothesis regarding age groups was not. Surprisingly, older women reported better physical health and well being than young women. Implications for theory and practice are drawn.

## **SESSION 2565 (PAPER)**

### **SPIRITUALITY AND WELLNESS**

#### **ASSESSING GENDER DIFFERENCES IN THE RELATIONSHIP BETWEEN NEGATIVE INTERACTION WITH THE CLERGY AND HEALTH AMONG OLDER MEXICAN AMERICANS**

N. Krause, *University of Michigan, Ann Arbor, Michigan*

A rapidly growing literature indicates that supportive social relationships are associated with better physical and mental health. However, this research further reveals that interaction with others may also be conflicted and unpleasant. The purpose of the current study was to evaluate negative interaction that arises within a social context of that is important to many older Mexican Americans (i.e., negative interaction with a member of the clergy). Findings from a nationwide survey of older Mexican Americans indicate that more frequent interpersonal

conflict with a member of the clergy is associated with less favorable self-rated health as well as more acute and chronic health conditions. However, these effects were observed among older Mexican American women but not among older Mexican American men.

### **DOES THE 'RELIGION-SOCIAL INTEGRATION PARADOX' APPLY TO OLDER ASIAN AMERICANS?**

K. Chee<sup>1</sup>, A.M. Blazek<sup>2</sup>, *1. Department of Sociology, Texas State University, San Marcos, Texas, 2. Sam Houston State University, Huntsville, Texas*

Objective: The religion-social integration paradox, according to Klineberg, refers to the pattern that religion increases ethnic minorities' integration in their own ethnic community while helping them to integrate into the larger society. This study examines whether or not this paradox applies to older Asian ethnics, who are known for being socially and culturally isolated. Method: Analysis used secondary data (Klineberg's Houston Area Survey, 1982-2007) that had a large number of Asian-origin respondents, including Vietnamese, Chinese, and Koreans. Those respondents aged 50 years or older (50-85 years) were selected for the current study (N=239). Religious preference, church attendance, and religious importance measured religion. Participation in an ethnic community organization meeting, participation in an ethnic cultural event, and making effort to teach youth about their ethnic background measured the levels of co-ethnic social integration. Having a close friend who is Anglo, Black, or Hispanic measured the extent of non-ethnic social integration. Results: More than half of the respondents indicated that religion is very important to their lives. Religious affiliation and church attendance are each significantly and positively associated with effort in co-ethnic teaching, but not with the other two co-ethnic community participation activities. Religious importance is significantly and positively associated with having a close friend who is Black, but not with having an Anglo or a Hispanic friend. Conclusion: These findings suggest that religion may facilitate older Asians' integration to both their own ethnic and non-ethnic communities, but with limited effects. Practical implications as well as directions for further research are discussed.

### **EXAMINING SOCIAL SUPPORT AS AN EXPLANATION FOR THE LINK BETWEEN RELIGIOUS ACTIVITY AND WELL-BEING**

J.D. Wilmoth<sup>1,2</sup>, C. Adams-Price<sup>1,2</sup>, J. Turner<sup>2,1</sup>, *1. School of Human Sciences, Mississippi State University, Mississippi State, Mississippi, 2. National Strategic, Planning, Analysis, and Research Center, Mississippi State, Mississippi*

Participation in religious activities consistently has been linked to various measures of well-being in older populations. A common explanation for this association is the social support derived from religious affiliations. The twofold purpose of this study is to (1) determine how much of the association between religious participation and well-being among a population of older adults can be explained by four other social support variables (visiting family, visiting friends, club or civic group participation, and volunteering) and (2) to explore whether these associations vary by age. Method: Data were collected through a random sample telephone survey of adults in Mississippi age 55 and older. The dependent variable for this study, a Quality of Life Index, is calculated from responses to four self-reported survey items that addressed overall life satisfaction and problems with boredom, depression, and loneliness. To examine the unique contribution of religious participation in the explanation of quality of life, a series of hierarchical multiple regression analyses was performed for the entire sample and then for subgroups aged 55-64, 65-74, 75-84, and 85 and older. In step 1, quality of life was the dependent variable and (a) volunteering, (b) club or civic group, (c) visiting family, and (d) visiting friends were the independent variables. In step 2, religious participation was entered into the step 1 equation. The contribution of religious participation, when controlling

for the social support variables, was significant ( $p < .01$ ) for the overall sample and for each subgroup except for those ages 75-84.

### RELIGIOUS INVOLVEMENT AND ALLOSTATIC LOAD

T. Hill<sup>1</sup>, S. Rote<sup>1</sup>, C. Ellison<sup>2</sup>, 1. *Sociology, Florida State University, Tallahassee, Florida*, 2. *University of Texas-San Antonio, San Antonio, Texas*

Building on previous studies of religious involvement and health, we use data collected from a large national sample of older adults to test the effects of religious involvement on several individual indicators of allostatic load, including dehydroepiandrosterone (DHEA), c-reactive protein (CRP), Epstein-Barr virus antibodies (EBV), glycosylated hemoglobin (HbA1c), body mass, diastolic blood pressure, systolic blood pressure, and pulse. We also examine an index of these factors (i.e., allostatic load). Our results show that religious attendance is associated with lower levels of body mass, diastolic blood pressure, CRP, EBV, and overall allostatic load. Our results confirm previous studies of blood pressure, CRP, and overall allostatic load. To the best of our knowledge, we are among the first to examine the association between religious involvement and EBV. Additional research is needed to test viable mediators of the association between religious involvement and allostatic load. It is also important to consider indicators of biological risk as mechanisms linking religious involvement to physical health and longevity.

### DOES RELIGIOSITY OR SPIRITUALITY REALLY CONTRIBUTE TO SUCCESSFUL AGEING IN THE GENERAL POPULATION?

R.A. Burns, K.J. Anstey, *Centre for Research on Ageing, Health and Wellbeing, The Australian National University, Canberra, Australian Capital Territory, Australia*

There is considerable evidence for the positive association between religious or spirituality dimensions and mental and physical health outcomes across cultures and religions. However, much of this evidence is based on cross-sectional designs and with samples that can not be claimed to be representative of the population. Our analysis of the Australian Personality and Total Health Through Life (PATH) study which includes participants ( $N = 2,551$ ) aged 60-64 at baseline, who were followed for 12 years, indicates that spirituality provides limited direct benefit to physical or mental health. Results from a Structural Equation Modeling Framework indicates rather that spirituality is associated to other lifestyle factors which are themselves related to better physical and mental health outcomes. Longitudinal analyses allow us to determine the extent to which health-related behaviors mediate and/or moderate the association between spirituality and health outcomes.

## SESSION 2570 (SYMPOSIUM)

### BO-DIDDLEY SYMPOSIUM WORKSHOP

Chair: *D.J. Sheets, University of Victoria, Victoria, British Columbia, Canada*

What is it about Cicero's insights about life experience in his classic "De Senectute" that makes the blues a fitting expression of maturity? The Bo Diddley track is GSA's annual exploration of this age-old, old-age question. The life story of an award-winning older minority blues singer will be shared at a special lecture. This session provides insight into the "real world" of minority aging, in a way that does not minimize the cumulative disadvantages of racism and poverty while simultaneously revealing the resilience that emerges in a dedication to the art of the blues. Hearing the Blues shouldn't be this much fun, but the music will get you jumping and hopping, laughing and crying right along with her. The great spirit, unrivaled vitality and energy, and enormous creativity of this blues musician are like nothing you've ever heard.

## SESSION 2575 (SYMPOSIUM)

### CHARTING NEW FRONTIERS: EXPLORING POST-GRADUATION OPPORTUNITIES ACROSS DISCIPLINES. INSIGHTS FROM EMERGING SCHOLARS

Chair: *C. Brown, Allied Health/Gerontology, Virginia Commonwealth University, Parker, Colorado*

Co-Chair: *K.S. Hall, Duke University, Durham, North Carolina*

Now, more than ever, junior scholars in the area of aging will pursue a vast array of professional opportunities following graduation. Such opportunities vary as a function of discipline, training, and personal preference. Recognizing the heterogeneity of the post-graduation experience, the ESPO, AGHE, and Task Force on Mentoring have collaborated to create a two-part professional development symposium that will explore 'new frontiers' as it relates to post-graduation career paths. Specifically, a group of emerging scholars have been assembled to speak to: 1) the different expectations and opportunities in working at teaching institutions; 2) identifying and pursuing industry positions as a second career; 3) collaboration opportunities between academia and public industry; and 4) professional opportunities for emerging scholars in government agencies. This session is designed to present GSA junior scholars with a new perspective of various careers in gerontology by identifying potential next steps following graduation and strategies for how best to prepare for such endeavors.

### NON-TRADITIONAL OPPORTUNITIES FOR GERONTOLOGISTS IN CONTEMPORARY HIGHER EDUCATION

K. Humber, 1. *Gerontology and Behavioral Sciences, University of Maryland University College, Adelphi, Maryland*, 2. *University of Maryland Baltimore County, Baltimore, Maryland*

Advances in technology have given rise to innovative modes of content delivery from which has emerged a new type of American learner. Older and more experienced, many of these non-traditional learners are generally more receptive to material infused with gerontological content. As teaching institutions grow, they increasingly rely on an adjunct workforce to deliver academic content. Part-time teaching, while not lucrative, provides young professionals in the field an opportunity to develop strong pedagogical and andragogical skills. In addition, as interdisciplinary scholars, gerontologists bring valuable insights to the classroom. The emergence of gerontology programs in recent decades has also created the need for administrators who are uniquely positioned to shape curricula and raise the visibility of the discipline across their respective campuses and communities. The rewards and challenges of instruction and administration of gerontology in modern higher education are discussed.

### THE ROLE OF GERONTOLOGY IN ENVIRONMENTAL DESIGN RESEARCH

T.D. Parr, *Graduate Center for Gerontology, University of Kentucky, Lexington, Kentucky*

Environmental design research is performed by professionals working in architecture, interior and landscape design, facility management and community planning. This specialized area of research captures the transactional relationship of people and their built and natural environments. An increased role in research is likely as communities realize they are ill prepared for their aging members, environmental barriers are associated with health outcomes, and stakeholders demand planning and design recommendations be evidence based. This presentation outlines gerontology's current involvement in the design industry and demonstrates an opportune time for gerontologists to develop increased contributions toward environmental design research. Increased collaboration in environmental design research provides gerontologists a vital role in sponsoring environments that are responsive to the needs of aging persons. After attending this session the participants will understand

gerontology's role in interdisciplinary research, planning and design of built environments.

### **TRANSFORMATIVE LEARNING THEORY: NON-TRADITIONAL FEMALE STUDENTS (40+) CHARTING NEW FRONTIERS IN ACADEMICS**

P.P. Brown<sup>1</sup>, C. Brown<sup>2</sup>, 1. *University of Central Missouri, Warrensburg, Missouri*, 2. *Virginia Commonwealth University, Richmond, Virginia*

Mezirow used transformative learning theoretical (TLT) processes while studying women who reentered academics during the 1970s. The current study entertains the three concepts put forth by Mezirow's TLT with women who obtained their undergraduate degree during the traditional student time of their life course and then later returned to complete their doctorate. Similar to Mezirow's original work, we identify "factors that impeded or facilitated" their progress. Each woman describes her first TLT phase, a disorienting dilemma, as an "Ah-ha" moment. The women critically reflect upon their disorienting dilemma, thereby fulfilling the second phase of TLT and explore a rational discourse, the third phase of TLT. Finally, the women discuss their options for new roles, relationships, and actions relative to their new status as a PhD. Their current work options and relocations are explored, relative to additional factors such as: retired partner/spouse, child/grandchild responsibilities, ageism, sexism, and past work life.

### **FINDING YOUR PATH AND WALKING IT: OPPORTUNITIES FOR GERONTOLOGY STUDENTS WHO ARE INTERESTED IN THE FIELD OF PUBLIC POLICY**

T. McMullen, *Doctoral Program in Gerontology, University of Maryland, Baltimore and Baltimore County, Baltimore, Maryland*

There are numerous professional opportunities for students within the field of gerontology and public policy. However at times, for a student, finding your path may prove difficult, as navigating the field is complicated. Whether it is a fellowship within a policy-related field, a governmental student placement program, or an internship with a policy-related focus, there are many paths that gerontology students can walk when attempting to find that ideal public policy position. This presentation will identify professional and training opportunities available to emerging scholars and professionals in the field of aging and policy. Information gathered for this presentation will draw upon the experiences and knowledge of many individuals who work within the field of public policy and aging. Moreover, this presentation will identify strategies that gerontology students may take in order to find that perfect placement in the field of policy.

## **SESSION 2580 (SYMPOSIUM)**

### **EDUCATING A WORKFORCE IN RURAL AMERICA: THE GERIATRIC SCHOLAR PROGRAM**

Chair: *S. Barczy, Wm. S. Middleton VA GRECC/ University of Wisconsin School of Medicine & Public Health, Madison, Wisconsin*  
Co-Chair: *B. Kramer, VA Greater Los Angeles Healthcare System GRECC/ David Geffen School of Medicine at UCLA, Los Angeles, California*

The Geriatric Scholar Program (GSP) within the Department of Veterans Affairs (VA) is a novel workforce development initiative for enhancing the geriatric skills of providers. It has successfully infused geriatrics competencies, practice behaviors, and practice-based learning in primary care to improve clinical care for older Veterans. This multimodal educational program is targeted to primary care providers and ancillary staff who work in VA's rural clinics and primary care clinics where the need for geriatric care is significant. GSP consists of didactic education in geriatrics and gerontology and in clinical microsystem quality improvement (QI). All scholars engage in an experiential learning plan to conduct a local QI project and participate in reinforcing

experiences of webinars, audio-conferences, clinical practica, mentoring and team training to reinforce the competencies learned during the didactic clinical education and QI portions of the program. Since 2008, 259 physicians, nurse practitioners, physician assistants, social workers and pharmacists have enrolled in this interdisciplinary training program. The speakers will review four components of the program ; 1) the quality improvement education, projects and mentoring, 2) the clinical practica- one week "mini-fellowships", 3) the rural interdisciplinary team training (RITT), and 4) the webinars, and discuss how each reinforces geriatric competencies and learner-identified goals and objectives. Furthermore, the extensive developed and exportable resources of the program will be highlighted and strategies for implementation of these products into other workforce development initiatives will be discussed. This work is sponsored by the Geriatric Research Education and Clinical Center (GRECC) program of the Veterans Affairs.

### **QUALITY IMPROVEMENT WORKSHOP, PROJECT DEVELOPMENT AND SCHOLAR COACHING: PRACTICING THE SKILLS OF HEALTHCARE IMPROVEMENT AT THE PATIENT LEVEL**

C. Callaway-Lane<sup>1,2</sup>, J. Hathaway<sup>1</sup>, T. Speroff<sup>1</sup>, 1. *GRECC, VA-Tennessee Valley Healthcare System, Nashville, Tennessee*, 2. *Vanderbilt University School of Nursing, Nashville, Tennessee*

Members of the VA-Tennessee Valley Healthcare System GRECC offer a one day workshop teaching the techniques of quality improvement using the Model for Improvement adopted by the Institute of Medicine (IOM). This workshop includes didactic sessions followed by team exercises and group interaction. The objective is for the Scholar to become activated in addressing clinic problems and gain self-efficacy in improving the health of elderly veterans. Upon completing the workshop, each scholar is charged with completing an improvement project within their clinical setting. Each scholar is guided by a quality improvement coach throughout the project. Results are demonstrated by a poster presentation of the Scholar's work showing competency for quality improvement methods and lessons learned. A selected group of presentations are chosen for the National GRECC Leadership conference. This session will review our course, coaching methods, and the tools we have developed to run an effective program for practice-based learning.

### **RURAL INTERDISCIPLINARY TEAM TRAINING FOR RURAL HEALTHCARE PROVIDERS: ENHANCING TEAM SKILLS TO IMPROVE CARE FOR OLDER VETERANS**

J.L. Howe<sup>1,2</sup>, J.L. Griffith<sup>1,2</sup>, 1. *Brookdale Department of Geriatrics & Palliative Medicine, Mount Sinai School of Medicine, New York, New York*, 2. *Geriatric Research Education & Clinical Center, James J. Peters VA Medical Center, Bronx, New York*

One component of the GSP is the Rural Interdisciplinary Team Training (RITT) Program. Piloted in FY 2011, the program aims to strengthen interprofessional teams at rural CBOCs. The RITT training program was piloted in the summer of 2011 at five CBOCs across the United States and moved into its implementation phase in FY 2012. RITT sites engage in 8 hours of team-based training to enhance communication, leadership, conflict resolution, and problem solving skills. All pilot site teams received enduring educational materials including a curriculum binder, resource kit, and DVDs. Each CBOC site is paired with a GRECC liaison who worked with the CBOC to implement the training participants completed pre and post self-assessments about working on an interprofessional team. Preliminary results of the process review indicate that team members are responsive to change and plan to implement changes in their practice to improve teamwork and teambuilding.



## **WEBINARS: A NEW APPROACH TO PROFESSIONAL EDUCATION**

R. Chernoff<sup>1</sup>, J.L. Howe<sup>2</sup>, 1. GRECC, Central Arkansas Veterans Healthcare System, Little Rock, Arkansas, 2. James J Peters VAMC, VISN 3 GRECC/Mount Sinai School of Medicine, New York, New York

The Geriatric Scholars (GS) program has performed extensive evaluations to establish the needs of primary care health professionals who provide service to veterans at rural community-based outpatient clinics. Of the issues identified by the GS, one was a need for professional development. To address this, the Arkansas Geriatric Education Center (AGEC) and the Consortium of New York Geriatric Education Center (CNYGEC), along with the Little Rock and New York GRECCs, developed a webinar series on professional development topics. Webinars were selected as the medium to maximize the availability to GS. Topics include peer-to-peer education; the adult learner; health literacy; leadership; managing team dynamics; use of technology in education; and quality improvement and clinical care. The process of developing each webinar and the enduring educational products resulting from this project will be discussed.

## **CLINICAL PRACTICA: REINFORCING SELF-EFFICACY WITH CLINICAL EXPERIENCES IN GERIATRIC MEDICINE**

S. Barczy, *Medicine/ Geriatrics, Wm. S. Middleton VA GRECC/ University of Wisconsin School of Medicine & Public Health, Madison, Wisconsin*

To supplement the didactic education, Scholars may select from a course list of clinical practica at six Geriatric Research, Education and Clinical Centers. Scholars are encouraged to select the programs which they consider most appropriate to enhancing their clinical skills, regardless of proximity to their home VA facility. The practica vary in foci on specific clinical areas, patient interactions (i.e., interactions with volunteer and simulated patients, observed patient care) and length of the experience (2 to 5 days). Although the content of the experiences differ based upon the site, all reinforce the GSP learning program objectives: scholars observe how geriatric clinicians conduct evidence-based assessments, engage in interdisciplinary care and incorporate VA and community resources in care planning. Local documentation templates and tools are shared. Furthermore Scholars are paired with clinical mentors who help them adapt these strategies and tools to their individual practice settings.

## **SESSION 2585 (SYMPOSIUM)**

### **EXAMINING A LIFE COURSE PERSPECTIVE IN NURSING RESEARCH WITH OLDER ADULTS**

Chair: J. Mentés, *Center for the Advancement of Gerontological Nursing Science University of California Los Angeles, Los Angeles, California*

Discussant: M. Ruiz, *School of Nursing University of California Los Angeles, Los Angeles, California*

Often due to an overwhelming focus on multiple physical co-morbidities associated with aging, we do not pay attention to the effect of crucial life course issues on older adults' health. A life course perspective emphasizes the powerful link between older persons' lives and the historical and socioeconomic context where these lives unfold, an important focus for gerontological nursing research. Although current trends in life course research emphasize the effect of early childhood trauma or deprivation and its effect on health across the lifespan; uncovering traumatic as well as supportive life events from an aging perspective can inform scholarly inquiry. This symposium will present different aspects of a life course perspective for nursing research with older adults. The first paper will explore the effects of life events on self care practices among older African Americans with diabetes. The second paper will focus on coping with

HIV/AIDS over the life course. The third paper will focus on life course pathways to homelessness in older adults. The last paper will explore recognizing generational caregiving expectations in African American caregivers.

## **EFFECTS OF LIFE COURSE EVENTS ON DIABETES SELF-CARE PRACTICES: A THEORETICAL EXPLORATION**

K. Skrine Jeffers, J. Mentés, L.R. Phillips, *UCLA, Los Angeles, California*

It is widely known that African American older adults experience among the highest rates of diabetes-related complications due to inadequate self-care behaviors, and a myriad of psychosocial factors. However, little is known about the underlying life course-related factors that may play a significant role in contributing to this growing problem. A fresh look at the life events that co-occurred during the school age, adolescent and young adult years of today's older African Americans is needed. Their psychosocial development was charred by one of the most turbulent racial times in U.S. history. This paper is a theoretical examination that may deepen nursing's understanding of African American older adults and their health behaviors, and inform the development of sustainable interventions that reduce the growing trend of preventable amputations, kidney failure and premature death within this population.

## **LIFE COURSE EFFECTS IN NEWLY DIAGNOSED OLDER WOMEN WITH HIV/AIDS**

A.M. Rankin, *University of California, Los Angeles, Los Angeles, California*

It is estimated that by the year 2015, over half of all HIV/AIDS cases will be in adults older than the age of 50. Two contributing factors to this increase in HIV infection in older adults are increased risky behaviors, such as unprotected sex and drug use; and a decreased perception of HIV risk by older persons and healthcare providers. Perception of risk and initiation of safe sex practices are lower in older women, compared to younger women. Because of this, many older women are not diagnosed with HIV/AIDS until later stages; leading to adverse health outcomes. Life course changes that have molded older adult's behaviors and increased HIV risk in older adulthood include: the discovery of HIV, the sexual revolution in the 1960's, and the advent of sexual stimulants. This presentation will explore the importance of life course effects in research with newly diagnosed older women with HIV/AIDS.

## **LIFE COURSE PATHWAYS TO HOMELESSNESS IN OLDER ADULTS**

N. Salem, J. Mentés, *UCLA, Los Angeles, California*

Homelessness is a major public health issue in the United States (U.S.). There are approximately 3.5 million homeless individuals living in the U.S., and between 60,000 to 400,000 are older homeless adults. By 2050 it is anticipated that the elderly homeless population will double due to the growth of the baby boomer population. The literature indicates that older homeless adults experience four times higher rates of morbidity and premature mortality when compared to the general population, specifically related to diabetes, hypertension, and cardiovascular disease. In order for nurses to effectively address the unique needs of older individuals who are homeless, it is imperative to understand the different pathways in which individuals enter into homelessness. This paper will examine homelessness in the elderly from a life course perspective, emphasizing the historical, sociodemographic, and structural factors influencing pathways into homelessness that should be included when conducting nursing research with older homeless adults.

## RECOGNIZING GENERATIONAL CAREGIVING EXPECTATIONS IN AFRICAN AMERICAN CAREGIVERS

E. Ume, 1. *College of Nursing and Health Care Innovation, Arizona State University, Phoenix, Arizona*, 2. *University of California Los Angeles, Los Angeles, Arizona*

African American caregivers (AACG) eschew institutionalization of elderly loved ones, providing informal care at home until their relatives die or it becomes impossible for caregivers to continue. This presentation describes findings of one qualitative theme from this mixed methods study exploring the post-caregiving transitions of 40 AACGs. Semi-structured individual interviews were used for qualitative data collection. Normative experiences and reflections of AACGs about life course events of generational caregiving after completion of the caregiving experience are presented. They describe it as a duty and an unavoidable responsibility based on collective cultural expectations and familial upbringing, that is accepted by individuals without question. Three emerging attributes of generational caregiving include reciprocity, role modeling, and an aversion to institutionalization. AACGs deny burden but express rewards of happiness, peace and blessings. AACGs see their role as important, culturally sanctioned, and expected, and do not “think twice” about accepting and carrying out that role.

## SESSION 498 (SYMPOSIUM)

### HIP FRACTURE RECOVERY RESEARCH NETWORK: A GLOBAL INITIATIVE TO ADDRESS METHODOLOGICAL CHALLENGES

Chair: *L.A. Beupre, University of Alberta, Edmonton, Alberta, Canada*

Discussant: *J. Magaziner, University of Maryland, Baltimore, Maryland*

The need to improve functional recovery after hip fracture is a global public health issue that will increase over the foreseeable future. The Global Hip Fracture Research Network seeks to enhance communication among interdisciplinary hip fracture researchers internationally, establish a network of sites for studies, set research priorities and address methodological research challenges in this vulnerable group. In this symposium, which will be of interest to healthcare professionals and investigators who study and care for older individuals with hip fracture, we will examine current research and methodological challenges in conducting studies in this group of patients. This series of presentations bring together a number of relevant topics regarding recovery following hip fracture. To better define the outcomes after hip fracture from a population perspective, age and sex-adjusted risk of mortality and institutionalization following hip fracture will be reported. As cognition deficits are prevalent in this patient population, we will examine the implications of using proxy respondents and identify characteristics to correct for discrepant patient-proxy responses. Multi-disciplinary rehabilitation is encouraged following hip fracture, but the evidence may be difficult to interpret and apply clinically. Recent updates from the Cochrane Collaboration and their clinical implications will be discussed. Finally, multi-site, complex exercise intervention studies following hip fracture are infrequently performed; strategies to address barriers to undertaking interventional research in multiple settings following a hip fracture will be reported.

### DISABILITY AND INSTITUTIONALISATION AFTER HIP FRACTURE

K. Rapp, C. Becker, *Gerontologic Rehabilitation Clinic, Robert-Bosch-Hospital, Stuttgart, Germany*

Hip fractures are dramatic events with far-reaching consequences in the biography of old people. Presented will be age- and sex-specific incidence rates of disability and institutionalisation after a hip fracture. These rates will be compared with rates after other reasons of hospitalisation like stroke or myocardial infarction.

### PROXY RESPONDENTS TO EVALUATE HEALTH STATUS IN PATIENTS WITH HIP FRACTURE: CHALLENGES, OPPORTUNITIES, AND LESSONS

M. Shardell<sup>1</sup>, A. Jones<sup>2</sup>, 1. *University of Maryland School of Medicine, Baltimore, Maryland*, 2. *University of Alberta, Edmonton, Alberta, Canada*

Measuring health status in studies of hip-fracture patients is challenging because cognitive deficits are highly prevalent in this population. Obtaining health information from proxy respondents helps to include patients with cognitive impairment and preserve external validity. While using proxies helps to avoid selection bias, factors affect proxy responses that may introduce bias caused by measurement error. Patient-proxy dyads from two studies, Baltimore Hip Studies (BHS) and the Edmonton Hip Fracture Study (EHFS) illustrate how agreement is influenced by the type of respondent, health measure, and time period during recovery. BHS followed 282 pairs of caregivers and patients over 12 months after fracture. EHFS followed 161 pairs of family caregivers and patients who were interviewed 4 times over the 6 months after surgery. We found the greatest dyadic discrepancies for unobservable dimensions of health such as depressive symptoms, and the best agreement for observable dimensions such as activities of daily living.

### UPDATES AND CLINICAL IMPLICATIONS OF COCHRANE COLLABORATION REVIEWS OF MULTIDISCIPLINARY REHABILITATION AFTER HIP FRACTURE

I.D. Cameron<sup>2</sup>, L.A. Beupre<sup>1</sup>, 1. *University of Alberta, Edmonton, Alberta, Canada*, 2. *University of Sydney, Sydney, New South Wales, Australia*

The Cochrane Collaboration has published systematic reviews of multidisciplinary rehabilitation after hip fracture over a long period. The conclusions have been tentative but positive. Surprisingly the summary estimates of effectiveness are not changing greatly despite increasing numbers of studies. This makes the evidence difficult to interpret. Factors influencing this situation include models of rehabilitation that differ greatly between countries, changes to treatment received by the control groups in the trials, and differences in organisation of orthopaedic surgical services and community care services. Updates of the current Reviews will be presented and these will be incorporated with the United Kingdom National Institute of Health and Clinical Excellence Hip Fracture Guidelines to provide a platform for discussion of the clinical implications of this research.

### STRATEGIES FOR UNDERTAKING COMPLEX INTERVENTIONS FOLLOWING HIP FRACTURE

K.K. Mangione<sup>1</sup>, L. Beupre<sup>2</sup>, D. Orwig<sup>3</sup>, 1. *Physical Therapy, Arcadia University, Glenside, Pennsylvania*, 2. *University of Alberta, Edmonton, Alberta, Canada*, 3. *University of Maryland, Baltimore, Maryland*

Phase III clinical trials are used to confirm effectiveness, and while this framework fits fairly straight forward with drug trials, its application in complex interventions, in which “multiple components may act both independently and inter-dependently” is less clear. Components include behaviors and their parameters (frequency/timing) and methods of organizing/delivering those behaviors (practitioner type(s), setting/location). Identifying active ingredients in these trials is complex, but replicating and validating interventions is essential. Using data from two trials—one in the development phase (non-randomized trial conducted in over 30 nursing homes) and the other a phase III multi-center RCT involving 300 community-dwelling participants, we will discuss the challenges in designing interventions and monitoring treatment fidelity in post hip-fracture settings. We will address strategies to monitor and to ensure replication of the intervention across sites throughout the trial.

**HEALTH CARE: DATA, INTERVENTIONS & COST STRUCTURES****SOCIAL INTEGRATION AND METABOLIC SYNDROME IN LATE LIFE**

Y. Yang<sup>1</sup>, Y. Ji<sup>2</sup>, T. Li<sup>1</sup>, 1. *Carolina Population Center, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina*, 2. *Asia Research Institute, National University, Singapore*

Health and survival benefits of social embeddedness have been widely documented across social species, but the underlying biophysiological mechanisms are not fully elucidated. This study filled this gap by examining the impact of social integration on fat and glucose metabolism as one major physiological determinant of longevity. Using prospective data from the Health and Retirement Study of a nationally representative sample of older adults aged 50+ in the U.S., we examined the effects of social integration over 6 years (1998 – 2004) on status of metabolic syndrome (MetS) in 2006 (N = 3,127). Social integration was measured by marital status, contacts with parents, children, neighbors, and volunteer activity. We assessed six biomarkers: waist circumference, HDL and total cholesterol, HbA1c, systolic and diastolic blood pressures, and BMI, as well as a summary index of MetS. We estimated finite mixture models to characterize trajectories of social integration over time and logit and Poisson regression models to assess whether these trajectories predict MetS, adjusting for sociodemographic, behavioral, and other health factors. We found evidence for the protective effects of social integration against a number of metabolic disorders. A lower degree of social integration is significantly related to a 36% higher risk of abdominal obesity, a 55% higher risk of high systolic blood pressure, and a 67% higher risk of MetS. Those with increasing social integration exhibited lower risks of metabolic dysregulation than those with chronically low or decreasing social integration. There are sex differences in these effects with females benefiting more from social engagement.

**EFFECTS OF PREVENTIVE HOME VISIT PROGRAM ON HEALTH CARE COSTS IN AMBULATORY FRAIL ELDERLY**

A. Kono<sup>1</sup>, Y. Kanaya<sup>1</sup>, C. Tsumura<sup>2</sup>, L. Rubenstein<sup>3</sup>, 1. *School of Nursing, Osaka City University, Osaka, Japan*, 2. *Konan Women's University, Kobe, Japan*, 3. *the University of Oklahoma, Oklahoma, Oklahoma*

The aim of the present secondary analysis from a randomized controlled trial was to examine the effect on health care costs of a preventive home visit program for ambulatory frail elders living in three Japanese communities. Community health nurses and care managers provided structured preventive home visits to the intervention group subjects every six months over two years. From the enrolled subjects (n=323) randomly assigned to either the visit (n=161) or the control group (n=162), we analyzed those subjects (N=307) having health care insurance from the local government except medical welfare, which consisted of 154 people in the visit group and 153 people in the control group. The total of the health care costs, including costs for hospitalization or outpatient clinic, were documented over the two years. The total health care cost per month in the visit group was more likely to change to a lower value over the study period than that in the control group. Two-way repeated ANCOVA adjusting for a 1-month cost showed a significant difference (F=4.84, p=0.0278). The change in monthly health care cost for outpatient clinic did not differ between the two groups (NS). Hospitalization, which accounted for more than 1,000,000 yen per month (around US \$10,000), was more likely to occur in the control group subjects than in the visit group over the study period. These results suggest that a preventive home visit program can reduce the monthly health care cost, particularly for hospitalizations that cost the ambulatory frail elders a lot of money.

**ANALYZING LINKED DATA: HOSPITALIZATIONS AND DEATHS AMONG NON-INSTITUTIONALIZED FEE-FOR-SERVICE MEDICARE BENEFICIARIES (NATIONAL HEALTH INTERVIEW SURVEY, NATIONAL DEATH INDEX, MEDICARE CLAIMS)**

Y. Gorina, M.F. Owings, A.E. Simon, *National Center for Health Statistics, Hyattsville, Maryland*

From 2008 to 2009, about 10 million Medicare beneficiaries were admitted as hospital inpatients. For Medicare beneficiaries aged 65 and over, inpatient hospital care accounts for about 23% of total health care expenditures and 34% of Medicare spending. In 2010, CMS reported 30-day readmission rates of 18% for pneumonia, 20% for acute myocardial infarction, and 25% for heart failure. The Medicare claims data and death records linked to the National Health Interview Survey (NHIS) allowed us to analyze patient level information to examine the percentage of NHIS respondents that were hospitalized and readmitted during a 3 year period after the survey. Percentages were calculated by socio-demographic characteristics, self-perceived health status, and other characteristics. We used data for participants in the 1999-2003 NHIS who were linkage eligible fee-for-service Medicare beneficiaries aged 65 and over (n=27,329; 51% of the NHIS participants aged 65 and over). To obtain nationally-representative estimates we used SUDAAN to adjust NHIS survey weights for linkage ineligibility. Our preliminary results show that among study participants, 39.2% (SE 0.4%) were hospitalized (Range: 1 to 32 admissions) and 17.5% (SE 0.3%) were hospitalized and readmitted within 30 days of discharge at least once. Among those who were alive in three years since the NHIS interview, 34.0% (SE 0.4%) were hospitalized and 13.3% (SE 0.2%) were hospitalized and readmitted at least once. Among those who had died by three years after the NHIS interview, 72.7% (SE 0.8%) were hospitalized and 44.4% (SE 0.9%) were hospitalized and readmitted at least once.

**PATIENT AND PROVIDER PERSPECTIVES OF THE UNIQUE TRANSITIONAL CARE NEEDS OF REHOSPITALIZED VETERANS**

C. Stephens<sup>1,2</sup>, N. Sackett<sup>2</sup>, D.W. Schopfer<sup>1</sup>, G. Schmajak<sup>1,2</sup>, N. Moy<sup>1</sup>, R. Pierce<sup>1,2</sup>, M.I. Wallhagen<sup>2</sup>, S. Lee<sup>1,2</sup>, 1. *San Francisco VA Medical Center, San Francisco, California*, 2. *University of California, San Francisco, San Francisco, California*

Background: Readmissions to the hospital are common and costly, often resulting from poor care coordination. Despite the increased attention given to improving the quality and safety of care transitions, little is known about patient and provider perspectives of the unique transitional care needs of rehospitalized Veterans. Methods: Using hospital administrative/census data, a purposive sample of 25 medical/surgical patients were identified who had been readmitted to an urban VA medical center in the prior 90 days. Semi-structured interviews were conducted with patients and their care providers (inpatient/outpatient doctors, nurses, social workers, physical and occupational therapists) regarding their thoughts about the major challenges and etiologies related to readmission and post-discharge needs. Thorough field notes were compiled and analyzed for basic themes. Results: Core patient themes identified were: (1) Knowledge gaps and deferred power; (2) Difficulties navigating the health care system; and (3) Complex psychiatric and social needs. Core interdisciplinary provider themes were: (1) Substance abuse and mental illness; (2) Lack of Social or Financial Support/Homelessness; (3) Natural History of Medical Illness; and (4) Non-adherence with follow-up. Conclusions/Implications: Veterans at high risk for readmission have a complex profile of physical/mental/social needs and perceived transitional care challenges. Patient sense of deferred power may be attributed to the sociocultural context and hierarchical nature of serving in the military and receiving care in a VA hospital. Understanding the unique perspectives of Veteran's and their

providers will be critical to implementing effective evidence-based transitional care interventions to decrease hospital readmissions in VA settings.

## **MEDICARE: UNDERSTANDING THE CHOICES AND TRADEOFFS IN BENEFITS**

C. Matheis<sup>2</sup>, H. Moody<sup>1</sup>, *1. AARP, Washington, District of Columbia, 2. AARP, Washington, District of Columbia*

In partnership with the Center for Health Care Decisions AARP worked to develop an interactive simulation, which allows participants to choose benefits to be included in a hypothetical Medicare program within a budget. The exercise, known as CHAT<sup>®</sup> (Choosing Healthplans All Together), helps participants understand the relationship between the cost of healthcare and various elements of coverage. A computer-based small-group process, the Medicare CHAT exercise asks individuals and groups to make decisions about the components of a Medicare benefit package when there are more coverage options than available resources. The process also incorporates examples of patient-specific medical events, so participants get a realistic picture of the impact of their coverage decisions when a health care problem arises. These medical events illustrate for participants the specific types of medical problems that can surface and their cost consequences. The trade-offs that participants address commonly fall into five categories: the extent of individual cost sharing; the degree of provider choice; categories of coverage; the extent of coverage; and criteria for coverage, such as pre-authorizations or standards of effectiveness. Because each has an actuarial value, participants make cost-relevant choices. Since its development AARP has been testing and engaging small groups in this exercise. The purpose of this session will be to simulate portions of the CHAT exercise, share the experiences and learning from previous sessions and then discuss current proposals to change the Medicare benefit package and the challenges facing Medicare going forward from a beneficiary perspective.

## **SESSION 2600 (PAPER)**

### **ISSUES AFFECTING MORTALITY AND END OF LIFE DECISIONS, AND PROCESSES**

#### **ACHIEVING CONSENSUS ON PALLIATIVE CARE IN DEMENTIA AMONG AN INTERNATIONAL PANEL OF EXPERTS**

J.T. van der Steen<sup>1,2</sup>, M. de Boer<sup>1,2</sup>, C.M. Hertogh<sup>1,2</sup>, L. Volicer<sup>3,4</sup>, S. Juenger<sup>5</sup>, L. Radbruch<sup>5,6</sup>, O. the EAPC<sup>7</sup>, *1. VU University Medical Center, EMGO Institute for Health and Care Research, Amsterdam, Netherlands, 2. VU University Medical Center, Department of Nursing Home Medicine, Amsterdam, Netherlands, 3. Charles University 3rd Medical Faculty, Prague, Czech Republic, 4. School of Aging Studies, University of South Florida, Tampa, Florida, 5. Department of Palliative Medicine, University Hospital Bonn, Bonn, Germany, 6. Palliative Care Centre, Malteser Hospital Bonn/Rhein-Sieg, Bonn/Rhein-Sieg, Germany, 7. European Association for Palliative Care, Milano, Italy*

Palliative care in dementia is an ill-defined concept, and evidence of its effectiveness, as well as guidance on how to apply principles of palliative care in dementia is sparse. Therefore, achieving a broad consensus among experts and clinicians is important. We aimed at developing an agreed-upon set of recommendations about palliative care and treatment of older people with Alzheimer's disease and other progressive dementias based on evidence from research where available, and on consensus on best practices where not. In the first, qualitative phase of a Delphi study (2011), a team of twelve people with relevant expertise in medicine, nursing, social work and counselling, ethics, patient participation, epidemiology, and research methodology drafted a set of 57 recommendations covering eleven domains. The domains covered

a broad range of issues such as "applicability of palliative care," "societal and ethical issues," and "adequate treatment of symptoms and providing comfort." It also included appropriate goals of care across stages of dementia. Second, in spring 2012, over 80 experts from about 25 countries are being invited to complete an online survey to rate agreement with each of the recommendations on a five-point Likert scale, and importance of each of the domains on an 11-point numerical scale. Consensus is evaluated according to pre-defined criteria for (dis)agreement and importance. A set of recommendations on palliative care in dementia will be proposed based on the experts' consensus. Areas of disagreement will be highlighted and discussed.

#### **LIVE DISCHARGE FROM HOSPICE: A NATIONAL STUDY**

T.J. Christian, P.L. Gozalo, J.M. Teno, *Center for Gerontology and Health Care Research, Brown University, Providence, Rhode Island*

**Purpose:** Increasing numbers of hospice providers exceed their annual cap on allowable Medicare reimbursements. Live disenrollment rates are higher among hospices exceeding the limit, raising suspicions that ineligible patients are admitted and later discharged. The objective of this study is to determine whether the live discharge rate is influenced by the current total of Medicare funds which a hospice has received. **Sample:** First-time Medicare hospice beneficiaries ages 65+ discharged from hospice alive or through death during hospice fiscal years 2007-2008 (10% Medicare claims extract). **Methods:** Using within-hospice provider conditional logistical regression, at each month in the fiscal year we calculate the ratio of Medicare reimbursements received relative to the provider's reimbursement cap which we test as a risk factor for live discharge. Results are case-mix adjusted for age, gender, race, length of stay, service setting, primary diagnosis, and fiscal year and month of discharge. **Results:** Among 81,628 enrollments, 66,412 (81.4%; median LOS 11 days) ended with death and 15,216 (18.6%; median LOS 40 days) ended with live discharge. The providers in the top quintile of live discharges accounted for 56.2% of all live discharges. The risk of live discharge is 15% greater [95% CI 1.1-1.2] once a hospice collects 20% of allowable Medicare reimbursements and 39% greater [95% CI 1.2-1.6] once a hospice collects 75% of allowable Medicare. **Conclusion:** The results indicate that hospices discharge more patients alive as they near their cap limit. Hospice payment policy should be reformed to ameliorate this phenomenon which disrupts continuity of care.

#### **REFERRAL TO DEATH INTERVAL AND LOCATION OF DEATH OF PATIENTS REFERRED TO PALLIATIVE CARE IN AN ASIAN ONCOLOGY CENTRE**

Y. Do<sup>1</sup>, J. Poulouse<sup>1</sup>, P. Neo<sup>2</sup>, *1. Duke-NUS Graduate Medical School Singapore, Singapore, Singapore, 2. National Cancer Centre Singapore, Singapore, Singapore*

**Context:** Location of death and preferences for location of death of terminally ill patients can be influenced by a variety of factors. **Objectives:** To study the factors predicting location of death of patients referred to palliative care in Singapore. **Methods:** Retrospective analysis of data on patients referred to a hospital-based palliative care service during a one year period. Multinomial regression method was used for statistical analysis after stratifying the patients by gender. **Results:** Longer referral-to-death interval was associated with a higher likelihood of dying at home or in an in-patient hospice compared with hospital, for both males and females. For male patients, age at death being  $\geq 65$  years (OR 2.41, 95% CI 1.42-4.09), and being married (OR 2.01, 95% CI 1.07-3.76) were associated with a higher likelihood of dying at home, whereas for females, the corresponding associations were statistically insignificant. Malay men (OR 3.74, 95% CI 1.5-9.4) were more likely to die at home compared to Chinese men. A diagnosis of stomach cancer was independently associated with a higher likelihood of dying at home. **Conclusions:** Longer referral-to-death interval was associated with death outside the hospital setting, for both genders. For male

patients, socio-demographic factors were also found to have some influence on location of death, whereas for females; these factors did not show any statistically significant associations.

### **CAN WE DO BETTER THAN SELF-RATED HEALTH? IMPROVING MORTALITY PREDICTION WITH EXTERNAL HEALTH RATINGS**

M. Todd, N. Goldman, *Office of Population Research, Princeton University, Princeton, New Jersey*

A large literature on self-rated health (a single question that asks respondents to evaluate their overall health into one of four or five categories) has found a robust link between self-rated health (SRH) and subsequent mortality. The reasons for this link, however, remain poorly understood. Prior research compared the health ratings of survey respondents to those of interviewers and physicians, who were each asked to evaluate the respondents' health status with a question similar to SRH, and found that these three evaluators place different weights on particular health factors in their evaluations. This suggests that health assessments made by interviewers and physicians may contribute valuable additional information regarding a respondent's health, beyond what is incorporated in SRH. The contribution of this study is in determining whether this additional information from external health evaluators improves mortality prediction. Using data from the 2006 round of the Social Environment and Biomarkers of Aging Study (SEBAS) along with mortality data for the period from 2006 to 2011, we evaluate the predictive power of self, interviewer, and physician health assessments for subsequent mortality among approximately 1200 Taiwanese adults aged 53 and older. We find that interviewer health ratings outperform both physician and self-ratings in predicting mortality. The relationship between interviewer ratings and subsequent mortality is attenuated but remains large in magnitude and statistically significant after inclusion of a wide range of demographic and health covariates.

### **DESIGNATED DECISION-MAKERS AND HOSPICE ENROLLMENT OF NURSING HOME DECEDENTS: A TIME-SERIES ANALYSIS**

S.E. Rich<sup>1,2,3</sup>, S.C. Miller<sup>3</sup>, *1. Grand Rapids Medical Education Partners, Grand Rapids, Michigan, 2. Michigan State University College of Human Medicine, Grand Rapids, Michigan, 3. Alpert Medical School, Brown University, Providence, Rhode Island*

Background: Nursing home residents have increasingly enrolled in hospice care over the past 10 years, but the decision to enroll in hospice is often made by a surrogate decision-maker. Little is known about how decisions for end-of-life care differ by type of decision-maker. We examine the association between type of decision-maker and enrollment in hospice among Medicare nursing home decedents during 1999-2006, and how this association changed over time. Methods: Medicare claims and Minimum Data Set data are concatenated for all Medicare nursing home decedents in the 50 US states and DC during 1999-2006 (N=3,733,439). Multilevel logistic regression is used to examine the association between type of decision-maker indicated on the MDS closest to death and hospice enrollment in the nursing home by Medicare claims. Results: Use of durable powers of attorney for health care (DPA) increased from 27.0% to 31.9% in 1999-2006. Although hospice enrollment in nursing homes increased for decedents with every type of decision-makers, the prevalence of enrollment was significantly greater for those with DPA (OR 1.19, 95% CI (1.15-1.22)) or with guardians (1.08, (1.05-1.11)), compared to those with informal family decision-makers only. The rate of increasing hospice use was greatest for decedents with DPA (1.04 (1.02-1.05)). Conclusion: Formal surrogate decision-makers may be serving effectively as advocates to enroll nursing home residents in hospice at the end of life; alternatively, residents who have completed DPA may be more active in end-of-life care planning. Residents' end-of-life care may improve with the formalization of surrogate decision-maker status.

## **SESSION 2605 (PAPER)**

### **MOBILITY AND DISABILITY ISSUES: STRATEGIES FOR MOVING FORWARD**

#### **ARE WE MISSING THE OPPORTUNITY TO TREAT MODIFIABLE DISABILITY IN OLDER ADULTS SEEN IN PRIMARY CARE CLINICS?**

C.A. Ciro<sup>1</sup>, J.W. Mold<sup>2</sup>, *1. Rehabilitation Sciences, OUHSC, Oklahoma City, Oklahoma, 2. OUHSC: Family Medicine, Oklahoma City, Oklahoma*

Purpose: The goal of this study was to understand which activities older adults being seen in a primary care practice report as most meaningful to their happiness and to examine patterns of disability in their daily activities. Methods: Descriptive, cross-sectional survey of 143 consecutive adults  $\geq 65$  years seen in a primary care practice at an academic medical center. Participants were asked to report their most meaningful activities, personal/ environmental barriers to those activities, and medical diagnoses. Binary proportions with 95% confidence intervals (CI) were used to describe aggregate patterns of desired variables; chi-square analysis was used to examine differences in categorical variables. Results: Activities with the highest proportions of personal meaningfulness were: self-care (25%; 95% CI: 20.7-28.8), socialization (15%; 95% CI: 12.3-19.1), and movement (13%; 95% CI: 10-16.3). Seventy-one percent (71%; 95% CI: 66.3-81.2) reported disability in their meaningful activities. Of the individuals who reported disability, a significant percent (52.9%; 95% CI: 44-61.6) expressed that improvement in movement activities such as walking, would make the most difference in their happiness ( $p < .0001$ ). Factors that contribute most to disability are joint stiffness (42%; 95% CI: 33.8-50.1), fatigue (38.5%; 95% CI: 30.4-46.5) and weak legs (37%; 95% CI: 29.1-45.1). Ninety-one percent (91%) of the participants identified having at least one diagnosis that is Medicare-approved for rehabilitation services. Discussion: The prevalence of disability in meaningful activities is high and may be caused by modifiable impairments. While most are Medicare recipients, they are unlikely to qualify for rehabilitation without history of an acute medical event.

#### **PAIN CONTRIBUTES TO ONSET/WORSENING OF MOBILITY DIFFICULTY AND PERFORMANCE DECLINE IN OLDER ADULTS**

L. Eggermont<sup>1</sup>, L. Shi<sup>7</sup>, D.K. Kiely<sup>2</sup>, J.F. Bean<sup>6</sup>, J. Guralnik<sup>5</sup>, R.H. Shmerling<sup>4</sup>, R. Jones<sup>2,3</sup>, S.G. Leveille<sup>7</sup>, *1. VU University, Department of Neuropsychology, Amsterdam, Netherlands, 2. Institute for Aging Research, Hebrew SeniorLife, Department of Medicine, Harvard Medical School, Boston, Massachusetts, 3. Division of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, 4. Division of Rheumatology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, 5. Laboratory of Epidemiology, Demography and Biometry, National Institute on Aging, Bethesda, Maryland, 6. Department of Physical Medicine and Rehabilitation, Spaulding Rehabilitation Hospital, Harvard Medical School, Boston, Massachusetts, 7. College of Nursing and Health Sciences, University of Massachusetts Boston, Boston, Massachusetts*

BACKGROUND Chronic pain is associated with mobility limitations in older adults but few prospective studies have examined the impact of chronic pain on mobility. METHODS Participants were 765 older adults from the population-based MOBILIZE Boston Study. Chronic pain was classified according to location, severity, and pain interference. Mobility difficulty was assessed by self-report and by the Short Physical Performance Battery (SPPB). The relationship between baseline pain and onset or worsening of mobility difficulty or clinically meaningful decline in SPPB performance (1-point decrease), was

determined by relative risk (RRs) using multivariable Poisson regression models with robust error variances. **RESULTS** The onset of new/worsening mobility difficulty at 18-months according to number of joint pain sites was 11% (no sites), 21% (1 site), 27% (multisite) and 37% (widespread pain,  $p$ -value $<0.001$ ). Similarly, SPPB decline at 18-months was 32% (no sites), 46% (1 site), 36% (multisite), and 49% (widespread pain,  $p$ -value $<0.05$ ). In a multivariate model predicting new/worsening self-reported mobility difficulty, the RR=2.09 (95%CI, 1.28-3.42) for multisite pain and the RR=2.41 (95%CI, 1.40-4.13) for widespread pain versus no pain. For SPPB decline, the RR=1.21 (95%CI, 0.90-1.62) for multisite pain and RR=1.53 (95%CI, 1.14-2.07) for widespread pain versus no pain. Similar associations were found for other pain measures predicting declining mobility. **CONCLUSIONS** Chronic pain measured according to distribution, severity and interference is strongly associated with increased risk for developing new or worsening mobility difficulty and for clinically meaningful declines in mobility performance in older adults. Further research is needed to determine whether effective pain management strategies can prevent or limit mobility deterioration among older adults.

#### **AEROBIC TRAINING IN OLDER ADULTS WITH VASODEPRESSIVE CAROTID SINUS HYPERSENSITIVITY**

K. Madden, C. Lockhart, T. Potter, G.S. Meneilly, *University of British Columbia, Vancouver, British Columbia, Canada*

**BACKGROUND:** Vasodepressive carotid sinus hypersensitivity (V-CSH) is a common but incurable etiology for fainting in older adults, and this condition is diagnosed by carotid sinus massage (CSM). Aerobic exercise has been shown to be effective in other neuroautonomic etiologies of syncope (such as orthostatic hypotension) but the effectiveness of aerobic training in V-CSH remains unexamined. **OBJECTIVE:** We examined whether aerobic training could attenuate the vasodepressive response to carotid sinus massage (CSM) in older adults with V-CSH. **METHODS:** 45 older adults (mean age  $72.2 \pm 0.7$ ) with V-CSH were recruited. Subjects were randomized to each of 2 groups: an aerobic group (AT,  $n=20$ , 3 months vigorous aerobic exercise), and a non-aerobic (NA,  $n=25$ , no aerobic exercise) group. Exercise sessions were supervised by a certified exercise trainer 3 times per week, and utilized a combination of cycle ergometers and treadmills. The vasodepressive response (defined as the decrease in SBP during CSM) was measured before and after the training intervention using a Finometer (Finapres Medical Systems, Amsterdam, The Netherlands). **RESULTS:** After the 3-month intervention, all subjects continued to meet the criteria for V-CSM in both the AT and NA groups. There was no difference in the attenuation of the vasodepressive response with training between the AT and NA groups ( $-5.7 \pm 4.0$  versus  $-8.1 \pm 4.0$  mm Hg,  $p = 0.138$ , 2-way Analysis of Variance). **CONCLUSIONS:** Aerobic training has no effect on the SBP response to CSM in older adults with V-CSH. Unlike in other neuroautonomic etiologies for fainting, aerobic exercise is not effective as a treatment for V-CSH.

#### **ACCESSIBILITY AND PROXIMITY OF OUTDOOR RECREATIONAL FACILITIES AND PROGRESSION OF WALKING DIFFICULTIES**

J. Eronen, M. von Bonsdorff, M. Rantakokko, T. Rantanen, *Gerontology Research Center and Department of Health Sciences, University of Jyväskylä, Jyväskylä, Finland*

**Background:** Older people who report environmental barriers in their neighborhood have a higher risk for walking difficulties. However, the role of environmental factors that protect against walking difficulties is not well known. The aim of this study is to examine the relationship between the accessibility and proximity of outdoor recreational facilities and progression of walking difficulties in community-dwelling older people. **Methods:** The target population consisted of 75-81-year-old community-dwelling people. The inclusion criteria for this study were the ability to walk 0.5 km without difficulties, only moderately physi-

cally active or sedentary, no memory impairment, no medical contraindications and informed consent to participate. The final study group included 265 persons who were followed up for 3.5 years. Walking difficulties in 0.5 km at baseline and every six months during the follow-up were self-reported. The accessibility and proximity of outdoor recreational facilities were self-reported (outdoor recreational facilities and parks within a walking distance, suitability of the surrounding environment for physical activity and easy access to outdoors from participants' homes) and summed, range 0-5. **Results:** Of the participants, 46% developed walking difficulties during the follow-up. Accessibility and proximity of outdoor recreational facilities decreased the risk for progression of walking difficulties, hazard ratio per item 0.82, (95% confidence interval 0.70-0.97). **Conclusions:** Accessibility and proximity of outdoor recreational facilities protected against progression of walking difficulties. The results indicate that the mobility of older community-dwelling people may be promoted with outdoor recreational facilities that are easy to access and located within a walking distance from home.

#### **WHICH REHABILITATIVE IMPAIRMENTS ARE ASSOCIATED WITH FUNCTIONAL STATUS AMONG OLDER PRIMARY CARE PATIENTS? RESULTS FROM THE BOSTON REHABILITATIVE IMPAIRMENT STUDY OF THE ELDERLY (BOSTON RISE)**

J.F. Bean<sup>1,2</sup>, N. Latham<sup>3</sup>, P. Ni<sup>3</sup>, N.E. Holt<sup>1</sup>, S. Percac-Lima<sup>4</sup>, S.G. Leveille<sup>5</sup>, A. Jette<sup>3</sup>, *1. Spaulding Rehabilitation Hospital, Boston, Massachusetts, 2. Harvard Medical School, Boston, Massachusetts, 3. Boston University, Boston, Massachusetts, 4. Massachusetts General Hospital, Boston, Massachusetts, 5. University of Massachusetts Boston, Boston, Massachusetts*

Rehabilitative care treats impairments that are amenable to care and underlie functional limitations. We have defined these as Rehabilitative Impairments (RI). In order to design parsimonious and effective rehabilitative treatment programs for functionally limited older adults, it is important to know which RI are most associated with functional status. However, there is controversy about which RI have the strongest functional association. The Boston Rehabilitative Impairment Study of the Elderly (Boston RISE) is a longitudinal cohort study among 430 primary care patients  $\geq 65$  years. We evaluated baseline data and sought to identify which of 10 RI were most associated with self reported functional status as measured by the Late Life Function and Disability Instrument (LLFDI-F) and observed physical performance as measured by the Short Physical Performance Battery (SPPB). Participants were 68% female, had mean age  $75.6 \pm 7$  years, mean LLFDI-F  $55.5 \pm 7.9$  and mean SPPB  $8.6 \pm 2.3$ . After eliminating variables to reduce collinearity, we constructed separate multivariable models predicting LLFDI-F and SPPB adjusting for age, gender, BMI and other impairments commonly encountered in primary care. Within the final model evaluating LLFDI-F, RI in leg strength, leg power and trunk muscle endurance were significant predictors ( $P < .001$ ). These RI were also significant within separate models evaluating LLFDI-F sub-scales that assess lower extremity function. These same 3 RI and limb speed were significant predictors of SPPB performance. Our findings highlight that RI in leg strength, leg power, trunk muscle endurance and limb speed are relevant to the functional status of older primary care patients.

#### **SESSION 2610 (SYMPOSIUM)**

##### **CAREGIVING STRESS AMONG CHINESE CAREGIVERS ACROSS CULTURES**

Chair: *T.Y. Lum, Social Work and Social Adm, The University of Hong Kong, Pokfulam, Hong Kong, Sau Po Centre on Ageing, Pokfulam, Hong Kong*

Frailelders in Chinese families depend mainly on their children for support and care. However, industrialization and urbanization have

weakened the traditional family care system. The four papers in this symposium will discuss how these changes affected the caregiving stress and burden among Chinese families across culture. In rural Mainland China, due to outward migration of women to coastal cities for manufacturing jobs, fewer women are available for caregiving. Guo, Chi and Silverstein reported a rise in sons' eldercare but a decrease in daughters' eldercare in rural China between 2001 and 2009. Such change in a gender pattern was mainly due to the availability of sons to live in the same village as their parents. Industrialization and urbanization also reshaped Chinese people's attitude toward filial responsibility. Funk and Chappell found that among Chinese caregivers in Hong Kong and Canada, a higher congruence between filial responsibility and behavior was associated with higher perceived caregiver burden. Also, in Chinese families, eldest sons are expected to bear the greatest filial responsibility toward their aging parents. Liu, Guo and Bern-Klug found that being an "oldest son" was associated with higher odds of reporting economic stress due to caregiving. In urban China, Lou and Kwan found that a higher intensity of caregiver was associated with higher number of depressive symptoms among caregiver. They also found that female, younger and non-married caregivers reported more depressive symptoms than their male, older and married counterparts.

#### **TRAJECTORY AND DETERMINANTS OF ELDERCARE IN RURAL CHINA OVER AN EIGHT-YEAR PERIOD: A TWO-LEVEL GROWTH APPROACH**

M. Guo<sup>1</sup>, I. Chi<sup>2</sup>, M. Silverstein<sup>3</sup>, 1. *School of Social Work, University of Iowa, Iowa City, Iowa*, 2. *University of Southern California, School of Social Work, Los Angeles, California*, 3. *University of Southern California, Davis School of Gerontology, Los Angeles, California*

This study examined the trajectory and determinants of the care provided by adult children to their parents aged 60 and older (N = 1,355) in rural Anhui province, China between 2001 and 2009. Two-level growth models were carried out to predict the trajectories of monthly care provided by each child to the parents over the eight years. The findings revealed an increase in sons' care but a decrease in daughters' care over time. Married sons provided less support than did unmarried sons. Having young children led to a decrease in the care provided by daughters. The eldercare was need-driven, as the functional impairment of parents attracted more care from both sons and daughters over time. Given that pension systems have not yet been extended to the countryside, the findings of this research is essential to help ensure the formulation of eldercare policies that meet the needs of all family types.

#### **FILIAL RESPONSIBILITY: DOES CONGRUENCE BETWEEN ATTITUDES AND BEHAVIOUR AFFECT CAREGIVER BURDEN?**

L. Funk<sup>1,2</sup>, N.L. Chappell<sup>2</sup>, 1. *University of Manitoba, Winnipeg, Manitoba, Canada*, 2. *University of Victoria, Victoria, British Columbia, Canada*

Research has shown that filial responsibility attitudes are not strongly associated with caregiving behaviours; whether they are at all is culturally specific. However, we do not know whether and how congruence between internalized normative beliefs about filial responsibility and caregiving behaviours is related to burden. The purpose of this study was to examine this question among filial caregivers from three cultural groups: Caucasian Canadian, Chinese Canadian, and Hong Kong Chinese (n=315). Data were collected in Hong Kong and Canada through in-person interviews. Dependent variables were dimensions of the Multidimensional Caregiver Burden Inventory. Multiple measures of congruence between attitudes and care behaviours were constructed. Controlling for other factors and examining findings between cultural groups, it appeared that in comparison to incongruence, congruent low scores were associated with lower reported burden, yet congruent high scores were associated with increased burden. Implications for the study and measurement of cognitive dissonance will be discussed.

#### **ECONOMIC STRESS AMONG YOUNG-OLD CHILDREN CARING FOR THE OLDEST-OLD IN CHINA: THE IMPORTANCE OF CONTEXTUAL FACTORS**

J. Liu, M. Guo, M. Bern-Klug, *School of Social Work, University of Iowa, Iowa City, Iowa*

The rapid increase in the oldest-old population in China exerts significant influences on both informal and formal caregiving systems. Guided by the stress process theory, this study used cross-sectional survey data collected from 721 pairs of Chinese young-old adult child caregivers aged 50 and older and their oldest old parents aged 80 and older to examine whether contextual factors of caregiving such as the health status, socioeconomic status, and other significant roles of the young-old children and parent-child relationships affect adult children's likelihood of experiencing economic stress in caring for the oldest-old parents. Logistic regression results indicate that young old who were oldest sons, who had lower income and poorer health status, were more likely to experience stress. The findings point to the need for culturally congruent social services and social policies designed to enhance the family's ability to care for elder members in China.

#### **FACTORS AFFECTING SHANGHAI FAMILY CAREGIVERS' DEPRESSIVE SYMPTOMS**

V. Lou<sup>1,2</sup>, C. Kwan<sup>3</sup>, 1. *Sau Po Centre on Ageing, The University of Hong Kong, Hong Kong, Hong Kong*, 2. *Department of Social Work & Social Administration, The University of Hong Kong, Hong Kong, Hong Kong*, 3. *Department of Statistics and Actuarial Science, The University of Hong Kong, Hong Kong, Hong Kong*

Objective: The study examines factors affecting depressive symptoms among Chinese family caregivers in Shanghai. Method: Sample of the study was recruited from 10 residential committees by multiple-stage sampling. The inclusion criteria were older adults aged 75 or above, with at least 2 Activity of Daily Living (ADL) impairment, and having at least one primary family caregiver. Standardized questionnaire was administered by trained interviewers via face-to-face interview. A total of 720 dyads (frail older adults and their family caregivers) were successfully interviewed, with mean age of 83.08 among frail older adults and 63.12 among family caregivers. Findings: Depressive symptoms of family caregivers were found to be greater when caregivers were female, younger, and not-married. Moreover, for those family caregivers who take care of frail elders with same care needs, the higher intensity of care was associated with greater risk of depressive symptoms. Acknowledgement: This study was supported by Research Grants Council of Hong Kong (Ref. 448009H)

#### **SESSION 2615 (SYMPOSIUM)**

#### **DESIGN, IMPACT AND LESSONS LEARNED FROM AN INNOVATIVE APPROACH TO NH PAY FOR PERFORMANCE**

Chair: *G. Arling, IU Center for Aging Research, Indiana University School of Medicine, Indianapolis, Indiana*

This symposium presents findings from our Agency for Healthcare Research and Quality (AHRQ)-sponsored Research and Demonstration study of Minnesota's Performance-Based Incentive Payment Program (PIPP), an innovative state-level model for funding grassroots, provider-initiated, evidence-based quality improvement projects. The symposium illustrates how program evaluation, improvement, and dissemination can happen in tandem. The symposium co-authors are a multidisciplinary team from nursing, medicine, and the social sciences, representing universities and the Minnesota Department of Human Services. The academic researchers and state agency staff have formed a strong partnership. They participate in overlapping workgroups (i.e.,

case study, dissemination, and quantitative analysis) that facilitate a continuous flow and cross-fertilization of ideas. Study findings about PIPP program processes and impact are shared among the research team, considered from multiple vantage points, and applied simultaneously to evaluation and dissemination. The research team is cognizant of the need for objectivity and balance. Program weaknesses as well as strengths need to be identified. Also, individuals from PIPP-funded projects and facilities need to be assured that information they provide during the study, particularly opinions about the program or sensitive information about their projects, will be kept in confidence and not shared with state staff on the research team. We describe (a) the design and implementation of the PIPP program as well as practical aspects of program administration; (b) the rich array of statewide quality measures that PIPP projects can use to track their performance; (c) impact of the program on quality of nursing home care, and (d) dissemination of PIPP findings.

### PIPP PROGRAM DESIGN AND IMPLEMENTATION

V. Cooke<sup>1</sup>, T. Lewis<sup>1,2</sup>, 1. MN Department of Human Services, Minneapolis, Indiana, 2. University of Minnesota School of Public Health, Minneapolis, Minnesota

The PIPP program represents a substantial investment by the state of Minnesota with funding of \$18 million annually that has supported 89 individual or collaborative projects involving 199 facilities. Unlike conventional pay-for-performance programs, nursing home providers design their own projects and work with the state in selecting outcome targets that are tailored to the intervention and will determine their incentive payments. Performance targets are tied to Minnesota Nursing Home Report Card measures such as the Minimum Data Set clinical quality indicators, resident quality of life and family satisfaction surveys, nursing staffing level and retention. Providers risk losing 20% of their incentive payment if they fail to meet performance targets. Providers are expected to sustain their improved outcomes beyond the project period through enhanced revenues or greater organizational effectiveness. We describe the program design, administrative issues, and its benefits of improved provider relationships and an industry-wide emphasis on quality improvement.

### ISSUES IN MEASURING CARE QUALITY

T. Lewis<sup>1,2</sup>, G. Arling<sup>3,4</sup>, K. Abrahamson<sup>5</sup>, V. Cooke<sup>2</sup>, 1. University of Minnesota School of Public Health, Minneapolis, Minnesota, 2. Minnesota Department of Human Services, Minneapolis, Minnesota, 3. Indiana University Center for Aging Research, Indianapolis, Indiana, 4. Regenstrief Institute, Indianapolis, Indiana, 5. Western Kentucky University, Bowling Green, Kentucky

Performance measurement is fundamental to quality improvement yet poses challenges. PIPP projects use unique measures from the Minnesota Nursing Home Report Card ([www.health.state.mn.us/nhreportcard](http://www.health.state.mn.us/nhreportcard)). These include 24 quarterly risk-adjusted clinical quality indicators; 14,000 annual resident quality of life and satisfaction interviews; annual state inspections and complaints; wage- and acuity-adjusted direct-care staffing, direct-care staff retention and temporary staffing; proportion of single-bed rooms; and measures in development including 17,000 annual family satisfaction surveys and appropriate community discharge and hospitalization rates. We highlight the diversity of outcomes across the wide variety of PIPP projects. These standardized measures are valid and reliable; available statewide, allowing peer comparison; include trends of two to eight years; and emphasize outcomes over processes. However, they also have limitations: some are general or insensitive to change (e.g. incontinence, pain); some are only available annually; and the move to a new MDS assessment has revision of indicators and risk adjusters.

### PIPP IMPACT ON CARE QUALITY

G. Arling<sup>1,2</sup>, T. Lewis<sup>3,4</sup>, K. Abrahamson<sup>5</sup>, A. Perkins<sup>1</sup>, M. Woodhouse<sup>3</sup>, 1. Indiana University Center for Aging Research, Indianapolis, Indiana, 2. Regenstrief Institute, Indianapolis, Indiana, 3. University of Minnesota School of Public Health, Minneapolis, Minnesota, 4. Minnesota Department of Human Services, Minneapolis, Minnesota, 5. Western Kentucky University, Bowling Green, Kentucky

We are assessing the impact of the PIPP program with an interrupted time series design that focuses on trends in quality measures (described above) for Minnesota's 380 nursing facilities between baseline (2005 - 2007) and PIPP implementation periods (2008-2010). Within the framework of a mixed-effect growth model, we examine trends in facility performance as a function of time (calendar quarter), PIPP project participation (time-varying indicator variable), interactions between time and PIPP participation, and facility characteristics. Baseline trends in nearly all of the facility performance measures were similar for PIPP and non-PIPP facilities. PIPP facilities showed significantly greater improvement in composite quality indicator and other performance measures after PIPP program implementation. Significant improvement occurred across different PIPP project types and performance areas. Certain projects stood out as having exceptional performance gains, whereas other projects showed only minimal improvement. Qualitative case studies are inquiring more deeply into keys to project success.

### DISSEMINATING PROJECT SUCCESSES AND RESEARCH FINDINGS

V. Cooke<sup>1</sup>, J. Gardard<sup>1</sup>, T. Lewis<sup>2,1</sup>, M.E. Lee<sup>3,4</sup>, H. Davila<sup>5</sup>, C. Mueller<sup>5</sup>, 1. Minnesota Department of Human Services, Minneapolis, Minnesota, 2. University of Minnesota School of Public Health, Minneapolis, Minnesota, 3. Indiana University Center for Aging Research, Indianapolis, Indiana, 4. Regenstrief Institute, Indianapolis, Indiana, 5. University of Minnesota School of Nursing, Minneapolis, Minnesota

The Minnesota Department of Human Services, a full and active partner in the AHRQ Research and Dissemination study, has taken the lead in PIPP program dissemination. Various methods are being used to diffuse the adoption of exemplar projects that have been well designed and highly successful in meeting their goals, e.g., falls prevention, creative therapies, culture change, and care transitions; and to promote new quality improvement methodologies such as root cause analysis that can be applied widely across facility settings. Dissemination occurs through multiple channels: annual PIPP Conference, social networking website, quarterly newsletter, PIPP tool kit, conference presentations, news stories and journal articles. In order to expand facility participation, the PIPP program sponsors information sessions, such as writers' workshops where facilities learn to prepare PIPP proposals. The program also has introduced a mentoring option where new PIPP applicants can team up with experienced facilities in designing and carrying out projects.

### SESSION 2620 (SYMPOSIUM)

#### INTERSECTIONALITY: THEORIZING HEALTH INEQUALITIES BY RACE, GENDER, INCOME, AND AGE

Chair: V.L. Bengtson, Roybal Institute on Aging, University of Southern California, Los Angeles, California

Co-Chair: W. Vega, Roybal Institute on Aging, University of Southern California, Los Angeles, California

An important concept that has emerged in the social sciences recently is intersectionality, the combination of social characteristics such as race/ethnicity, gender, poverty, and age that can produce inequalities in health care, physical and mental illness, and quality of life. We propose the theory of cumulative disadvantage and advantage as perhaps the most useful explanatory framework for understanding intersectionality. This theory explains the amazing variability within America's elderly



population in health outcomes as the culmination of a lifetime of disadvantages compared to individuals who have not suffered discrimination due to their race or ethnicity, economic status, or gender. This symposium brings together research on intersectionality and the cumulative disadvantage/advantage theory conducted by a research team at the Roybal Institute on Aging of the University of Southern California's School of Social Work. A major focus of research at the Roybal Institute concerns Intersectionality and its health consequences for elderly populations. The papers in this symposium illustrate various aspects of theory-driven investigation using intersectionality as a focus. The first paper, by Vern Bengtson, discusses three current theories of aging in the context of intersectionality. William Vega's paper reviews research findings from the EPESE multi-wave data on aging and chronic disease burden using an intersectionality lens. The paper by Karen Lincoln looks at the "obesity-depression paradox" from an intersectionality perspective using data from a nationally-representative study of African Americans, Black Caribbeans and non-Hispanic whites. Donald Lloyd's paper focuses on the cumulative advantage/disadvantage theory using data on cumulative stress exposure from 1502 Florida residents aged 45-93. Maria Aranda describes how the concept of intersectionalities can be usefully applied in clinical research and intervention, based on a qualitative study of older Latinos in long-term care.

### **CUMULATIVE ADVANTAGE/DISADVANTAGE AT THE INTERSECTION OF INEQUALITIES**

D.A. Lloyd, *Roybal Institute on Aging, University of Southern California, Los Angeles, California*

Cumulative advantage/disadvantage (CAD) is seen in a life-course trajectory along a path upon which one's history leads to a future of similar circumstances. This theory predicts that a life-course within the context of multiple disadvantaged statuses will lead to sustained disadvantages, and conversely advantaged outcomes in the context of advantaged social statuses. Two versions of CAD are a) the succession of roles and statuses that varies qualitatively across individuals and b) the accrual of experiences, whose valence is predicted by early statuses. This paper deals with how life-course accruals may be characterized both in form and in quantity, empirically illustrated using lifetime stress exposure in a community-residing sample of 1502 Florida residents aged 45-93. Both measures of cumulative disadvantage independently contribute to psychological health. The analysis incorporates social status characteristics as predictors of these two dimensions of cumulative disadvantage. Integration of the concept of intersectionality with CAD will be discussed.

### **SOCIOECONOMIC POSITION, OBESITY AND DEPRESSION: IS THERE AN OBESITY-DEPRESSION PARADOX?**

K. Lincoln, *University of Southern California, Los Angeles, California*

Morbidity rates for a wide range of physical health and mental health problems increase across generations and over the life span. These differences are accentuated for rates of obesity: recent cohorts are reaching a higher prevalence of obesity earlier in the life course, and thus experiencing a greater cumulative exposure to excess weight over their lifetimes. Obesity is most prevalent among Black women and raises their depression odds. Still, Black Americans have lower rates of depression despite greater exposure to life stressors and higher rates of psychological distress. Theories of intersectionality and cumulative advantage/disadvantage highlight how race, nationality and gender mutually construct one another over the lifespan and provide a framework for understanding the physical health and mental health status of Black Americans. This presentation exam-

ines the "obesity-depression" paradox; the seemingly counterintuitive relationship between depression and obesity among Black Americans. Data from the National Survey of American Life (N=6,082), a nationally representative study of African Americans, Black Caribbeans and non-Hispanic Whites, are used across three studies using multinomial logistic regression, latent class analysis and geomapping. Results indicate that it is essential to consider 1) the role of psychosocial stress and health behaviors to advance understanding of depression and obesity, 2) heterogeneity within and between racial/ethnic groups to understand the "obesity-depression" paradox and for targeting interventions to at-risk groups. Finally, geo mapping is a useful approach in survey research to spatially locate individuals who are identified as "at-risk" and has important public health, clinical and policy relevance beyond prevalence rates.

### **AGING AND CHRONIC DISEASE BURDEN USING AN INTERSECTIONALITY LENS**

W.A. Vega, *Roybal Institute on Aging, University of Southern California, Los Angeles, California*

An important issue in aging research is extending life and preserving its quality despite living with chronic diseases. Although we have succeeded in reducing life years lost to disease, rapid declines in health and high rates of disability are realities for aging Mexican Americans. Intersectional theory will be used to examine how social categories affect quality of life over time among individuals living with chronic disease, as expressed in declines in functional status and increased depression. The EPESE multi-wave data are used to determine how race/ethnicity, sex, and socioeconomic position are associated with functional status and depression since onset of chronic disease, and how outcomes are potentially modified by social support, onset of co-occurring medical conditions, and residence in immigrant enclaves. Intersectionality is used to formulate hypotheses based on the research literature about social categories and health, specify a longitudinal analysis using community survey data, and interpret findings.

### **DEPRESSION CARE FOR OLDER LATINOS: ADDRESSING INTERSECTIONALITIES IN CLINICAL RESEARCH**

M.P. Aranda, *Univ Southern California, Los Angeles, California*

Despite consensus that psychiatric illnesses are treatable, only half of depressed older adults receive attention from their primary care provider for mental health complaints, and fewer than 10% access specialty mental health care in a year. The consequences of untreated or undertreated late-life depression include disability, increased health care utilization, suicide risk, and even death. Barriers to quality mental health care for older adults span individual and organizational factors, and are accentuated in racial and ethnic minority older adults. Improving access to mental health services for older Latinos, who suffer elevated rates of depression, means integrating mental health into medical care as well as adapting services to their sociocultural realities. The Programa Mano Amiga study is a federally-funded randomized behavioral depression care program intended to eliminate disparities in geriatric Latino mental health services. Based on an iterative process of intervention development, we provided a socioculturally adapted psychosocial treatment to 100 medically-ill older Latinos in a community-based setting. The study addresses barriers to quality depression care which emanate from lifelong cumulative disadvantage due to multiple intersecting statuses (age, gender, national origin, immigration history, disability status, SES, etc.). Taken together, our study is guided by a theoretical framework that addresses known barriers to depression care, and sociocultural adaptations of psychosocial treatment that address the intersectionalities of aging from a Latino perspective.

## SESSION 2625 (SYMPOSIUM)

### NAVIGATING ETHICAL CONSIDERATIONS FOR TECHNOLOGY-BASED SERVICES FOR OLDER ADULTS

Chair: *C. Berridge, University of California, Berkeley, Berkeley, California*

Discussant: *H. Moody, AARP, Washington, District of Columbia*

Navigating the ethics of technologies for older adults is difficult and crucial work for gerontologists. The wide range of technologies used to support older adults' ability to live independently complicates our understanding of their ethical implications and justifications. From remote monitoring to social networking, these devices and their associated services are diverse in meaning and use, invoking different sets of ethical questions. Gerontologists in the U.S. have had relatively few opportunities to engage these ethical considerations. Drawing from knowledge and methodologies in the fields of ethics, technology and society studies, philosophy, sociology and neurology, the participants in this symposium will address a range of overlapping ethical issues. We will move beyond the matter of privacy to consider older adults' actual perceptions as end users, as well as ways in which nonagenarian technogenarians negotiate technologies to care for themselves and connect with others. We will discuss the ethical value of technology that supports cognitive and relational capacities. This symposium also addresses the ethics research, politics, value base, and legal frameworks for technologies for the care of older adults in the United Kingdom where the world's largest randomized controlled trial of telecare and telehealth was recently conducted. Finally, we will present case studies of design processes for robots and monitoring systems to define the ethical implications of the user representations employed by designers and engineers.

### IN-HOME MONITORING TECHNOLOGIES: PERCEPTIONS OF OLDER ADULTS

*K. Wild, Neurology, OHSU, Portland, Oregon*

As research and development regarding in-home technologies designed for health monitoring and/or maintenance of independence move ever closer to real-world settings, we need to better understand how the primary beneficiaries view these technologies. The successful application of assistive and monitoring technologies depends on the receptivity of potential users, in this case older adults. While a digital divide still exists between younger and older technology users, the idea of older adults as technophobes no longer appears to hold true; older adults have clear preferences in terms of usability, control, privacy, and confidentiality. These preferences cannot be assumed to be invariant, as attitudes have been shown to differ both within groups and within individuals depending on changing circumstances and needs. This paper will review recent research in older adults' perceptions, attitudes, and priorities regarding in-home technology, and the relevance of ethical guidelines to continued research in this arena.

### CONCEPTIONS OF THE GOOD IN USING ASSISTIVE TECHNOLOGIES IN COMMUNITY CARE SERVICES FOR OLDER ADULTS

*M. Dunn, The Ethox Centre, University of Oxford, Oxford, United Kingdom*

In the UK, policy-makers claim that assistive technology (AT) can enhance the well-being of older adults and promote equity within care services. Micro-level ethical issues have been identified in the ways that AT devices have been rolled out in different care contexts. However, it is also important to interrogate the values that lie at the heart of the broader conceptions of goodness and fairness within contemporary policy and practice around AT. In my presentation I will examine whether the ethical values that are claimed to undergird a good community care system stand up to scrutiny, and argue that it is unclear whether technological interventions will act to promote these values in ways that

are ethically defensible. After attending this presentation, participants will be aware of international perspectives in AT policy and practice, and will have a grasp of the ethical considerations in making judgments about the value of these technologies.

### ETHICAL ISSUES IN TECHNOLOGY & HOME-BASED CARE: MAXIMIZING THE COGNITIVE AND RELATIONAL ABILITIES OF OLDER PERSONS

*J.A. Parks, Philosophy, Loyola, Chicago, Illinois*

My paper will address the ethics of technology use in home-based care, focusing in particular on the ways in which technological interventions may assist in the repair of impaired or diminished cognitive capacities. While there has been some ethical attention to the use of expensive medical technologies to assist physical caregiving in home-based care, less attention has been paid to the possible uses of technology to shore up individuals' cognitive and relational capacities. By addressing advances in telemedicine and other technologies that are adaptable for home use, I intend to consider how new technologies are allowing persons with various stages of dementia to maximize the cognitive abilities that remain, as well as their abilities to interact and relate to others. While the hyper-valuation of autonomy in long term care should not be accepted uncritically, I will argue that relational values and virtues are nevertheless important for all of us, and that technological interventions may help to extend our relational capacities in ways that are ethically praiseworthy.

### BENEATH THE SHINY SURFACE: ETHICAL DIMENSIONS OF THE DESIGN OF TECHNOLOGIES FOR OLDER ADULTS

*L. Neven, 1. Utrecht University, Utrecht, Netherlands, 2. Lancaster University, Lancaster, United Kingdom*

This paper will explore the ethical dimensions of the way designers of technologies for older adults conceive of older adults. Drawing on three case studies, this presentation will show how older persons are represented as ill, frail and dependent, as reluctant and resistant to (technological) change, and as technologically illiterate people. Such negative stereotypical representations matter as they form the basis for design decisions and are subsequently embedded in technologies. As a result such gerontechnologies may for instance restrict choice, force certain actions or be used to gather information that leads to changes in care. These effects are not recognised as problematic as these technologies are quickly seen as neutral parts of the elders' lives, but also because there is a strong moral rhetoric surrounding these gerontechnologies which states that such technologies are advantageous for all involved parties, and consequently that developing these technologies is "the right thing to do".

### TECHNOGENARIANS: ETHNOGRAPHIC INSIGHTS

*M. Loe, Colgate University, Hamilton, New York*

Meika Loe analyzes nonagenarians' use of everyday technological tools to care for themselves in old age and construct meaning. Despite what we may expect, nonagenarian women and men can be and are "technogenarians" in their active use of everyday technologies to create meaningful lives and comfortable spaces. Specifically, these elders use and negotiate old and new technologies in the context of gendered repertoires to achieve goals such as self-efficacy, health, well-being, and connectedness. Nonagenarians can teach us how household technologies can become aging technologies; instruments of continuity, control and health; or just the opposite. In sum, the "oldest old" take responsibility for their own health, care, and well-being through designing user-friendly spaces and adapting everyday technologies to fit their needs.

**LONG TERM CARE FINANCING AND ADMINISTRATIVE SYSTEMS****PAY-FOR-PERFORMANCE IN FIVE STATES: LESSONS FOR THE NURSING HOME SECTOR**

E.A. Miller<sup>1</sup>, J. Doherty<sup>2</sup>, *1. Gerontology, Univ Mass Boston, Boston, Massachusetts, 2. L & M Policy Research, Washington, D.C., District of Columbia*

Pay-for-performance (P4P) directs higher reimbursement to providers that achieve desired outcomes. Little is known about the use of P4P in the nursing home sector, however. This study reports the results of in-depth case studies of nursing home P4P in five state Medicaid programs: Iowa, Minnesota, Oklahoma, Utah, and Vermont. Detailed summaries are provided, followed by a review of best practices and other lessons learned. Data derive from in-depth interviews with those responsible for implementing nursing home payment policy in each of the states studied. Data also derive from review of archival resources. Results highlight the importance of obtaining stakeholder input, both initially and on an ongoing basis. They also highlight providing opportunities for acceptance and learning by phasing in programs slowly, beginning with performance measurement, followed by public report cards, and, finally, by introduction to P4P incentives. Funding P4P using new appropriations, incorporating multiple quality measures and domains, and relying on existing data sources where possible were deemed critical for success; so too was allowing programs to evolve over time to account for changes and innovations in quality measurement. Believed especially important was bringing key stakeholders together to determine the underlying philosophy and principles that guide program design and implementation and subsequent refinement. Monitoring for potential unintended consequences and conducting annual assessments to document program successes and potential areas for improvement were deemed important as well.

**DOES MEDICAID PAY MORE TO A PROGRAM OF ALL-INCLUSIVE CARE FOR THE ELDERLY [PACE] THAN FOR FEE-FOR-SERVICE LONG-TERM CARE?**

G. Wieland<sup>1,2</sup>, B. Kinoshian<sup>3</sup>, P. Stallard<sup>4</sup>, R. Boland<sup>1</sup>, *1. Geriatrics Services, Palmetto Health Richland, Columbia, South Carolina, 2. University of South Carolina, Columbia, South Carolina, 3. University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania, 4. Duke University, Durham, North Carolina*

In rebalancing from nursing homes [NHs], states are increasing access of NH-certified dually eligible (Medicare/Medicaid) patients to community waiver programs and PACE. Prior evaluations suggest Medicaid's [MA] PACE capitation exceeds its spending for comparable admissions in alternative care, although the latter expenditures may be underestimated. We test whether MA PACE payments are lower than predicted fee-for-service [FFS] outlays. Using grade-of-membership methods, we model health deficits for duals  $\geq 55$  admitted to waiver, PACE and NH in South Carolina ( $n=3,988$ ). Clinical types, membership vectors, and program type prevalences are estimated. We calculate a blend, fitting PACE between FFS cohorts whose post-admission one-year utilization was converted to attrition-adjusted outlays. PACE's capitation is compared to blend-based expenditure predictions. Four clinical types describe population health deficits/service needs. The waiver cohort is most represented in the least impaired type (1: 47.1%), NH entrants in the most disabled (4: 38.5%). PACE's highest prevalences were in Types 3 (32.7%) and 2 (32.3%). PACE's blend was: Waiver—0.5602; 95% c.i., 0.5472, 0.5732, and NH—0.4398; 0.4268, 0.4528. Average MA attrition-adjusted 1-year payments for waiver and NH were \$4,177 & \$77,945. The mean predicted cost for PACE patients in alternative LTC was \$36,620 (95% c.i.: \$35,662, \$37,580). PACE's MA capitation was \$27,648—28% below the lower limit of predicted

FFS payments. PACE's capitation was well under outlays for equivalent patients in alternative care—a substantial savings for Medicaid. Our methods provide a rate-setting element for PACE and other managed LTC.

**SERVICE AND FINANCING INTEGRATION OF MEDICAL CARE AND LONG TERM SERVICES AND SUPPORTS FOR THE ELDERLY: A SYSTEMATIC REVIEW**

A. Chattopadhyay<sup>1</sup>, S. Wang<sup>1</sup>, J. Stone<sup>2</sup>, A. Bindman<sup>1,2</sup>, *1. Medicine, University of California at San Francisco, San Francisco, California, 2. California Medicaid Research Institute, University of California, San Francisco, California*

In the United States, frail elders living in communities have high levels of medical and long-term care needs. Services are provided by many different agencies, leading to fragmentation and inefficiencies. We reviewed published literature and the grey literature in the form of program evaluation reports of state and federal agencies evaluating community-based programs that integrate long-term care and medical services to examine their efficacy and effectiveness across three metrics: health outcomes (mortality, functional status, mental health, and quality of life), rates of utilization of high cost services, and cost. Twenty four studies reporting evaluation of seventeen interventions are summarized. These studies were categorized along a continuum of integrating strategies at different levels: Clinical/Service Delivery Level, Organizational Level and Financing/Administrative Level. Results show that integrated care programs can improve certain health and cost outcomes for the elderly population with LTSS needs. Many of the interventions along the service and financing continuum showed improvements in at least one outcome, such as functional status and reduced utilization of nursing homes. Although cost savings were difficult to achieve, organizational level interventions seemed to have the most potential for improvements in costs. Variations in outcome could be attributable to variation in program design. Future research efforts should include randomized trials by which the efficacy of each of the structural features of integrated care can be examined by random assignment of subjects to multiple (program) design strategies.

**EXPECTATIONS OF NURSING HOME USE: DO THEY TRANSLATE INTO LONG-TERM CARE INSURANCE PURCHASE AND SAVINGS?**

J.C. Greenfield, T. McBride, S. Billiot, *Washington University, St. Louis, Missouri*

Models of life cycle behavior suggest that expectations about future events may affect savings, insurance, and retirement planning. The Health and Retirement Study (HRS) collects subjective expectations of nursing home use. Previous work explored whether individuals accurately predict lifetime nursing home use and found that women and men incorporate their subjective experience, personal characteristics, and health conditions, and that their expectations conform reasonably well to previous empirical literature about predictors of lifetime nursing home use. Since the HRS first introduced the expectations question there has not been any exploration of whether the individuals' expectations about future nursing home use translates into either purchases of long term care insurance (LTCI) or savings to coincide with their expectations about lifetime nursing home use. This paper explores this relationship using longitudinal data over an 18-year period in nine waves of the HRS. We find that individuals who report higher expectations of lifetime nursing home use do not invest more in savings accounts, nor are they more likely to purchase LTCI. The results suggest that other factors typically found to be predictors of investments in assets and LTCI are significant predictors in the HRS sample (e.g., education, income). The findings confirm that expectations, recorded long before respondents experienced a need for nursing home care, do not translate into planning for LTC utilization, especially under uncertainty, and may suggest the need for policy intervention to address this uncertainty.

## EVALUATING OHIO'S PACE PROGRAM: RECOMMENDATIONS FOR STATE POLICY MAKERS

S. Mehdizadeh, P.C. Faust, S. Kunkel, R. Applebaum, *Scripps Gerontology Center, Miami University, Oxford, Ohio*

In 2010 the Ohio Legislature was presented with conflicting recommendations about the state's Program of All Inclusive Care for the Elderly (PACE) initiative. With one stakeholder group recommending expansion of the program and another arguing that PACE was too costly to Medicaid, no policy action was agreed upon. However, an evaluation was authorized asking the researchers to provide policy recommendations for state officials. This paper presents findings from the evaluation and includes both process and outcome components. In the outcome analysis all PACE enrollees in 2007 (N=630) at the state's two sites were identified and followed over a five year time period. The same number of participants from the same regions of the state, enrolled in Ohio's home and community-based care Medicaid waiver program (PASSPORT), was selected via matching propensity score for comparison. Mortality rate, nursing home and hospital use, and retention in the program as well as overall Medicaid and Medicare per-member, per-month expenditures are compared, by group, over the 5 following years irrespective of their initial program affiliation. Outcome findings were supplemented by a process analysis that included interviews with an array of staff members at each of the PACE sites and interviews with state officials to discuss implementation barriers and successes. Evaluation results are presented in the context of the more than 10 previous studies of PACE using comparison group methodologies. The presentation will describe the final recommendations made to state policy makers using both the outcome and process components of the study.

## SESSION 2635 (PAPER)

### THE FUTURE OF LONG TERM CARE POLICY AND PRACTICE

#### PROJECTING OLDER CANADIANS' HOME SUPPORT NEEDS: FUTURE SCENARIOS OF DISABILITY AND SOCIAL SUPPORT

J. Keefe<sup>1</sup>, S. Vezina<sup>1</sup>, J. Légaré<sup>2</sup>, Y. Décarie<sup>3</sup>, *1. Mount Saint Vincent University, Halifax, Nova Scotia, Canada, 2. Université de Montréal, Montreal, Quebec, Canada, 3. Institut national de la recherche scientifique, Montreal, Quebec, Canada*

This research examines how different scenarios of disability and support network usage would affect older Canadians' home care assistance (weekly hours of support) up to 2031. The Canadian older population is projected using Statistics Canada's LifePaths microsimulation model. Using regression parameters, other characteristics are applied to the projected population (i.e., disability status, need for assistance, living arrangement, receipt of assistance, and source of assistance). Results from two scenarios are compared with the Baseline Scenario. The "recent-trend" Scenario assumes the changing disability rate observed between 1994/95 and 2000/01 will continue at the same pace up to 2031. The "cultural shift" Scenario assesses the impact of Baby Boomers turning to the marketplace to meet their care needs. The projected amount of assistance will increase from approximately 15 million hours in 2006 to 29 million in 2031. The "recent-trend" Scenario projects 27.6 million hours in 2031 resulting from a projected decline of the disability rate simultaneous to a rise in disability severity. The "cultural shift" Scenario results in a lower reliance on informal sources in 2031. The total projected need would increase by 2.4 times the Baseline scenario, and the number of hours delivered by the formal network would increase by nearly 3 times. Session participants will gain an understanding of how disability rates and support network usage may impact future home care assistance. This is an important policy concern given

the increasing size of the older Canadian population in the coming decades and the need to prepare to meet care demands.

#### HOW DO WE MEASURE UNMET NEED FOR SOCIAL CARE IN LATER LIFE?

A. Vlachantoni<sup>1,2,3</sup>, R. Shaw<sup>3</sup>, R.M. Willis<sup>1,3</sup>, M. Evandrou<sup>1,2,3</sup>, J.C. Falkingham<sup>2,1,3</sup>, R. Luff<sup>1,3</sup>, *1. Centre for Research on Ageing, University of Southampton, Southampton, United Kingdom, 2. ESRC Centre for Population Change, University of Southampton, Southampton, United Kingdom, 3. EPSRC The Care Life Cycle, University of Southampton, Southampton, United Kingdom*

Recent spending cuts in the area of adult social care raise policy concerns about the proportion of older people whose need for social care is not met. Such concerns are emphasised in the context of population ageing and other demographic changes, for example in the living arrangements of older people, which can place greater pressure on formal and informal systems of care and support provision. However, the concept of 'unmet need' is challenging in terms of its definition and measurement, as it can include objective notions of access and use of services, as well as subjective notions of expectations, satisfaction and want. This paper explores the concept of 'unmet need' and its operationalisation through national cross-sectional and longitudinal data from the General Household Survey and the English Longitudinal Study of Ageing. Following attendance of this presentation, participants will be enabled to: firstly, understand the link between literature in social policy and the concept of 'unmet need' in the British policy context; secondly, assess evidence from the GHS and the ELSA which illustrate patterns of unmet need for social care among older people and which explore the relative importance of demographic and socio-economic characteristics in such differentials; and thirdly, understand the policy implications of the findings in the context of significant demographic and policy change in the UK.

#### MEASUREMENT OF STATE LTSS SYSTEMS: THE EVALUATION OF EXISTING EFFORTS AND DEVELOPING NEW INDICATORS

L.J. Clark-Shirley, J. Howard, O. Urdapilleta, *IMPAQ International, Washington, District of Columbia*

As states continue to reform long-term supports and services (LTSS) systems, there is growing interest in benchmarking success in providing balance between home and community based services (HCBS) and institutional alternatives. Such systems assure optimal health, well-being, and functioning for people across the lifespan in the most integrated setting possible. The Centers for Medicare & Medicaid have supported the National Balancing Indicator (NBI) project in developing of a set of indicators that efficiently measure States' LTSS systems. One major task of the NBI was to identify and unify efforts of Federal agencies that measure certain aspects of LTSS, in order to develop a holistic view of a State's LTSS system. This presentation discusses our methodology for collecting, analyzing, rating, and incorporating these Federal efforts into the NBI-led set of national LTSS indicators, and evaluation criteria specific to LTSS measures created for this purpose. Collaboration with the Federal government revealed sources of potential LTSS indicators from six agencies. The NBI team gathered technical specifications of measures from each agency via a web-based survey. Evaluation criteria specific to LTSS indicators were developed, adapted from the National Quality Forum model. A panel of independent expert reviewers was then convened to evaluate each Federal measure using these criteria, focusing on importance/relevance to LTSS, scientific acceptability, usability, and feasibility. As Federal and State policies encourage HCBS, it is critical to have a sound metric with which to measure the characteristics of LTSS nationally. This presentation highlights a multi-faceted approach to achieving this goal.

## **LONG-TERM CARE: WHERE HAVE YOU GONE, WHERE ARE YOU GOING?**

R. Applebaum, S. Mehdizadeh, *Scripps Gerontology Center, Miami University, Oxford, Ohio*

From its name to the type and setting of care provided, the world of long-term services and supports has changed dramatically in the last two decades. Using 18 years of longitudinal data from the state of Ohio this presentation describes how the long-term services system is different from the one that existed in the early 1990's. Data come from nine biennial surveys of all Ohio nursing homes and residential care facilities and comprehensive resident and home care participant data on user characteristics and utilization rates. Findings show large changes in where services are provided and who receives care. For example, Ohio, as has most other states, has changed the ratio of its older population using Medicaid long-term care, going from 91% nursing home in 1993, to 58% nursing home in 2010. At the same time the sheer number of admissions to Ohio nursing homes increased from 70,000 to more than 200,000 painting a picture of today's nursing home as a short-term care provider. These massive changes indicate an industry in transition. What will this mean for the future of the home care and nursing home industries? What will tomorrow's system of long-term services and supports look like? Building on these two decades of findings the presentation will tackle the question of where long-term care has been, and where it is going.

## **MEETING LONG TERM SERVICES AND SUPPORTS THROUGH ADRCS: CONSUMER AND STAFF EXPERIENCES**

D.L. White, P. Carder, S. Elliott, A. Foucek Tresidder, G. Luhr, D. Truxillo, *Institute on Aging, Portland State University, Portland, Oregon*

Aging and Disability Resource Centers (ADRC) serve individuals and families facing or anticipating the need for long term services and supports. Information and assistance (I&A) and options counseling (OC) are among core ADRC services and emphasize informed decision making and support for self determination. This paper reports on the experiences of consumers and staff of three pilot ADRCs in Oregon. ADRCs were involved in developing common professional standards and the OC training program. Program structures varied according to the needs and resources of the parent organizations and communities served. Survey and focus group data from I&A and OC staff as well as qualitative and quantitative data from consumer satisfaction surveys (n=252) are presented. Most OC staff reported high levels of job satisfaction, naming flexibility as a key job feature. In agencies where I&A and OC staff work closely together, I&A workers also reported high job satisfaction. Both shared concerns about determining when OC services are needed. Time pressures were the major source for job stress, particularly for OCs with multiple job responsibilities and I&A workers with high call volumes. Consumer data indicate overall satisfaction; the majority reported being better off and better informed after contact with the ADRC and 85% reported that staff spent enough time with them to understand their concerns. At the same time, consumer data suggest that not all consumers in need of OC services are receiving them; 26% indicated they had concerns that the ADRC had not addressed. Implications for strengthening OC services will be discussed.

## **SESSION 2640 (SYMPOSIUM)**

### **CONNECTING THE DOTS: LINKING RESEARCH, CLINICAL AND MULTIDISCIPLINARY APPROACHES TO GRANDPARENT CAREGIVERS' HEALTH AND WELL-BEING**

Chair: *F. Conway, Psychology, Adelphi University, Garden City, New York*

Discussant: *B. Hayslip, University of North Texas, Denton, Texas*

The health of grandparent caregivers is examined within a unique matrix of cross disciplinary vantage points and mixed approaches. Bring-

ing together a multidisciplinary team of researchers, nurses, psychologists, social workers, both the psychological and physical health of grandparents are explored. The health of grandparent caregivers is an important predictor of grandparent's psychological wellbeing. In order for grandparents to care adequately and effectively care for their grandchildren, the integrity of their physical and psychological health status is paramount. For a variety of reasons including the role demand of caregiving, grandparent caregivers neglect their health. This symposium discusses psychological and physical health concerns of grandparent caregivers and methods used to intervene with grandparents' health. This symposium brings together varying theoretical perspectives to examine several dimensions of grandparent caregiver's health. This unique comprehensive examination of dimensions of grandparent caregivers' health includes an emphasis on physical, psychological, nutrition and other health aspects. Studies in the symposium examine psychological health of grandparent caregivers including a focus on physical health as a predictor of psychological distress in a large sample of African American custodial grandmothers, links between the mind and body connection in African American and Latino grandparent caregivers, the preventative public health concerns related to the grandparent caregivers' nutritional needs and the mechanisms through which caregiving impacts health. Implications for a holistic approach to health interventions with grandparent caregivers are discussed.

## **THE MIND AND BODY CONNECTION: FUNCTIONAL AND PHYSICAL HEALTH AS PREDICTORS OF PSYCHOLOGICAL HEALTH IN AFRICAN AMERICAN AND LATINO GRANDMOTHERS RAISING THEIR GRANDCHILDREN**

F. Conway<sup>1</sup>, S.C. Jones<sup>2</sup>, *1. Psychology, Adelphi University, Garden City, New York, 2. Long Island University, Brooklyn, New York*

Grandparent caregiving has been long associated with psychological stressors. Less understood is the role grandparent's physical health status plays in their psychological wellbeing. Seventy African American and Latino grandmothers who are raising their grandchildren were interviewed regarding their caregiving experience and administered measures regarding their demographics, psychological and physical health. Physical health was assessed using the physical health scales of the Comprehensive Assessment and Referral Evaluation Subscales and psychological wellbeing was assessed using the Brief Symptom Inventory. Regression analysis show health conditions affecting grandmother's level of activity (respiratory problems, arthritis, leg problems, vision disorder, ambulation problems) and total impaired health (somatic symptoms, heart disorder, respiratory problems, sleep disorder) predicted the severity of their psychological distress (R2Change=.001, p<0.01 and R2Change=.000 (p<0.01 respectively). Although there is heterotopy in grandparent caregivers' health, the impact on their psychological functioning tends to be consistently detrimental to their psychological health.

## **RACE/ETHNIC DIFFERENTIALS IN THE HEALTH CONSEQUENCES OF GRANDPARENTS CARING FOR GRANDCHILDREN**

F. Chen, C.A. Mair, L. Bao, *Dept. of Sociology, University of Maryland, College Park, Maryland*

Although Black and Hispanic grandparents are much more likely to coreside with grandchildren and to provide routine childcare for grandchildren than White grandparents, researchers have not fully investigated race/ethnic differentials in the health consequences of such caregiving for grandparents. Do the potential benefits of grandparenting (e.g., emotional reward and social support) outweigh the potential negative effects (e.g., stress, physical demand, and financial difficulty) or vice versa? Do minority grandparents' poorer health outcomes reflect their initial socioeconomic disadvantages, or does a lack of financial resources compound the stress of caregiving? Finally, could the strong

norm of familism and support of kinship network among Black and Hispanic grandparents act as a buffer and thus increase resiliency? To answer these questions, we analyze data from the Health and Retirement Study, a nationally representative, longitudinal panel study of older adults in the United States. We treat health as a cumulative process and examine the influence of grandparents' caregiving on health trajectories with multiple health indicators for different race/ethnic groups.

### **THE NUTRITIONAL NEEDS AND FOOD HABITS OF GRANDPARENT-HEADED FAMILIES**

M.L. Dolbin-MacNab, E. Serrano, K.A. Roberto, *Virginia Tech, Blacksburg, Virginia*

Adequate and proper nutrition is important to the health of custodial grandparents and their grandchildren. Unfortunately, little is known about the nutritional needs and food habits of grandparent-headed families, though previous research suggests that grandparents face barriers to obtaining healthy and nutritious foods. Using data from six focus groups with 59 professionals who work with custodial grandparents, this study examined professionals' experiences of grandparents' dietary quality and food security. Results of a qualitative analysis indicate that grandparent-headed families experience varying degrees of food insecurity. Poor dietary habits were also common, and were linked to grandparents' time and energy demands as well as a lack of financial resources. Limited information about the association of nutrition and health outcomes was also mentioned, along with relationship dynamics that resulted in problematic eating habits. Findings highlight opportunities to improve the dietary quality of custodial grandparents and grandchildren via professional collaborations, nutrition education, and nutrition assistance programs.

### **PSYCHOLOGICAL DISTRESS IN CUSTODIAL GRANDMOTHERS: THE ROLE OF PHYSICAL HEALTH, FAMILY RESOURCES, AND CHILD BEHAVIOR PROBLEMS**

S.J. Kelley, D.M. Whitley, P.E. Campos, *Georgia State University, Atlanta, Georgia*

Although grandmothers raising grandchildren demonstrate remarkable commitment, the comparatively high levels of depression found among custodial grandmothers raises concern for their quality of life and ability to provide care for grandchildren. The purpose of this study is to determine levels of psychological distress in African American custodial grandmothers and to identify factors associated with increased distress. The sample consisted of 516 African American custodial grandmothers with a mean age of 57 years. Thirty-eight percent of participants scored in the clinical range on psychological distress. Results of a hierarchical multiple regression analysis indicated that increased child behavior problems, poor physical health, and lack of resources were associated with increased psychological distress. The model predicted 33% of the variance in psychological distress. The extent of clinically elevated psychological distress found in this study raises considerable concern regarding the well-being of African-American custodial grandmothers. Implications for practice, policy, and research will be discussed.

## **SESSION 2645 (SYMPOSIUM)**

### **INFLUENCE OF CULTURE ON ELDERS' WELLBEING IN ASIA – CHINA, INDIA, SOUTH KOREA, AND TAIWAN**

Chair: *K. Chee, Department of Sociology, Texas State University, San Marcos, Texas*

This symposium addresses diverse cultural factors relevant to the wellbeing of older adults in different Asian societies. Results from four research projects on Chinese, Indian, South Korean, and Taiwanese elders demonstrate: a) how critical it is to understand these elders' wellbeing and actions in their specific cultural context, b) complex ways in which culture shapes their perceptions and actions, and c) implications of these findings for suggesting the directions of future research involv-

ing Asian elders. First, Liang describes how cultural beliefs such as filial piety, the virtue of moderation, and a naturalistic approach to health shape the spirituality of Chinese elders and ultimately their conceptualization of wellbeing. Second, Gupta reports on various relational, structural, and cultural factors that are intertwined with the psychosocial wellbeing of older care receivers and their caregivers in India. Third, Kim discusses how South Korean elders with religious affiliation are more likely to live with their children, but are less likely to transition to co-residence with or living close to their children when experiencing functional limitations. Finally, Wang presents findings from an ethnographic study in adult daycare centers in Taiwan to observe the notions of public and private selves among persons with dementia in the context of a collectivistic Taiwanese culture. The chair will lead a discussion on cultural similarities and differences among different Asian societies according to these findings and how a careful attention to the cultural context is crucial in understanding older adults' perceptions, actions, and wellbeing regardless of their health or disability status.

### **CULTURE, SPIRITUALITY AND WELLBEING AMONG CHINESE ELDERS: IMPLICATIONS FOR CROSS-CULTURAL AGING STUDIES**

J.J. Liang, K. Basnyat, H. Stohry, *MU, Ohio, Oxford, Ohio*

This study explores the influence of cultural beliefs and practices on spirituality and wellbeing among Chinese elders by drawing on relevant literature as well as qualitative data collected from face-to-face, semi-structured, in-depth interviews with 10 elders in Xi'an, China. Besides filial piety known for regulating caregiving experiences and intergenerational relationships, belief in the virtue of moderation indicative of another Confucian idea and a naturalistic approach to health reflective of Taoist thoughts are found to play a vital role in shaping Chinese elders' spirituality and formulating their conceptualization of wellbeing. We also find that non-adherence to formal religious beliefs does not exclude spiritual pursuits and thus argue that the difference between religiosity and spirituality must be recognized in cross-cultural aging studies. Thereby, we propose a more nuanced yet integrative understanding toward cultural traditions and the mechanisms that affect spirituality and wellbeing among elders in the Chinese society.

### **COMMUNITY-DWELLING OLDER ADULTS AND CAREGIVER DYADS: FINDINGS FROM ALLAHABAD, INDIA**

R. Gupta, M. Brown, *School of Social Work, San Francisco State University, San Francisco, CA, California*

Objective: The purpose of this study was to examine psychosocial wellbeing among community-dwelling caregiver and care receiver dyads in the Allahabad, India. Methods: We employed mixed methods to gather as much information as possible from 31 dyads. The questionnaire was translated from English to Hindi. Data were collected from community-dwelling older adults and their care receivers. Findings: The results indicate that 21 of the 31 caregivers were female (67.7%) and 19 of the 31 care receivers were also female (61.3%). Results from the qualitative data show the following themes: 1) relationship quality of the dyad prior to caregiving influences the relationship quality when caregiving becomes necessary, 2) lack of social or governmental resources increase caregiver burden, 3) norms of filial duty to provide care to elders in the home are eroding, leading to greater stress. Implications for services for elders in India are discussed.

### **HEALTH, RELIGIOUS AFFILIATION, AND TRANSITIONS IN LIVING ARRANGEMENTS AMONG KOREAN OLDER ADULTS**

B. Kim, J. Liang, *The University of Michigan, Ann Arbor, Michigan*

Objective: This study investigates the linkage between health and transitions in living arrangements among Korean older adults, and how religious affiliation affects this association. Method: Data came from

the two waves of the Korean Longitudinal Study of Ageing on individuals over the age of 65 years ( $n=3,874$ ), and multinomial logit regressions were used. Results: Functional limitations increased the probability of transitions to co-residence or to living near children as opposed to living alone. Those with religious affiliations, including Protestants, Catholics, and Buddhists, were more likely to live with their children than those without any religious affiliation. Interactions between religious affiliation and health were, however, negatively associated with transitions to co-residence. Conclusion: This suggests that the social resources provided by religious community enable older parents to live independently from their children when health problems occur. Implications include the significance of non-family resources for older adults in South Korea.

### THE DEMENTED SELF IN PUBLIC AND PRIVATE: AN ETHNOGRAPHY IN ADULT DAY CARE CENTERS IN TAIWAN

P. Wang, *National Taipei University, New Taipei City, Taiwan*

Prior studies of dementia are mostly concerned with care issues. The demented person may be deemed as being alienated from his/her own body because of the shortage of coherent memory. Such a way of knowledge production is, however, inadequate to inquire into an ethic of relatedness. This study sets out to inquire into the ways in which demented persons' subjectivities are mediated and constructed both publicly and privately in their daily lives. I used ethnographic methods to study three daycare centers in Taiwan from 2011 to 2012 (70 days in total). Each center has a mix of demented and non-demented elderly people. Findings reveal that all of the demented persons are able to establish their own public selves at the daycare, and that some of their public selves are quite different from their private selves at home. Collective dynamics and particularities of care arrangements in the Taiwanese culture are discussed.

## SESSION 2650 (SYMPOSIUM)

### LOOKING FORWARD TO IT!: MULTIPLE ROLES OF FUTURE TIME PERSPECTIVE ACROSS ADULTHOOD

Chair: B. Demiray Batur, *University of Zurich, Zurich, Switzerland*

Co-Chair: S. Bluck, *University of Florida, Gainesville, Florida*

Discussant: S.T. Charles, *University of California, Irvine, California*

Time is a critical dimension in disciplines as disparate as Physics and Philosophy, but social scientific research has not fully embraced time as a central construct. This is particularly perplexing in the adult development literature where the passage of time basically defines the central construct: aging. Chronological age (i.e., time since birth) is widely assessed, but is conceptually barren as it represents only numerical time. The current symposium revives classic conceptualizations of psychological time perspective as central to the aging process (e.g., Jung, 1933; Neugarten, 1996). Social selectivity theory (e.g., Carstensen, Isaacowitz, & Charles, 1999) has been useful as a contemporary framework for studying time perspective. This symposium builds on that pioneering work, highlighting the multiple ways that time perspective plays a role in adult development and aging. Such research examines not only chronological age, but individuals' sense of their location in 'life-time': their future time perspective in relation to views of their past. Presenters will address: (a) the relation between happiness, psychological health and future time perspective, (b) heterogeneity within older adults concerning how chronological age and future time perspective influence well-being, (c) how making meaning about one's past affects development of an optimistic future perspective in young and late adulthood, and (d) the link between a balanced time perspective (past, present, future) and narrative foreclosure. The discussant will bring together findings across the presentations to highlight our increasing sophistication in conceptualizing psychological time, and its role in development as individuals move, through time, across the lifespan.

### HAPPINESS, PSYCHOLOGICAL HEALTH, AND FUTURE TIME PERSPECTIVE

J.A. Hicks, *Texas A&M University, College Station, Texas*

Guided by Socioemotional Selectivity Theory (Carstensen et al., 1999), four studies tested the prediction that perceptions of time limitations amplify the relationship between happiness and psychological health. In Studies 1 and 2, adults indicated their perceived position in their life span. Results revealed state positive affect, whether naturally occurring or induced, was a stronger predictor of well-being for individuals who perceived themselves as having a limited amount of time left to live. In Studies 3 and 4, we tested whether eudaimonic happiness (e.g., authenticity) would similarly interact with time perceptions to predict well-being. Study 3 showed that authenticity was more strongly linked to well-being for individuals who reported a limited time perspective. In Study 4, we manipulated time perspective and showed that authenticity was a much stronger predictor of well-being for those in the limited time condition. Implications and future directions regarding the contributions of age related processes to psychological well-being are discussed.

### PERCEPTIONS ABOUT FUTURE TIME AND WELL-BEING IN OLD AGE: EVIDENCE FROM THE BERLIN AGING STUDY AND THE HEALTH AND RETIREMENT STUDY

C.A. Hoppmann<sup>1</sup>, D. Gerstorff<sup>2</sup>, F.J. Infurna<sup>2</sup>, N. Ram<sup>2</sup>, 1. *Univ. of British Columbia, Vancouver, British Columbia, Canada*, 2. *The Pennsylvania State University, University Park, Pennsylvania*, 3. *Humboldt University, Berlin, Germany*

Perceiving one's future time as limited has been linked with motivational shifts toward prioritizing socio-emotional goals and high well-being. To date, little attention has been paid to the heterogeneity in future time perceptions within the group of older adults. We used Berlin Aging Study (M age = 85 years) and Health and Retirement Study data (M age = 68 years) to examine associations between various indicators of perceptions about the future and well-being in old age. Contrary to expectations but consistent across studies, we found that people who perceived their time left as limited reported lower well-being (lower life satisfaction and positive affect, more negative affect and depressive symptoms), even after controlling for biological, cognitive, and social resources. We take these findings to extend past studies using age-comparison designs, highlight the multidimensional nature of the construct, and interpret them according to the model of Strength and Vulnerability Integration.

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### USING THE PERSONAL PAST CREATES AN OPTIMISTIC FUTURE FOR OLDER BUT NOT YOUNGER ADULTS

N. Alea<sup>1</sup>, S. Bluck<sup>2</sup>, 1. *University of the West Indies, St. Augustine, Trinidad and Tobago*, 2. *University of Florida, Gainesville, Florida*

People reflect on the past and envision their future. We expected that adaptively using one's personal past would be related to an optimistic future time perspective, but that this may be moderated by age. Young ( $n = 89$ ;  $M$  age = 19.08) and older ( $n = 85$ ;  $M$  age = 73.09) men and women self-reported how often they use the personal past for two reasons: to search for meaning, and to direct future behavior. They also reported their future time perspective. Making meaning of the past and using the past to direct behavior were both related to a more open, optimistic future, only for older adults. Results are discussed in terms of how autobiographical memory can be used to create an optimistic sense of the future.

### A BALANCED TIME PERSPECTIVE AND NARRATIVE FORECLOSURE

J.D. Webster<sup>1</sup>, E.T. Bohlmeijer<sup>2</sup>, G.J. Westerhof<sup>2</sup>, 1. *Psychology, Langara College, Vancouver, British Columbia, Canada*, 2. *University of Twente, Enschede, Netherlands*

Time perspective and lifestyles are intimately connected and may have important links to well-being, yet little research in these areas

exists. This study investigated how a balanced time perspective, defined as positive perceptions about both one's past and future, is associated with an aspect of lifestories called Narrative Foreclosure (NF), a belief that one's lifestory is basically completed. Participants included 186 male and 326 female Dutch adults ranging in age from 17 – 92 ( $M = 46.46$ ,  $SD = 21.37$ ). Bivariate correlations showed expected negative correlations between NF and past and future subscales of the Balanced Time Perspective Scale (BTPS), and hierarchic regression analyses showed that time perspective accounted for additional variance in NF above and beyond demographic, physical health, and personality variables. ANOVA results indicated main effects for both age and time perspective whereby younger adults, and persons in the future and balanced time categories of the BTPS, scored lower in NF.

## SESSION 2660 (SYMPOSIUM)

### **RAISING THE GAF WITH THE SOCIAL FOCUS COHORT: AN INNOVATIVE CLINICAL PRACTICE TO IMPROVE THE OVERALL QUALITY OF LIFE FOR RESIDENTS IN LONG-TERM CARE WHO ARE BEHAVIORALLY CHALLENGING**

Chair: *E.S. Sutherland, Department of Geropsychiatry, San Francisco VA Medical Center, San Francisco, California, UCSF, San Francisco, California*

The Social Focus Cohort (SFC) was launched in 2007 at the San Francisco VA Medical Center (SFVAMC) Community Living Center (CLC) to improve the overall quality of life of veterans who are behaviorally challenging. After a thorough analysis of patient and provider data over a five year span (i.e., behavioral disturbances and duration, frequency of interdisciplinary team meetings) a relationship was discovered between these factors and suicidal ideation, homicidal ideation, and prevalence of Axis I and Axis II disorders. As a result, the SFC was developed and implemented in the CLC, which is a 120 bed skilled nursing facility and includes short-stay and long-term stay patients. The general purpose of the SFC is to provide specialized interdisciplinary expertise, comprehensive milieu-based therapy, and psychological/behavioral management to residents who can benefit from such a therapeutic environment. The SFC Team is comprised of a geropsychologist, medical providers, social worker, recreational therapy, occupational therapy, and all levels of nursing including a Clinical Nurse Specialist, Nurse Manager, MDS Coordinator, RN's, LVN's, and CNA's. The SFC Team assists residents in achieving the highest possible level of psychological, behavioral, cognitive, and social functioning within the least restrictive level of care and environment possible. This symposium will cover SFC development including implementation, inclusion/exclusion criteria and other considerations for admission; non-pharmacological interventions provided including community re-integration exercises for long-term care patients; and the importance of an Interdisciplinary Team in care of this nature. Implications include provision of a method of treatment for behaviorally challenging individuals in long-term care settings.

### **BEHAVIORAL ISSUES IN A SKILLED NURSING FACILITY? DEVELOPING AND IMPLEMENTING AN INNOVATIVE CLINICAL PROGRAM FOR RESIDENTS WHO ARE BEHAVIORALLY CHALLENGING**

*E.S. Sutherland, 1. Department of Geropsychiatry, San Francisco VA Medical Center, San Francisco, California, 2. UCSF, San Francisco, California*

Historically mental and behavioral problems are very prevalent in nursing home settings, difficult for staff to treat, and often times limit discharge options. The Social Focus Cohort (SFC) Team addresses complex problem behaviors by restructuring systems, implementing environmental interventions, creating a specialized team approach and increasing education and training. This individual symposium will highlight the process by which residents and providers are selected to be a member of the SFC as well as how this process was developed and

continues to be revised. Additional focus will be placed on resident outcomes for both those members who have successfully discharged back into the community and those who remain a life time member.

### **QUALITY OF LIFE IN A SKILLED NURSING FACILITY? IMPLEMENTING AND SUSTAINING A NON-PHARMACOLOGICAL INTERVENTION FOR RESIDENTS WHO ARE BEHAVIORALLY CHALLENGING**

*A. Stripling, Department of Geropsychiatry, San Francisco VA Medical Center, San Francisco, California*

Researchers have noted the benefits of non-pharmacological interventions and discuss the importance of social contact and structured activities in treatment addressing long-term care residents with behavioral issues. New to the Veterans Administration (VA) system, the Social Focus Cohort (SFC) is an innovative and effective program, which has resulted in a number of treatment outcomes including: lessening of symptom severity, reduction of specific target behaviors that impact resident's ability to function effectively, improving ability to relate to others, increasing perform activities of daily living and improving overall quality of life. Methods used, include but are not limited to: a variety of weekly therapeutic groups, VA wellness programs, individual therapy and/or neuropsychological evaluation which are provided as needed to foster independence and autonomy. This individual symposium will cover the facilitation and implementation of these interventions, as well as, veteran's reactions and responses.

### **WORKING TOGETHER IN A SKILLED NURSING FACILITY? THE IMPORTANCE OF A SPECIALIZED INTERDISCIPLINARY TEAM APPROACH WHEN CARING FOR RESIDENTS WHO ARE BEHAVIORALLY CHALLENGING**

*K.K. Jacobson, 1. Psychology, Department of Veteran Affairs San Francisco VA Medical Center, California, California, 2. John F. Kennedy University, Pleasant Hill, California*

Research has documented the benefits of collaborative team approaches, for both the care recipients (i.e. improved outcomes, more effective use of health resources) and providers (i.e. superior morale, coordination and problem-solving). As such, the Social Focused Cohort (SFC) Team utilizes members of various disciplines including geropsychologists, medical providers, social workers, recreational therapist, occupational therapist, and all levels of nursing. The SFC Team duties include: meeting to consider the appropriateness of new referrals, weekly team meetings with and without residents, and regularly scheduled Interdisciplinary Care Plan (ICP) meetings (i.e., initial, quarterly, and annual reviews). In order to provide fully comprehensive coverage, additional team rounds are conducted bi-weekly to check-in with residents and consultation occurs with staff members outside of the SFC team as needed. This individual symposium will cover the necessity of a team approach with residents who are behaviorally challenging, as well as, provider's reactions and responses to the SFC approach.

## SESSION 2665 (SYMPOSIUM)

### **STRESS, TRAUMA, AND RESILIENCE IN UNEXPECTED PLACES: A LIFE COURSE PERSPECTIVE**

Chair: *M. Aydin, UCLA Center for Health Policy Research, Los Angeles, California*

Co-Chair: *E.H. Davison, VA Boston HCS, Boston, Massachusetts*  
Discussant: *B.G. Knight, USC Davis School of Gerontology, Los Angeles, California*

Positive change following exposure to stressful events appears counterintuitive, but research has increasingly documented the concurrent socio-emotional growth that some post-trauma survivors experience alongside negative responses to the same trauma. More attention is needed to identify whether similar positive outcomes exist



among older populations and how different research methods can be used to appropriately capture post-traumatic responses across the life course. This symposium presents four unique papers that report on diverse older populations that have been exposed to trauma at some point in the life course. Takahashi looks at a sample of former Kamikaze pilots during World War II and reports on unexpected psychological outcomes later in life compared to their non-pilot counterparts. Similarly, Davison and colleagues present qualitative evidence of both stress and positive appraisal among a sample of women deployed for service during the Vietnam War. The Kahanas investigate meaning-making and resiliency among a sample of older Holocaust survivors living in Budapest, Hungary, and their adaptation to a society that was once the setting for their victimization. Finally, Carver and colleagues discuss the relationship between prior exposure and response to trauma and experiences of a separate future traumatic event. Specifically, the investigators present evidence of age and gender differences in coping with the Iraq War among post-9/11 witnesses. The life course perspective enables both clinicians and researchers to better understand not only post-trauma responses in diverse settings, but also the possible impact of future adversity on psychological well-being among the aging population.

#### **TO BE KAMIKAZE OR NOT TO BE KAMIKAZE: A COMPARISON OF PSYCHOSOCIAL PROFILES AND PERSONALITY TRAITS BETWEEN FORMER SUICIDE BOMBERS AND THEIR COUNTERPARTS**

M. Takahashi, *Psychology, Northeastern Illinois University, Chicago, Illinois*

A series of interviews were conducted to examine Eriksonian life strengths, depressive symptoms (Geriatric Depression Scale), and personality traits (NEO-FFI) among former Kamikaze pilots ( $n=24$ ; mean age=83.75) and their counterparts ( $n=33$ ; mean age=84.21). The former pilots are those who completed the training and were, at the end of the war, waiting for an order to fly out their first/final mission, while their counterparts consist of members from the same cohort who did not enlist. A possible long-term tendency toward posttraumatic symptomatology was also assessed in the former pilots who had volunteered for the suicide operation. The results indicate that, compared to the non-pilots, the former Kamikaze are less depressed, have more resources from which they were able to construe such psychosocial strengths as hope and purpose, and scored significantly higher on all Big Five personality characteristics except Neuroticism. Only one former pilot expressed a traumatic memory regarding the suicide operation.

#### **HEADING OFF TO WAR: POSTTRAUMATIC STRESS, AGE, AND PERSPECTIVES OF THE IRAQ WAR**

K.S. Carver, B. Hayslip, D. Holmes, *University of North Texas, Denton, Texas*

While older adults often develop effective coping skills from stress and adversity over the life course, we know little about how resilience influences later responses to trauma. We utilized questions from NIH's 9/11 Questionnaire to retrospectively assess posttraumatic stress following September 11, 2001, as well as difficulty coping with the Iraq War among 40 younger (ages 18-31) and 56 older (ages 60-86) adults. Analyses of variance indicated ( $p < .05$ ) the following: 1) younger persons and those with increased posttraumatic stress expressed more difficulty coping with the Iraq War, 2) younger individuals with less posttraumatic stress demonstrated more difficulty coping with the Iraq War, while among those with more posttraumatic stress, older adults expressed more difficulty, and 3) men with decreased posttraumatic stress and women with increased posttraumatic stress expressed more difficulty coping with the Iraq War.

#### **PSYCHOLOGICAL OUTCOMES AMONG OLDER WOMEN LINKED TO STRESSFUL AND POSITIVE NURSING EXPERIENCES IN VIETNAM**

E.H. Davison<sup>1,3</sup>, A. Pless Kaiser<sup>2,3</sup>, J. Wang<sup>1</sup>, J.M. Stellman<sup>4,5</sup>, *1. Women's Health Sciences Division, National Center for PTSD, VA Boston, Boston, Massachusetts, 2. Behavioral Science Division, National Center for PTSD, VA Boston, Boston, Massachusetts, 3. Boston University School of Medicine, Boston, Massachusetts, 4. Mailman School of Public Health, Columbia University, New York, New York, 5. SUNY-Downstate Medical Center, Brooklyn, New York*

The experience of female nurses who served in country during the Vietnam War has been described in the literature via interviews and anecdotal reports (e.g., Norman, 1986) but under examined in the empirical literature. As part of a larger study conducted in 1998-1999 in collaboration with the Vietnam Women's Memorial Project, this paper qualitatively examines responses to open-ended questions regarding stressful and positive experiences of approximately 1300 female military nurses and other women deployed to Southeast Asia. Stressful experiences included: negative living/working conditions; difficult interpersonal experiences; experiencing/worrying about war-related issues; having moral/ethical questions about the work engaged in. Positive themes that emerged included: helping others; patriotism; personal/professional growth; interpersonal relationships; travel and exposure to new cultures. We present the most prominent themes, and discuss differences based on pre-military trauma history, warzone exposures, and other sample characteristics. In addition, associations between various themes and current health are evaluated.

#### **RESILIENCE AND VULNERABILITY: AGING IN THE SHADOW OF SERIAL TRAUMA**

E. Kahana<sup>1</sup>, B. Kahana<sup>2</sup>, *1. Case Western Reserve University, Cleveland, Ohio, 2. Cleveland State University, Cleveland, Ohio*

We report insights offered by elderly Holocaust survivors about trauma survivorship while living among perpetrators. Individual interviews were conducted with 112 Holocaust survivors, living in Budapest Hungary. Respondents experienced serial trauma, enduring political upheavals during and after communism. They reported lack of current social supports from family and friends and high divorce rates (38% vs. 4% among US survivors). Depressive symptoms were prevalent. Nevertheless, survivors reported having goals and meaning in life, reflecting resilience. Work and leisure activities contributed to meaningfulness. Elderly survivors valued bearing witness and preserving memories of the Holocaust. Surprisingly, religious affiliation was a salient aspect of meaning-making for elders, who otherwise engaged in few religious practices. We note important interactions between the macro social context and individual adaptations among elderly survivors of man-made disasters who age in settings of victimization.

#### **SESSION 2670 (PAPER)**

#### **INTERNATIONAL PERSPECTIVES ON GRANDPARENTING**

#### **CONTEMPLATING OLD AGE AND THE GLOBAL CARE CHAIN: LESSONS FROM TRANSNATIONAL GRANDMOTHERS RAISING GRANDCHILDREN**

K.D. Kalaw, *Sociology & Gerontology, Miami University, Oxford, Ohio*

A growing issue on the provision of care for older residents besets the world's most developed nations. The caregiver's role is often highlighted as more research is undertaken to explain his/her well-being, which is crucial in the effective delivery of care services to older adults in developed nations. However, there has been less effort devoted to

elucidate the increasing involvement of grandmothers in the transnational migration scene. Important is the grandmothers' direct participation of care work and household maintenance among families and children in developing nations who are left behind by the transnational parents. The purpose of the current study was to better understand the critical role grandmothers in the Philippines play in the global care arena as they contemplate on their aging. The Philippines is a country with a high prevalence of migrant care workers sent abroad to provide care services elsewhere. Interviews with three grandmothers provide a picture on how they foresee themselves as they continue to be providers of care among their grandchildren. All three grandmothers saw their lives have changed significantly, and are living comfortable lives, however, each has her own perception as it relates to their aging and future. Related issues on migratory strategies emerged from their narratives and revealed how they address issues on economic challenges, solitude and family relationships. This preliminary study offers an exploratory investigation to consider the narratives of grandmothers, and their untold stories to fill in the missing junction that sustains global care among transnational families.

### **TAKING GRANDPARENT EMPOWERMENT TO TANZANIA: CROSS-CULTURAL CHALLENGES**

C. Cox, *Graduate School of Social Service, Fordham, New York, New York*

More than a decade ago, the author developed a grandparent empowerment program for custodial grandparents in the United States. The program has received national awards and been replicated in many sites. This paper reports on the author's experience of taking this program to a group of custodial grandparents in Tanzania. The program focuses on developing parenting skills as well as empowering grandparents in both the family and the community. The curriculum was modified, translated into Swahili, and presented by the author with the assistance of a translator to 15 grandparents in a small rural village near the Tanzanian capital. The group shared many similar problems with grandparents in the United States but their traditional roles as well as their child rearing techniques varied. In addition, most lived in extreme poverty. This paper reports on the grandparents' responses to the program and the challenges in presenting it and making it appropriate to their specific needs. The results suggest that empowerment training can be an important intervention for grandparents struggling to raise grandchildren but at the same time, it must be culturally sensitive. The program also reinforced the idea that personal empowerment can serve as an important component for empowerment in the community.

### **GRANDPARENTHOOD CERTAINTY PREDICTS GRANDPARENTING EFFORTS? : EVIDENCE IN RURAL CHINA**

Z. Cong<sup>1</sup>, M. Silverstein<sup>2</sup>, 1. *Human Development and Family Studies, Texas Tech Univ, Lubbock, Texas*, 2. *University of Southern California, Los Angeles, Texas*

**Purpose:** The grandparenthood certainty theory posits that the certainty of grandparenthood explained why maternal grandparents are more involved in their relationships with grandchildren. This paper examined this theory within the rural China context. **Data/Methods:** The sample included 1508 Chinese elders with 5105 corresponding children who lived with their spouses. Fixed effects model was used to examine whether contact between parents and children, a surrogate for grandparenthood certainty, was more important predictors for sons than for daughters in getting help with grandchildren care from their parents. **Results:** We found that elder parents' help with grandchildren care offered to daughters was not conditional on the contact between daughters and their parents, but the help with grandchildren care to sons was contextual to how much contact they had with their parents. **Conclusion:** The results were consistent with the grandparenthood certainty theory even in rural China, where son preference was strong and sons

received much more grandchildren care from their parents. This will provide insights to intergenerational relationships with sons and with daughters with a multidisciplinary perspective.

### **GRANDPARENTING IN EUROPE – THE ROLE OF FAMILY POLICY ENVIRONMENTS, CULTURES AND STRUCTURES ON GRANDPARENT CHILDCARE**

K.F. Glaser, G. Di Gessa, E. Ribe, A. Tinker, D. Price, *Institute of Gerontology, King's College London, London, United Kingdom*

Our aim is to investigate how different family policy environments, cultures and structures shape grandparent care across selected European countries (Denmark, The Netherlands, Germany, France, England, Spain, Italy). Ageing populations, and other demographic changes such as more mothers in the labour market and higher levels of relationship breakdown, indicate that grandparents are likely to play an increasingly significant role in family life. To date, there is a lack of evidence on drivers (and in particular, policy drivers) of different grandparenting patterns across Europe. Moreover, no one has considered the role of policies relating to work and care for both generations, i.e. grandparent and adult child. In addition, the role of family cultures and structures is also considered. Employing data for selected countries from the Survey of Health, Ageing and Retirement in Europe (SHARE) and the English Longitudinal Study of Ageing (ELSA) we used multilevel regression models to investigate how family policy environments, cultures, and structures are related to the involvement of grandparents with their grandchildren. Preliminary results suggest that countries cluster into regimes of grandparental care, reflecting different family cultures, national policies and other country-specific contexts.

## **SESSION 2675 (PAPER)**

### **RESILIENCE**

#### **THE ASSOCIATION OF RESILIENCE WITH MENTAL AND PHYSICAL HEALTH OUTCOMES AMONG OLDER AMERICAN INDIANS**

M. Schure, M. Odden, R. Goins, *Public Health, Oregon State University, Corvallis, Oregon*

Few studies have examined resilience among older American Indians (AIs). Understanding the role of resilience among this population is important as they have historically and contemporarily faced and adapted to adversity, and disproportionately suffer from poor physical and mental health outcomes. The aim of this study was to examine the association of resilience with measures of mental and physical health. Our data were derived from the Native Elder Care study, a cross-sectional study of community-dwelling AIs aged 55 and older, conducted between 2006 and 2008. From a randomly-selected subsample of 189 Native Elder Care Study participants, 185 responded to the previously validated 10-item version of the Connor-Davidson Resilience Scale. Of these respondents, 25% reported low, 41% medium, and 34% high resilience. Unadjusted analyses revealed significant associations between resilience and depressive symptomatology, anxiety, and pain although there was not an association between resilience and medical comorbidity. Regression models were estimated for depressive symptomatology, anxiety, and pain controlling for demographic characteristics and the other measures of mental and physical health. Results indicated that those who reported high resilience scores had significantly lower odds of experiencing depressive symptomatology compared to those who reported low resilience (OR = 0.02, 95% CI = 0.00, 0.15) and pain (OR = 0.36, 95% CI = 0.15, 0.89). Resilience scores were not associated with anxiety. These findings suggest that resilience among older AIs may have important implications for physical and mental health outcomes. We will discuss the potential positive impact of resilience promotion programs on older AI health.

## RISK AND RESILIENCE: THE IMPACT OF SOCIAL DETERMINANTS AND PSYCHOSOCIAL STRESSORS ON DEPRESSION IN AFRICAN-AMERICAN OLDER ADULTS

K. Wright<sup>1,2,3</sup>, G.A. Pepper<sup>1</sup>, 1. *The University of Utah School of Nursing Hartford Center of Geriatric Nursing Excellence, Salt Lake City, Utah*, 2. *John A. Hartford Building Academic Geriatric Nursing Capacity Scholar, New York, New York*, 3. *Substance Abuse and Mental Health Services Administration MFP at ANA Fellow, Washington, District of Columbia*

**Introduction:** By 2020, depression will rank second in disease burden to cardiovascular disease. A paradox exists between the number of risk factors and prevalence of depression in African-Americans (AA) as compared to Caucasians, though studies are inconsistent regarding extent of depressive symptoms by race. **Purpose:** The purpose of this literature synthesis is to clarify the social determinants, psychosocial stressors and paradox of increased risk of depression in AA older adults. **Evidence Acquisition:** Relevant articles were identified through PubMed, Psych-Info and Cumulative Index of Nursing and Allied Health (CINHAL) databases and ancestral search. Total of 1319 articles were reviewed; 1144 excluded based upon the abstract and title; 175 evaluated for inclusion criteria: >10% of sample African-American; mean age >50; depression outcome (vs. predictor) variable. Total sample was 35 articles. Henning model was used for synthesis. **Evidence Synthesis:** Social determinants of health were consistent: those who were of a low-income and lived in disadvantaged neighborhoods had greater depressive symptoms. Neighborhood cohesion was a buffer against neighborhood disadvantage in AA. Greater social contact did not confer protective benefits. Individual level stressors such as primary care of grandchildren, lack of social ties, stigma, and racism/discrimination negatively impacted AA older adults. Spirituality/religion and adequate social supports may explain the paradox of lower depressive symptoms for AA older adults as compared to Caucasians in the face of greater cumulative stressors over the life course. **Conclusion:** Learning from the strengths of AA older adults that may buffer depressive symptoms can benefit all older adults; not just AAs.

## EFFECTS OF SELF-EFFICACY ON SUBJECTIVE FUNCTIONING, ACTIVITY, AND AUTONOMY IN MULTIMORBID ADULTS

R. Schwarzer<sup>1</sup>, L.M. Warner<sup>1</sup>, B. Schüz<sup>3</sup>, C. Tesch-Roemer<sup>2</sup>, S. Wurm<sup>2</sup>, J.P. Ziegelmann<sup>1</sup>, 1. *Freie Universität Berlin, Berlin, Germany*, 2. *The German Centre of Gerontology, Berlin, Germany*, 3. *University of Tasmania, Hobart, Tasmania, Australia*

Multimorbidity poses a threat to autonomy in older adults in line with less activity and compromised functioning. This study examined effects of self-efficacy on three outcomes: subjective physical functioning, physical activity, and perceived autonomy. The longitudinal study was conducted with 309 multimorbid older adults (aged 65–85) including three measurement points over 6 months. First, subjective physical functioning was regressed on health-specific risk perception and general self-efficacy. The latter two factors interacted in a way that risk perception predicted physical functioning only for individuals with low self-efficacy. Second, received friend support as well as self-efficacy were specified as predictors of exercise frequency. Besides main effects of social support and self-efficacy, an interaction between them emerged. Persons with low support were less likely to be active even if they were highly self-efficacious. Third, we tested effects of perceived self-efficacy and instrumental received social support on autonomy. Low self-efficacy and low support were jointly associated with lack of autonomy. However, the relation of self-efficacy with autonomy was also moderated by received support. The combination of high self-efficacy and low support yielded the highest level of autonomy. This is explained with higher need of support in multimorbid older adults who need outside help and who are competent in mobilizing such help. Receiving social support bolstered autonomy in lower self-efficacious

individuals, but in highly self-efficacious individuals support threatened autonomy.

## HARDINESS AND PROBLEM SOLVING STRATEGIES OF OLDER ADULTS ENGAGED IN INTENSIVE VOLUNTEERING

C. Cheek<sup>1</sup>, K.W. Piercy<sup>2</sup>, M. Kohlenberg<sup>1</sup>, 1. *Human Development and Family Studies, Penn State, Mont Alto, PA, Pennsylvania*, 2. *Utah State University, Logan, Utah*

For older adults, engaging in problem solving is often among their chief tasks. Hardiness, or dispositional resilience, is the ability to withstand stressors, and is related to the ability to solve problems. Kobasa (1979) maintained that hardiness consists of deep commitment to the activities of one's life, a positive attitude that appreciates challenge and change, and a belief that one can control or influence the events in one's experience. These characteristics were exhibited by 19 men and 18 women over 50 years old who demonstrated the components of hardiness in creatively solving problems in challenging circumstances of humanitarian and disaster relief service. The Mormons, Mennonites, and Lutherans who participated in this intensive volunteering, or volunteering done on a 24-hour basis away from home, averaged 56.24 years old (SD = 6.22), were mostly married (86.8%), and served an average of 81.95 weeks (SD = 61.2). Using interpretative phenomenological analysis, we found that not only were challenge, control, and commitment involved in problem solving, but among older volunteers, the overlap of these three components created secondary components that contributed strongly to problem-solving abilities. These included the use of life experiences as reservoirs of strategies, an emphasis on meaningful experience, and the use of values and social support in decision-making. Based on this data analysis, we suggest a model that will aid older adults in problem solving, one that reflects the use of both the main and secondary components of hardiness.

## DO ONLY THE STRONG SURVIVE? EXPLORING ADVERSITY AND RESILIENCE IN LATER LIFE

L. Manning, *Center for Aging/Dept of Sociology, Duke University, Durham, North Carolina*

Movement across the lifecourse assures that an individual will encounter a multitude of life events, and for some individuals these life events will be sources of hardship, stress, or trauma. What determines whether people flourish, languish, thrive or survive when encountering these events (Sarkisian & Lachs, 1996)? What circumstances increase the likelihood of having resilience, or the capacity to maneuver through adversity in a manner that protects health and well-being? Examining resilience considers how individuals recover from distressing events and persist through extreme adversities, while negotiating everyday aspirations and challenges in life (Maluccio, 2002; Zrally & Nyirazinyoye, 2010). Aging and the experience of being an older adult reveal and expose such aspirations, challenges, and complexities. Although aging affords many opportunities for growth and advancement, growing older also presents inherent challenges. It is the resilient individuals who can effectively and efficiently navigate adversity. Using grounded theory, an analysis of 60 qualitative interviews with older adults age 65 and older was conducted. In this study, the key factors of resilience in later life are investigated. Findings indicate that resilient elders engage in five key behaviors when navigating hardship: adversity confrontation, problem re-framing, resource mapping, self-preservation, and embracing uncertainty. From these findings, a mechanistic typology or an emergent theory of resilience and its linkages to health and well-being has been created. This work contributes to resilience research by offering an interdisciplinary perspective that examines the dynamics of over the lifecourse. Implications for increasing and enhancing resilience in older adult populations are considered.

## SESSION 2680 (SYMPOSIUM)

### BIODEMOGRAPHY OF AGING AND LONGEVITY

Chair: *M. Engelman, University of Chicago, Chicago, Illinois*  
Discussant: *C.L. Seplaki, University of Rochester, Rochester, New York*  
Discussant: *R. Varadhan, Johns Hopkins University, Baltimore, Maryland*

Demographic models that include an exponential rise in mortality hazards in adulthood have been shown to accurately describe the age pattern associated with many individual causes of death as well as all-cause mortality. This apparent commonality in hazard trajectories — despite differences in the underlying physiological mechanisms that cause them — suggests that all age-related pathologies are potentially multistage processes reflecting multisystem physiological dysregulation with age. In this symposium, we consider the biodemography of aging and longevity, using methods from formal demography, epidemiology, and statistics to describe the age pattern of mortality and dysregulatory patterns in aging populations. The first paper (Engelman et al.) provides an overview of mortality hazards across the age spectrum from early life to very old ages, and focuses on estimating the hazard's inflection point — the age when cohort mortality begins to increase exponentially with each passing year and the population can be described as “aging” by multiple statistical and mechanical definitions. The second paper (Gavrilova and Gavrilov) focuses on mortality at very old ages, and uses data on humans and rodents to demonstrate the persistence of the exponential pattern of mortality into the very oldest ages. The third and fourth papers (Dusseault-Bé langer et al. and Cohen et al.) shift the focus more specifically to biomarkers of aging, using novel statistical methods and two uniquely detailed longitudinal studies to describe variation in biomarkers across populations and time. Taken together, the papers explore the consistency of biomarker patterns with age-related physiological changes and increasing mortality risks.

### BIODEMOGRAPHY OF OLD-AGE MORTALITY IN HUMANS AND RODENTS

*N.S. Gavrilova, L.A. Gavrilov, NORC and the University of Chicago, Chicago, Illinois*

The growing number of persons living beyond age 80 underscores the need for accurate measurement of mortality at advanced ages. Earlier studies suggested that the exponential growth of mortality with age (Gompertz law) is followed by a period of deceleration, with slower rates of mortality increase. This study challenges earlier conclusions with new data from the U.S. Social Security Administration's Death Master File and survival records for laboratory mice and rats. Analyses of human extinct birth cohorts (1890-1898) demonstrated that mortality deceleration is far less pronounced when it is measured over monthly (rather than yearly) age intervals, and in higher-quality data. Mortality deceleration is also challenged by recent rodent data. Simulations show that some estimates of mortality may produce spurious mortality deceleration, while the Sacher estimate turns out to be the most accurate estimate of hazard rate. Supported by the National Institute on Aging (R01 AG028620 grant).

### UNDERSTANDING THE AGING PROCESS USING PRINCIPAL COMPONENT ANALYSIS ON LONGITUDINAL BIOMARKERS SUITES: INCHIANTI

*F. Dusseault-Bé langer<sup>1</sup>, A.A. Cohen<sup>1</sup>, Q. Xue<sup>2</sup>, L.P. Fried<sup>3</sup>, L. Ferrucci<sup>4</sup>, 1. Université de Sherbrooke, Sherbrooke, Quebec, Canada, 2. John Hopkins Bloomberg School of Public Health, Baltimore, Maryland, 3. Columbia University Mailman School of Public Health, New York, New York, 4. National Institute of Aging, Baltimore, Maryland*

Last year, we presented data showing that 69 biomarkers from the Women's Health and Aging Study II dataset could be used to generate 3 stable axes that explained about 20% of the total variation in biomarkers. However, it was not clear if these results would extend to other

populations. How universal (or not) these results are gives a strong indication of the stability of physiological associations across populations. Here, we compare our previous results to those from nearly 100 biomarkers from the Italian InCHIANTI database collected on young and old individuals. Using Principal Component Analysis (PCA) and bootstrap methods, we show that this dataset generates four stable axes explaining 29.14% of the variance. Generally speaking, we are able to identify some relatively stable axes between InCHIANTI and WHAS, though the axes do not always correspond to existing conceptions of physiology, and there are important differences between the datasets as well.

### MULTI-SYSTEM BIOMARKER ANALYSES IN TWO AGING POPULATIONS: SAME BIG PICTURE, DIFFERENT DETAILS FOR WHAS AND INCHIANTI

*A.A. Cohen<sup>2,1</sup>, F. Dusseault-Bé langer<sup>2</sup>, L.P. Fried<sup>3</sup>, L. Ferrucci<sup>4</sup>, 1. Groupe de Recherche PRIMUS, Centre Hospitalier Universitaire de Sherbrooke, Sherbrooke, Quebec, Canada, 2. University of Sherbrooke, Sherbrooke, Quebec, Canada, 3. Columbia University Mailman School of Public Health, New York, New York, 4. National Institute of Aging, Baltimore, Maryland*

Recent studies have used various methodologies to examine how multiple biomarkers from different physiological systems co-vary during the aging process. Here, we present a comparison of such results between the Women's Health and Aging Study II and InCHIANTI datasets. Broadly speaking, for methodologies including multivariate distribution analysis and principal components analysis, the two datasets produce similar qualitative results: clearly identifiable and stable patterns amid substantial complexity. However, the precise details of which biomarkers associate with which others and how biomarkers associate with aging differs substantially between these populations. We conclude that population-level characteristics such as culture and diet may have a substantial influence on at least some aspects of aging physiology.

### THE QUIESCENT PHASE IN HUMAN MORTALITY: WHEN DO POPULATION START TO AGE?

*M. Engelman<sup>1</sup>, R. Varadhan<sup>2</sup>, C.L. Seplaki<sup>3,2</sup>, 1. Sociology, University of Chicago, Chicago, Illinois, 2. University of Rochester, Rochester, New York, 3. Johns Hopkins University, Baltimore, Maryland*

We investigate the transition between the quiescent phase in human mortality — ages when the mortality hazard is lowest — to the Gompertz phase, when mortality risks increase exponentially with age. Using non-linear fitting methods and data for cohorts born 1800-1919, we estimate the parameters of the Siler model, describing mortality hazards across the full age spectrum. We then calculate inflection points in the hazard curve and characterize changes in the starting and ending ages of the quiescent phase, describing differences over time and between sexes. As overall survival improved over time, the quiescent phase has gotten longer, with an earlier beginning in early childhood and a later end at the conclusion of the reproductive years. Biomarker data provide a key avenue for testing the quiescent phase hypothesis, allowing us to chart age-related physiological changes and examine the consistency of such patterns with growing mortality risks.

## SESSION 2685 (SYMPOSIUM)

### BODY COMPOSITION AND FUNCTIONAL/METABOLIC CONSEQUENCES OF WEIGHT REGAIN FOLLOWING INTENTIONAL WEIGHT LOSS IN OLDER ADULTS

Chair: *B. Nicklas, Wake Forest School of Medicine, Winston-Salem, North Carolina*

Discussant: *A.B. Newman, University of Pittsburgh, Pittsburgh, PA, Pennsylvania*

The prevalence of obesity, and its metabolic consequences, is increasing among all age groups, including in older adults who are at height-

ened risk for sarcopenia and osteopenia/osteoporosis. Yet, in addition to fat loss, weight loss achieved through caloric restriction and/or exercise results in significant loss of skeletal muscle mass and bone mineral density, which could exacerbate aging-related loss of mobility, fracture incidence, or chronic disease. Furthermore, most individuals will regain their lost weight over time. Since the accretion of muscle and bone are impaired with aging, weight loss and subsequent weight regain may result in persistent muscle and BMD loss, perhaps leading to heightened disease risk, as shown by data from the intervention trials in this symposium. The results of these studies highlight the urgent need to identify novel strategies to minimize weight loss-induced decreases of muscle and bone in older, obese patients with medical or functional complications that will benefit from weight loss. The first presentation discusses the extent of weight regain following intentional weight loss in older adults with knee osteoarthritis. The next presentation illustrates that bone mineral density lost during weight reduction may not be fully recovered with weight regain in hormone-deficient, postmenopausal women. The third presentation shows body composition and cardiometabolic risk factors are worse one-year subsequent to a weight loss intervention, compared to baseline, in women who regained their lost weight. The final presentation shows that performing aerobic exercise during intentional weight loss may provide longer-term metabolic benefit despite weight regain in postmenopausal women

### **SKELETAL EFFECTS OF WEIGHT LOSS AND REGAIN IN POSTMENOPAUSAL WOMEN**

W.M. Kohrt, K. Villalon, *University of Colorado, Denver, Colorado*

There is a loss of bone mineral density (BMD) with weight loss, even when generated through exercise training. Whether this decline in BMD is recovered with weight regain was studied in postmenopausal women (n=23) who completed a 6-month exercise-based weight loss program and 18-month follow-up. Women (age=57±5 yr; BMI=29.6±4.0 kg/m<sup>2</sup>) lost 3.9±3.5 kg during the weight loss intervention. During follow-up, they regained 2.9±3.9 kg. Weight loss resulted in decreased hip (-0.1±3.5%; P=0.03) and lumbar spine (LS; -1.7±3.5%; P=0.002) BMD, and was accompanied by increased bone resorption (serum C-terminal telopeptide of type I collagen, CTX: 34±54%; P=0.08). However, weight regain did not generate increases in LS (0.05±3.8%; P=0.15) or hip (-0.6±3.0%; P=0.81) BMD or a decrease in bone resorption (CTX: -3±37%; P=0.73). The findings suggest that BMD lost during weight reduction may not be fully recovered with weight regain in hormone-deficient, postmenopausal women

### **WEIGHT REGAIN FOLLOWING AN 18-MONTH INTENTIONAL WEIGHT LOSS TRIAL IN OLDER OVERWEIGHT/OBSE ADULTS WITH KNEE OSTEOARTHRITIS: THE IDEA FOLLOW-UP PILOT STUDY**

D.P. Beavers<sup>1</sup>, B. Nicklas<sup>1</sup>, J. Newman<sup>2</sup>, S.P. Messier<sup>2</sup>, *1. Wake Forest School of Medicine, Winston-Salem, North Carolina, 2. Wake Forest University, Winston-Salem, North Carolina*

This study determined the extent of weight regain and changes in gait speed in older overweight/obese adults with knee OA within a minimum of 2 years following completion of an 18-month weight loss intervention, with and without exercise (WL; WL+EX). Mean weight loss was 8.9kg (9.5%) in the WL and 10.6kg (11.4%) in the WL+EX groups. The first 166 randomized participants that completed the study are being recalled for an extended follow-up visit. Of the 22 measured to date (mean age=68±5.5yrs), preliminary evidence indicates increases in weight (4.3±5.7kg) and BMI (1.6±2.1kg/m<sup>2</sup>) from trial completion. However, on average, these remain reduced from baseline (weight= -4.8±6.1kg, BMI= -1.9±2.2kg/m<sup>2</sup>), with 4 (18%) participants with follow-up BMI exceeding baseline BMI. Likewise, walking speed at long-term follow-up was decreased from the end of the trial (-0.1±0.2m/s), but still higher than baseline (0.1±0.2m/s), with 6 (27%) participants showing slower long-term walking speeds than at baseline

### **BODY COMPOSITION AND CARDIOMETABOLIC RISK FACTOR CHANGES WITH INTENTIONAL WEIGHT LOSS AND SUBSEQUENT WEIGHT REGAIN**

K.M. Beavers, D.P. Beavers, M.F. Lyles, B. Nicklas, *Wake Forest School of Medicine, Winston-Salem, North Carolina*

This study determined how body composition and cardiometabolic risk factors change in the year following a 12% intentional weight loss in postmenopausal women. Measurements were taken in 78 women before, immediately after, and 12-months after the weight loss interventions. DXA scans showed that fat was regained to a greater degree than lean mass in women who regained weight. All risk factors (blood pressure, total, HDL, and LDL cholesterol, triglycerides, fasting glucose and insulin, and HOMA-IR) significantly improved with weight loss, but regressed toward baseline during the year subsequent to weight loss. Increases in total cholesterol, triglycerides, glucose, insulin, and HOMA-IR during the post-intervention follow-up were significantly associated with magnitude of weight regain. Comparison of baseline and 1-year post-intervention risk factors showed worse total and LDL cholesterol, insulin, and HOMA-IR in regainers (p<0.05), suggesting that intentional weight loss followed by weight regain may worsen specific cardiometabolic risk factors in postmenopausal women

### **DOES THE ADDITION OF EXERCISE DURING INTENTIONAL WEIGHT LOSS IN OBSE POSTMENOPAUSAL WOMEN PROVIDE METABOLIC BENEFIT DURING SIX MONTH WEIGHT REGAIN?**

M. Serra, A. Ryan, A. Goldberg, *University of Maryland, Baltimore, Maryland*

Weight maintenance after weight loss is difficult and body fat regain may be site specific. This study determined regional body composition and metabolic factors 6 months after intentional weight loss alone (WL, n=28) and with aerobic exercise (AEX+WL, n=23) in obese sedentary postmenopausal women (age:6±1 yrs, BMI:34±1 kg/m<sup>2</sup>, VO<sub>2</sub>max:19±1 ml/kg/min, X±SEM). During the 6-mo follow-up period, all women were given the option of attending a monthly nutrition class and the AEX+WL group could use the exercise facility. Fat mass, fat-free mass, visceral and subcutaneous abdominal fat, and subcutaneous mid-thigh fat decreased significantly after WL and AEX+WL and remained significantly lower at one-year than at baseline despite a small, but significant, gain in body weight during follow-up (WL= +1.9%; AEX+WL= +1.8% weight regain). Improved glucose tolerance and reduced post-prandial hyperinsulinemia were maintained during follow-up in AEX+WL, but not WL, suggesting that exercise may have long-term metabolic benefit despite weight regain

## **SESSION 2690 (SYMPOSIUM)**

### **HUMANITIES AND ARTS CHARTING A NEW FRONTIER IN GERIATRIC EDUCATION**

Chair: *A. Sherman, National Center for Creative Aging, Washington, District of Columbia*

Discussant: *G.P. Hanna, National Center for Creative Aging, Washington, District of Columbia*

The humanities and arts in geriatric education centers offers a new frontier to enhancing person centered care, learner centered strategies and evaluation methodology. This symposium will present best practices from three geriatric education centers utilizing the humanities and the arts to provide holistic interprofessional education from multiple perspectives as educational tools to improve the professional development of healthcare providers; clinical intervention to improve the quality of healthcare of older people and as evaluation methodology. The New England GEC will present a new way to see older artists living and working in local communities as role models for healthy aging to change attitudes positively toward the potential of older people later in life. Texas GEC charts a new course in highlighting cutting edge

national evidence based humanities and arts programs in improving the quality of healthcare serving people with Alzheimer's and dementia. WAGECC is using humanities and arts to improve person centered care through learner centered interdisciplinary programs featuring the use of story/narrative. Each center incorporates many different kinds of arts modalities and work with the life experience of older people, their families and caregivers to create communities based on strength and satisfaction while addressing the signs and symptoms of health and illness in later life. Evaluation methodology additionally incorporates the humanities and arts to encourage healthy work environments where caregivers can be assured of a safe process for mapping new ways in patient care and chronic illness.

#### **ART IN AGING - LIVING ART LIVING WELL STUDIO, A MODEL FOR GERIATRIC EDUCATION**

J.A. Metcalfe<sup>1</sup>, C. Paolini<sup>2</sup>, 1. *National Center for Creative Aging, Washington, District of Columbia*, 2. *UNE Maine Geriatric Center, Portland, Maine*

The UNE-MGEC "Living Art Living Well Studio" is a 4 part studio series designed for health professionals, health professions faculty and students to improve awareness and knowledge regarding the impact of Art in aging and how creativity matters to the health of the body, mind and spirit of older adults. UNE-MGEC has partnered with the Maine Arts Commission and Cultural Resources to develop this model learning series. Each studio involves an elder Maine Master Artist and apprentice recruited from the 20 year old Maine Arts Commission's Traditional Arts Apprenticeship Program. Each studio is one and one half hours in length. The first part involves Master Artist and apprentice life review, facilitated by a folklorist. The second part explores the intersection of the role of art in aging as one grows older through the lens of the elder Master Artist and the importance of passing cherished legacy to the next generation.

#### **THE HUMANITIES AND ARTS ENHANCING PERSON CENTERED CARE IN GERIATRIC EDUCATION**

B. Lunsford, 1. *National Center for Creative Aging, Washington, District of Columbia*, 2. *Washington Area Geriatric Education Center consortia, Washington, District of Columbia*

WAGECC will describe two ways of using the humanities and creative arts to enhance ongoing professional development programs in geriatric education. First humanities and arts are used in teaching person centered care. Along with different arts forms, the use of story helps learners gain a more holistic perspective of older people and their families. This kind of education may use case studies and/or narratives that illustrate the lived experience around their health and illness, job, family, hobbies and existential dimensions. The second way the humanities and arts are used is to engage the learner more fully in the learning experience. This provides a more learner centered approach and models the value of person-centered interactions and relationship building for the caregiver. WAGECC is developing methodology for evaluating the use of humanities and arts as it is integrated throughout the inter-professional educational programs, which supports a culture of evaluation across settings.

#### **ARTS FOR PLEASURE, ARTS FOR THERAPY: LESSONS FROM GSA HUMANITIES AND ARTS IN GERIATRIC EDUCATION**

R. Roush, 1. *National Center for Creative Aging, Washington, District of Columbia*, 2. *Texas Consortium Of Geriatric Education Centers, Houston, Texas*

Nearly five million persons 71 y.o. and older (22%) have mild cognitive impairment without dementia that adversely affects memory and other executive functional capacities (Plassman 2007). For this group and the five million persons with Alzheimer's disease, creative approaches are needed to assist them and their caregivers cope with the

marked changes in their lives. The arts can be a helpful adjunct to traditional health care practices for those who now and who will have dementia. This presentation summarizes the 1) the relationship between the plasticity of the brain and the arts, 2) use of the literary device narrative medicine, 3) how exposure to great works of art evokes emotional memory among persons with AD; and 4) cases of persons with dementia whose engagement in the arts helped them cope. This presentation will make the case for more research to target an art form as the independent variable and measure in the hypothesizing change on the dependent one related to geriatric education..

### **SESSION 2695 (SYMPOSIUM)**

#### **METHODOLOGICAL ISSUES IN CONDUCTING RESEARCH WITH OLDER ADULTS: CHALLENGES FACED BY BAGNC ALUMNI**

Chair: *C.R. Shillam, Betty Irene Moore School of Nursing, University of California, Davis, Sacramento, California*

Discussant: *E.O. Siegel, Betty Irene Moore School of Nursing, University of California, Davis, Sacramento, California*

Increasing demand for adaptations in methodological approaches to research with older adult populations brings new and unexpected challenges in conducting such pioneering studies. This panel of Building Academic Geriatric Nursing Capacity (BAGNC) alumni will present a variety of issues experienced in their own innovative research approaches. First, electronic medical records in academic medical centers can serve as a valuable contribution to clinical research. However, these systems are designed for clinical use and challenges arise when attempting to retrieve data for research: poor data quality and difficulty with defining variables for data collection and analysis. Second, community based participatory research methods enhance the relevance of findings for researchers, participants, and the larger community. Identifying and establishing community partnerships when conducting research involving older adults can be difficult. Third, accessing caregivers of frail older adults for research is critical to understanding best practices for support of the caregiver-care recipient dyad. Recruiting caregivers while maintaining confidentiality of care recipients can be problematic. Fourth, conducting facility-based psychophysiologic research with older adults can be challenging. Analyzing field notes across these types of studies may provide clues for researchers about ways to improve the methodology for this type of research. This panel will present challenges researchers face when working with older adult populations. The discussant, Dr. Elena O. Siegel, will provide a synthesis of the issues presented and facilitate a discussion of strategies to successfully address these often-times difficult situations.

#### **METHODOLOGICAL COMPLEXITIES OF USING ELECTRONIC MEDICAL RECORDS AS A DATA COLLECTION TOOL**

*C.R. Shillam, Betty Irene Moore School of Nursing, University of California, Davis, Sacramento, California*

According to the National Institute of Health, the use of electronic medical records (EMR) in academic medical centers can serve as a valuable contribution to clinical research. However, these systems have been designed for clinical use and many challenges arise when attempting to use this data source for conducting research. Data collection of variables supported by the state of the science may not be possible based on the way in which the data are entered into the EMR. Additionally, the quality of the data is often inconsistent and acquiring adequate data for meeting statistical power requirements can be cumbersome. Having a well-balanced interprofessional team is one strategy for success with this approach to using EMR as a mechanism for data collection. Strong conceptual definitions of variables also aid in identifying how to capture data in a system designed for clinical use and not for research.

## **THE EXPERIENCE OF CARING FOR YOUR SPOUSE WITH ADVANCED HEART FAILURE: A RICOEURIAN PHENOMENOLOGY**

H.C. Bursch, *Adult and Gerontological Nursing, College of Nursing, The University of Iowa, Iowa City, Iowa*

Although not commonly used in the United States, Ricoeurian Phenomenology is a valuable qualitative method to study caregivers of older adults with advanced heart failure (AHF) because it is grounded in a philosophy that allows caregivers to consider their intention for how to be with their care recipients (CRs) at the end of life. However, the method requires deep reflection and has special implications for older adults. This study describes challenges encountered in recruiting caregivers as separate entities while protecting CR confidentiality. Recruiting AHF caregivers can be challenging when the prognosis of end-of-life is uncertain and healthcare providers are hesitant to introduce palliative care discussions. Valuable lessons-learned about both the methodology and the sampling techniques in this population of caregivers dealing with complex illness presentations at the end of life will be presented.

## **FINDING THE RIGHT RURAL COMMUNITY PARTNERS FOR INJURY RESEARCH IN OLDER ADULTS**

L.S. Edelman, *College of Nursing, University of Utah, Salt Lake City, Utah*

Rural populations are aging faster than urban populations. Rural older adults have injury risks influenced by individual health, social and economic factors, as well as community and environmental factors. It is, therefore, important to conduct research of individual and community perceptions of injury risks. When conducting community based participatory aging research in rural communities, researchers need to identify potential community partners who are: (a) knowledgeable about the older adult population; (b) concerned about their health status and quality of life; and (c) interested in partnering with aging researchers. Finding the right community partners can be daunting and time consuming for researchers new to the community. Networking with other researchers and community leaders, taking the time to meet with individuals and agencies working with older adults, and listening to community concerns are important when building and sustaining research partnerships that can impact injury risks in rural older adults.

## **CONDUCTING PSYCHOPHYSIOLOGIC RESEARCH IN NURSING FACILITIES: ISSUES AND CHALLENGES**

L. Nowak, J.E. Davis, *Wayne State University, Detroit, Michigan*

Conducting any form of research within nursing facilities can be challenging, but conducting psychophysiologic research can be particularly complicated. Contextual field data collected over the course of a study can provide a critical lens through which results can be examined and interpreted, and can provide important additional information necessary to strengthen the design of subsequent methodologically sound research studies. This study will utilize a descriptive qualitative design to examine the field diaries of three psychophysiologic studies conducted within the environment of nursing facilities. Results may identify issues specific to this type of research and setting. Further research to examine issues and challenges associated with conducting psychophysiologic research in nursing facilities are needed.

## **SESSION 2700 (SYMPOSIUM)**

### **PUBLIC AWARENESS AND FAMILY CAREGIVING: IMPROVING ACCESS TO INFORMATION AND SUPPORT**

Chair: *D.J. Sheets, School of Nursing, GEOTOP, Victoria, British Columbia, Canada*

Co-Chair: *M. Marcus, Weinberg Foundation, Owings Mills, Maryland*

Discussant: *S. Markwood, N4A, Washington, District of Columbia*

Family caregivers provide 80% of the long-term care services in the United States. While caregivers often take great satisfaction in their role, the demands can be extraordinary and can have significant adverse health impacts. The need for caregiver education and support to effectively

manage the caregiving role is well-recognized among professionals but raising public awareness of family caregiving needs remains challenging. Between 2009-2012, The Weinberg Foundation awarded \$8 million in funding to 14 non-profit organizations aimed at developing evidence-based and innovative programs to support family and informal caregivers for older adults. Three of the Weinberg projects discuss their strategies to improve public awareness about family caregiver challenges, to explicitly recognize the support family caregivers provide, and to increase access to education and supportive services. One panelist discusses methods for creating cultural acceptance of dementia and caregiving among Asian Americans in which multiple family members are often involved as caregivers. The second panelist presents findings from implementation of the Dementia Care Network model within a diverse Asian community in downtown Los Angeles which was effective in raising public awareness of dementia and the need for caregiver support. The final panelist describes the use of an innovative online caregiver self-assessment that has effectively reached caregivers, providing needed information about and connections to appropriate services earlier in the caregiving trajectory. Findings emphasize the importance of collaborative partnerships to ensure that culturally sensitive and context-specific approaches are used to reach caregivers with lessons drawn that inform other public awareness efforts.

## **ENGAGING FAMILY CAREGIVERS THROUGH COMMUNITY EDUCATION**

D.L. Yee<sup>1</sup>, L. Revilla<sup>1</sup>, L. Hinton<sup>2</sup>, E. Yau<sup>3</sup>, *1. Asian Community Center, Sacramento, California, 2. University of California Davis, Davis, California, 3. Alzheimers Association, Northern California, Mountain View, California*

Introductory skill-building presentations to inform family caregivers about dementia, brain health, and care management were developed by Bridge to Healthy Families (BHF): 84 sessions involving one to 208 family caregivers were conducted over 30 months. BHF aims to reach Asian American caregivers and improve access to appropriate supportive services. Community education can rely on one-time outreach efforts. BHF engaged diverse groups in its presentation to raise awareness and create cultural acceptance around dementia and caregiving. Multiple members of families were invited to multiple sessions: enlarging family dialogue and a language of caregiving. BHF broadens understanding of Asian American family caregiving, and how paid providers might collaborate with family caregivers to achieve shared objectives for quality care and quality of life.

## **AN INNOVATIVE APPROACH TO EARLY CAREGIVER INTERVENTION**

A. Kelly, *Share the Care, Inc., Orlando, Florida*

Family caregiving often becomes an explicit journey as the result of a caregiving crisis. One element that contributes to this burdensome, crisis-oriented reality is the fact that family caregivers identify themselves as caregivers late in the caregiving trajectory. CaregiverCentral.org is an online self-assessment tool designed to reach caregivers early using creative media and community-based marketing outlets. After answering questions about the caregiving situation, including some demographic details, caregivers receive a menu of information and specific appropriate services designed to meet their self-assessed needs. Two years of data show that the online self-assessment reaches family caregivers who are early in the journey and who are uninformed about available services.

## **DEMENCIA CARE NETWORKS: BUILDING CAREGIVER SERVICES THROUGH PARTNERSHIPS AND EDUCATION**

D. Cherry, S. Howland, *Alzheimer's Association, Los Angeles, California*

Asian Pacific Islanders are the fastest growing population of older adults in the United States. As a result of their aging population, they face a higher prevalence of Alzheimer's Disease and related disorders. The number of

Asian-Americans with Alzheimer's is expected to triple within in the next twenty years while for the Caucasian population the numbers are expected to double. These conditions are particularly stigmatized in many API cultures. This prevents families from seeking information and assistance. Dementia Care Networks are an inter-organizational model between mainstream aging service providers, like the Alzheimer's Association, and ethnically-focused health and social service agencies. The model relies upon inter-organizational learning, gradual establishment of trust, and joint community education to increase awareness of dementia and to develop supportive services for patients and their families. This presentation will focus on strategies and materials used in Los Angeles to raise public awareness and develop resources for API's living with dementia and for their families.

## SESSION 2705 (PAPER)

### HEALTH RISKS: CHRONIC AND ACUTE ISSUES

#### ARE RESPONDENTS IN PANEL SURVEYS CONSISTENT IN THEIR SELF-REPORT OF CHRONIC DISEASES?

C. Cigolle<sup>1,2,3</sup>, A.R. Quinones<sup>4,5</sup>, J.M. Bennett<sup>6</sup>, C. Blaum<sup>2,3</sup>, J. Liang<sup>6</sup>, 1. University of Michigan Department of Family Medicine, Ann Arbor, Michigan, 2. University of Michigan Department of Internal Medicine, Ann Arbor, Michigan, 3. VA Ann Arbor Geriatric Research, Education and Clinical Center (GRECC), Ann Arbor, Michigan, 4. Oregon Health & Science University Department of Public Health & Preventive Medicine, Portland, Oregon, 5. Portland VA Medical Center, Portland, Oregon, 6. University of Michigan School of Public Health, Ann Arbor, Michigan

Chronic disease data from longitudinal health interview surveys are frequently used in epidemiologic studies. Yet, these data may be limited by discrepancies in self-report by respondents across interview waves. We examined disease discrepancies in the Health and Retirement Study (HRS) and investigated a multi-step method of adjudicating discrepancies across waves. We hypothesized that discrepancies were associated with lower socioeconomic groups and varied by disease. We analyzed waves 1998-2006 of the HRS, a nationally-representative longitudinal health interview survey. Our study sample included adults  $\geq 51$  years ( $n=17,517$ ) who participated in  $\geq 1$  interview. Diseases included hypertension, heart, lung, diabetes, cancer, arthritis, and stroke. We used questions about the diseases (e.g., treatment) to formulate a 3-step adjudication method to resolve discrepancies in respondents' self-report of diseases across HRS waves. 20.1% of respondents had a discrepancy involving 1 disease; 5.4% had discrepancies involving  $\geq 2$  diseases. Hispanics and those with  $<12$  years of education were more likely to have discrepancies ( $p<.01$ ). Discrepancies were least frequent for hypertension and most for lung disease. By 2006, the absolute differences in disease prevalence between the original data and adjudicated data varied from 1.5% for cancer to 6.4% for arthritis. Some relative differences in prevalence were sizeable, e.g., lung disease, 31.0% (11.3% vs. 14.8%). Discrepancies in self-report of diseases across multiple waves of health interview surveys vary by ethnicity, education, and specific disease. Differences in disease prevalence between original and adjudicated data accumulate across succeeding waves, such that relative differences in prevalence may be substantial, with implications for research using these data.

#### TRAJECTORIES OF SELF-RATED HEALTH AMONG MIDDLE-AGED PERSONS WITH SELF-RATED POOR VISION

B. Steinman<sup>1</sup>, N. Kwan<sup>1</sup>, K.J. Johnson<sup>1</sup>, A. Chun<sup>2</sup>, 1. Institute for Community Inclusion, University of Massachusetts, Boston, Boston, Massachusetts, 2. University of Southern California, Los Angeles, California

There is growing interest in improving trajectories of decline often observed in various measures of health and functioning among older

adults with poor vision. Increasingly, self-rated health (SRH) is used as a measure of overall health due to its high correlation with more objective outcomes such as diagnosis of chronic diseases, depression and mortality. In the current study, we examined the contribution of socioeconomic status (SES) at midlife on SRH of aging persons with self-reported vision impairment. Using six waves (1998-2008) of data from the Health and Retirement Study, we compared the trajectories of SRH among 9,311 individuals ages 50 to 64 at baseline with poor, fair, and good self-rated vision. We assessed the degree to which SES among persons with vision impairment contributes to changes in SRH over a 10-year period. Individual growth models indicated SRH worsened over time for all vision groups. Compared with individuals with no vision impairment, individuals with fair and poor vision reported significantly worse SRH. However, the rate of deterioration in SRH for individuals with poor vision was slower even when demographics, SES, health behaviors, health status, and mortality were adjusted. These findings suggest that self-rated vision status is a significant component of SRH from midlife into older adulthood, even when disadvantages associated with SES are taken into account. In addition, slower decline of SRH for those with poor self-rated vision may reflect differences in strategies for adjusting to health problems and poor vision over time by this population.

#### INCONTINENCE AMONG OLDER PERSONS IN THE UNITED STATES

Y. Gorina, A. Bercovitz, S.M. Schappert, National Center for Health Statistics, Hyattsville, Maryland

Incontinence affects quality of life and is one of the functional decline predictors. It presents a significant financial and caregiver burden. We will use the National Health and Nutrition Examination Survey to present the estimates of incontinence among non-institutionalized persons aged 65 and over; National Survey of Residential Care Facilities for prevalence of incontinence in residential care facilities; Long Term Care Minimum Data Set for estimates among long-term care facilities residents; Medicare Current Beneficiary Survey to examine the trend in incontinence among Medicare beneficiaries aged 65 and over; National Ambulatory Medicare Care Survey and National Hospital Ambulatory Medicare Care Survey for ambulatory care visits with a diagnosis of incontinence; and National Home and Hospice Care Survey for estimates of incontinence among home health care and hospice patients. These estimates will be included in an upcoming National Center for Health Statistics report on incontinence. Our preliminary results show that among non-institutionalized persons aged 65 and over 43.0% (SE 2.10%) experienced bladder incontinence, twice as much women as men, while in the nursing home this percentage was about 70% both for men and women. The percentage with bowel incontinence was 14.8% (SE 1.0%) among non-institutionalized persons aged 65 and over, 20.8% (SE 1.0) among those in the residential care facilities, and 65.7% (SE 0.2%) in the nursing homes, about the same for men and women in all settings. We will describe definitions of incontinence in each data system and address the challenge of presenting the data from different sources.

#### NURSING HOME ACQUIRED UTI INFECTIONS

J. Engberg<sup>1</sup>, N. Castle<sup>2</sup>, J.C. Ferguson-Rome<sup>2</sup>, L. Wagner<sup>3</sup>, 1. RAND Corporation, Pittsburgh, Pennsylvania, 2. University of Pittsburgh, Pittsburgh, Pennsylvania, 3. New York University, New York, New York

Our research examined the factors associated with acquiring a urinary tract infection (UTI) while a resident in a nursing home. We examined all nursing home residents in the United States on April 1, 2006 who did not have a UTI ( $n=1,138,418$ ). We followed these residents until they contracted a UTI (9.5%), died (8.3%), left the nursing home (33.2%) or the year ended (49.0%). We estimated a Cox proportional hazards model, controlling for resident and facility characteristics and



for the state of residence. We found that men were 63% as likely as women to get UTIs. African American and other minority residents were 72% and 84% as likely to get UTIs as white residents, respectively. Older residents were more likely to get a UTI. Many of the indicators of frail or declining health status, including low cognitive function, presence of physical restraints, inability to perform ADLs, depression, pressure ulcers, use of psychoactive drugs, trouble walking and haven recently fallen were associated with an increase in the likelihood of getting a UTI ranging from 5 to 25%. Not surprisingly, the largest associations were those with lack of bladder control (AOR=1.4) and having an indwelling catheter (AOR=3.3). Associations with facility characteristics including staffing levels (NA, LPN, RN), facility size, percent Medicaid residents, percent occupied, urban setting, for-profit and chain status were much smaller. The standard deviation in the AORs associated with state of residence was 0.17, suggesting large geographic variation. We discuss implications for cost and for infection control practice and policy.

## SESSION 2710 (PAPER)

### INTERVENTIONS AND APPROACHES TO SUCCESSFUL AGING

#### WILD BLUEBERRY HEALTH STUDY: TEN YEAR REPORT

A. Wetherell<sup>1</sup>, R. Schnoll<sup>2</sup>, H.A. Raphaelson<sup>3</sup>, A. Pruchnicki<sup>4</sup>, B.S. Kristal<sup>5</sup>, D. Doiron<sup>3</sup>, D.J. Burns<sup>3</sup>, R.J. Martin<sup>6</sup>, 1. *Defence Science & Technology Laboratory (Retired), London, United Kingdom*, 2. *Department of Health and Nutrition Sciences Brooklyn College, Brooklyn, New York*, 3. *Mansfield Senior Center, Mansfield, Connecticut*, 4. *St. Luke's Roosevelt Hospital, New York City, New York*, 5. *Kristal Center, Weymouth, Massachusetts*, 6. *MMT Corporation, Sherman, Connecticut*

Background: Inspired by the results of Joseph et al. (*J.Neurol*1999;19(18):8114-21) we began evaluating wild blueberry health effects via the Internet in 2002. Methods: Recruitment, parallel group/crossover design, repeated measurements, statistics and multivariate analysis are described at [Blueberrystudy.com](http://Blueberrystudy.com) and in patents 6,712,615 and 8,095,480. Results: Decision-speed improved 4.2% within one week and maintained this gain over four weeks [N=97; p=0.024]. Self-reported sharpness, energy, aches, peacefulness, mood, sleep quality and overall health each improved within four weeks [N=99; p for each<0.02]. Odds of long-term word recall score improvement vs. decline were 7 to 1. Year-after-year word recall scores generally improved by 0.5-1% per year until scores of 100% correct were obtained. The rate of year-after-year improvement was unrelated to the number of measurements each year. Individual participants were able to measure memory score changes as small as 0.5% per year within their personal data sets at 95% confidence by conducting 150 or more measurements/year. Glutathione-S-transferase, a detoxification enzyme related to resistance to Alzheimer's and Parkinson's diseases, was detectable in 0/12 participants before and 5/12 after two months of 1-cup/day blueberry consumption. Serum glutamic oxaloacetic transaminase also increased slightly while significant decreases (p<0.05 without correction for multiple comparisons) were observed for carcinoembryonic antigen, gamma-glutamyl transferase, interleukin-1 $\beta$ , total cholesterol and uric acid. Conclusions: Wild blueberries can be safely consumed each day for many years. Word recall scores for long-term participants improved steadily until reaching 100% correct. Internet measurements can be more precise than laboratory measurements because averaging scores over time removes good-day/bad-day effects.

### SPIRITUALITY, RELIGIOUS COPING, AND OVERALL LIFE SATISFACTION AMONG MIDDLE-AGED AND OLDER CARDIAC PATIENTS

L. Noel<sup>1</sup>, A.L. Ai<sup>1</sup>, F.P. Hopp<sup>2</sup>, 1. *College of Social Work, Florida State University, Tallahassee, Florida*, 2. *Wayne State University, Detroit, Michigan*

BACKGROUND: Cardiac surgery is a potentially life changing event, but most research studies have focused on pathology related outcomes. We explore enhanced spiritual connectedness as a dimension of life satisfaction (eudaemonic well-being) in aging and mental health research. Specifically, this prospective study examined the effects of preoperative faith factors on perceived spiritual support, an indicator of spiritual connectedness, 30-months following cardiac surgery. METHODS: A two-wave (preoperative and 30-month follow-up) survey (n=226). Measures included cardiac indices from the Society of Thoracic Surgeons' National Database, left ventricular ejection fraction, New York Heart Association Classification, baseline health (physical and mental), optimism, hope, religiousness, prayer coping, religious/spiritual coping, and demographics. RESULTS: hierarchical regression showed that preoperative prayer coping, subjective religiosity and internal control were positive predictors of perceived follow-up spiritual support. Negative religious coping predicted lower levels of perceived spiritual support. These effects were not eliminated by entering expected mediators (various health locus of control beliefs), though preoperative internal locus of control also predicted higher levels of perceived spiritual support. CONCLUSIONS: Spiritual, coping-related experiences before cardiac surgery may enhance perceived existential relatedness long after the event. Future research should investigate mechanisms underlying this association.

### CYSTATIN C AND TRAJECTORY OF LOWER EXTREMITY PERFORMANCE IN OLDER WOMEN: STUDY OF OSTEOPOROTIC FRACTURES (SOF)

K. Ensrud<sup>1</sup>, L. Lui<sup>2</sup>, P.M. Cawthon<sup>2</sup>, L. Fredman<sup>3</sup>, Y. Slinin<sup>1</sup>, T.A. Hillier<sup>4</sup>, J.A. Cauley<sup>5</sup>, 1. *VA Medical Center / University of Minnesota, Minneapolis, Minnesota*, 2. *California Pacific Medical Center Research Institute, San Francisco, California*, 3. *Boston University, Boston, Massachusetts*, 4. *Kaiser Permanente Northwest, Portland, Oregon*, 5. *University of Pittsburgh, Pittsburgh, Pennsylvania*

Serum cystatin C (cysC) is a biomarker of renal function; lower levels indicate better function. Lower cysC has been associated with better lower extremity performance score in older adults, but the longitudinal association between cysC and the trajectory of performance later in life is uncertain. To determine the association between cysC and the subsequent 10-year trajectory in lower extremity performance, we measured serum cysC in a random sample of 1295 women (mean age 79.5 years) who completed gait speed and five-chair-stands tests at the SOF Year 10 examination. These performance tests were repeated at Year 16 and Year 20 exams. A modified Short Physical Performance Battery (SPPB) summary score (range 0-8) based on gait speed and chair stand tests was created for each participant at each time point. Random effects regression was used to determine a SPPB slope for each participant (median -0.27, interquartile range -0.20 to -0.37) which was categorized as minimal decline (Q1, n=324), usual decline (Q2-Q3, n=648), and accelerated decline (Q4, n=323). After adjustment for age, education, health status, prior stroke, prevalent diabetes, and body mass index, each 1 SD decrease in cysC was associated with a higher odds of minimal SPPB decline vs. usual SPPB decline (OR 1.41, 95% CI 1.17-1.70) and a lower, albeit not significant, odds of accelerated SPPB decline vs. usual SPPB decline (OR 0.93, 95% CI 0.81-1.06). Among older women, lower cysC was associated with a higher likelihood of successful aging as manifested by a favorable 10-year trajectory of lower extremity performance.

## MOBILE DIABETES INTERVENTION FOR BLOOD GLUCOSE CONTROL: CHALLENGING AGE MISCONCEPTIONS

C.C. Quinn<sup>1</sup>, A.L. Gruber-Baldini<sup>1</sup>, M. Shardell<sup>1</sup>, M. Terrin<sup>1</sup>, E. Barr<sup>1</sup>, D. Park<sup>2</sup>, F. Shaikh<sup>2</sup>, M. Brazda<sup>1</sup>, 1. *University of Maryland School of Medicine, Baltimore, Maryland*, 2. *UMBC, Catonsville, Maryland*

**Objective:** To assess differences in effects of mobile phone diabetes coaching and web portal intervention on blood glucose (HbA1c) levels in younger and older patients with Type 2 diabetes. **Methods:** A cluster-randomized clinical trial conducted November 2007 to January 2010. Patients (n=118) of primary care practices in the Baltimore area were enrolled and randomly assigned into usual care (control) (n=56) and intervention (n=62) groups. The patient intervention was a mobile phone coaching system and access to individualized web portal. Intervention group providers received reports summarizing patient's glycemic control, diabetes medications, lifestyle behaviors, and treatment options. **Measurements:** Primary outcome for this analysis was 12-month change in blood glucose (HbA1c level). Participants were stratified by age into two groups: younger (<55 years; control n=29; intervention n=37) and older (≥55 years; control n=27; intervention n=25). Linear mixed effects models were used to assess whether the intervention affected HbA1c differently depending on age. **Results:** The intervention resulted in significantly greater 12-month declines in HbA1c, compared to control, for patients in both age groups (p=0.04). Among older participants, HbA1c declined by 1.7% in intervention group and 0.3% in controls. Among younger participants, HbA1c declined by 2.0% in intervention group and 1.1% control group. Treatment effect did not significantly differ by age (p=0.26). This result was not effected by controlling for duration of diabetes or baseline HbA1c levels. **Conclusion:** Mobile technology interventions can be effective in both younger and older diabetes patients. Assisting older adults to manage their diabetes using mobile health is effective.

## USING A SINGLE BODY-WORN SENSOR FOR EVALUATING MOBILITY AND SUB-TASKS OF THE TIMED UP AND GO IN COHORT STUDIES OF AGING

J. Hausdorff<sup>1,2</sup>, A. Weiss<sup>1</sup>, A. Mirelman<sup>1</sup>, A.S. Buchman<sup>3</sup>, D.A. Bennett<sup>3</sup>, 1. *Tel Aviv Sourasky Medical Center, Tel Aviv, Israel*, 2. *Tel Aviv University, Tel Aviv, Israel*, 3. *Rush Alzheimer's Disease Center, Rush University Medical Center, Chicago, Illinois*

**Objective:** The Timed Up and Go (TUG) test is widely used to assess mobility and fall risk among older adults using a stopwatch. The objectives of this study were to demonstrate that a body-worn sensor in the community-setting could be used to automatically quantify mobility, in lieu of a stopwatch, and augment conventional testing by measuring different TUG subtasks among older fallers and non-fallers. **Methods:** 327 participants (mean age 83.6±6.8 yrs, 76% female) were recruited from the Rush Memory and Aging Project, a community-based, longitudinal cohort study. As part of their annual testing in their home, subjects performed two TUG trials while wearing a small, light-weight sensor on a belt. The sensor measures both acceleration and angular velocity in 3 directions. Time to complete the task was automatically determined. We derived measures of overall TUG performance and 4 different subtasks: transitions (sit-to-stand, stand-to-sit), walking, and turning. Multivariate analysis identified differences between fallers and non-fallers. **Results:** Time to complete the TUG was not different between the fallers (N=82) and non-fallers (p=0.182), but TUG subtask measures derived from the body-worn sensor differed. Fallers had a higher step duration when walking (p=0.014), a higher pitch range during the stand-to-sit (p<0.001), and tended to take more time to complete the turn (p=0.051). **Conclusions:** A single body-worn sensor can be used in the community-setting to automatically quantify TUG duration and to assess specific TUG subtasks that complement the traditional measure of time to completion. This apparently facilitates the identification of individuals at risk of falling.

## SESSION 2715 (PAPER)

### MENTAL HEALTH AND ASSOCIATED BIOMARKERS

#### ON-LINE WEEKLY SELF-REPORT OF LOW MOOD IN OLDER ADULTS WITH MILD COGNITIVE IMPAIRMENT

J. Kaye<sup>1,3</sup>, N.C. Mattek<sup>1,3</sup>, S.M. Thielke<sup>2,3</sup>, K. Wild<sup>1,3</sup>, T. Hayes<sup>1,3</sup>, 1. *Oregon Health & Science University, Portland, Oregon*, 2. *University of Washington, Seattle, Washington*, 3. *Oregon Center for Aging & Technology, Portland, Oregon*

**Background:** Depression in Mild Cognitive Impairment (MCI) is associated with progression to dementia. Little is known about self-reported subsyndromal depression or low mood in older adults especially related to common life events. **Objectives:** To investigate the prevalence of self-reported low mood among older adults without depression and to compare reports of low mood between MCI and cognitively intact volunteers relative to life events. **Methods:** Participants were enrolled in a longitudinal aging study. They received a weekly online health questionnaire posing nine questions about mood ("During the last week, have you felt downhearted or blue for more than three days?"), health (e.g. falls, ER visits), and socialization. Cognitive impairment was defined using standardized cognitive assessments and pre-defined algorithms. **Results:** Of 208 participants, 38 (18%) were classified as MCI. Mean age was 83.4 yrs (SD: 5.3); 75% female. Median Geriatric Depression Scale at baseline was 0 (SD: 1.3). During two years of continuous weekly follow-up, relatively more MCI participants reported low mood at least once, 41% vs 23%, p=0.025. There were no self-report differences on the other eight questions. **Conclusions:** In a non-depressed cohort, MCI participants were more almost twice as likely to report low mood using a weekly online questionnaire. This frequent method of prospective data acquisition may be required to capture more subtle mood changes that by themselves suggest a vulnerability to cognitive decline regardless of progression to depression. Further longitudinal follow-up will identify the relationship of these low mood changes to other markers associated with susceptibility to MCI.

#### MODELING SENEESCENCE: MORTALITY PREDICTIONS USING CALCULATED RATES OF AGING

M.E. Levine, E. Crimmins, *Davis School of Gerontology, Univ Southern California, Los Angeles, California*

Aging affects nearly every biological system and has implications for morbidity and mortality. Nevertheless, the rate of inter-individual changes is variable, potentially as a result of environmental, behavioral and genetics differences. The aim of our study is to develop an index of "biological age" that, when contrasted with chronological age, can be used to identify accelerated or decelerated agers. Our sample included 9,213 persons aged 30-75 from NHANES III. Using sex-stratified models, eleven biomarkers were regressed on age to generate an equation from which to calculate expected biological age. To validate our measure of biological age, we compared predictions of twelve-year mortality for subjects aged 45-75 to those made by chronological age using Receiver Operating Characteristics. For both sexes, biological age was found to be a significantly better predictor of mortality compared to chronological age. Next, quintiles of differences between chronological age and model estimates of biological age were used to categorize subjects as accelerated or decelerated agers. Finally, differences in disease-specific mortality by aging-rate were evaluated using measures of relative risk. Results showed that, cardiovascular and cancer mortality were 3.6 and 5.5 times as high, respectively, for males in the highest versus the lowest aging-rate quintile, and 7.1 and 2.8 times as high, respectively, for females in the highest versus the lowest aging-rate quintile. The development and validation of an accelerated aging construct is valuable given its impact on our theoretical understanding of the aging process,

and the development of preventative interventions with implications for health and longevity.

### **SUICIDE IN OLDER ADULTS: RESULTS FROM THE NATIONAL POISON DATA SYSTEM, 2000-2009**

D.J. Cobaugh<sup>1</sup>, M.J. Miller<sup>2</sup>, T. Pham<sup>2</sup>, E.P. Krenzlok<sup>3</sup>, 1. *ASHP Research & Education Foundation, Bethesda, Maryland*, 2. *University of Oklahoma College of Pharmacy, Tulsa, Oklahoma*, 3. *University of Pittsburgh School of Pharmacy, Pittsburgh, Pennsylvania*

Research Objective: To describe attempted and completed suicide cases in older persons reported to U.S. poison centers over a 10-year observation period. Methods: Cross-sectional data reported to the National Poison Data System (NPDS) involving individuals > 60 years who had a reported exposure to a single pharmaceutical or non-pharmaceutical substance and suicide as the exposure reason were analyzed. Sample demographics, substance type implicated, and medical outcomes were reported. Major morbidity and death probabilities were calculated for both groups. Relative risk (RR) of major morbidity or death was calculated for the pharmaceutical and the non-pharmaceutical substance groups. Tests of proportions were used to identify significantly ( $\alpha=0.05$ ) elevated morbidity and death rates for individual pharmaceutical and non-pharmaceutical exposure types. Results: The analytical sample included 24,785 cases with 89.7% involving pharmaceuticals. Overall, 62.2% involved females. Females comprised 64.4% of pharmaceutical and 42.9% of non-pharmaceutical cases. The relative risk (RR) of a major morbidity following pharmaceutical exposures was significantly lower compared to non-pharmaceuticals [RR=0.54 (95% CI: 0.49–0.59)] as was death [RR=0.25 (95% CI: 0.20–0.30)]. Pharmaceuticals with the highest major morbidity and death rates were barbiturates and cyclic antidepressants. Non-pharmaceuticals with the highest major morbidity rates were automotive products and toilet bowl cleaners, respectively. Conclusions: In poison center cases, pharmaceutical agents are more likely to be used in suicide attempts by older adults. However, the relative risk of major morbidity or death is lower with pharmaceuticals when compared to non-pharmaceutical substances.

### **A LONGITUDINAL STUDY OF PSYCHIATRIC DISORDERS PREDICTING THE ONSET OF PHYSICAL HEALTH PROBLEMS**

M.J. Lyons<sup>1</sup>, M.D. Grant<sup>1</sup>, C.E. Franz<sup>2</sup>, M.S. Panizzon<sup>2</sup>, H. Xian<sup>3,4</sup>, R. Toomey<sup>1</sup>, W.S. Kremen<sup>5,2</sup>, 1. *Psychology Department, Boston University, Boston, Massachusetts*, 2. *Department of Psychiatry, University of California, San Diego, La Jolla, California*, 3. *St. Louis VA Healthcare System, St. Louis, Missouri*, 4. *Department of Psychiatry, Washington University, St. Louis, Missouri*, 5. *Center for Excellence, VA San Diego Healthcare System, La Jolla, California*

Considerable research has demonstrated comorbidity between psychiatric disorders and other types of medical conditions. However, these studies are typically cross-sectional and don't address the directions of causal relationships, if any, between disorders. Data were drawn from two studies of the Vietnam Era Twin Registry (VETR), a sample of male twins who served in the military between 1965 and 1975. Psychiatric disorders were assessed during 1992 in the Harvard Drug Study (HDS) when the average age of participants was 41.5 years (S.D. = 2.3; range = 36 to 46) using the Diagnostic Interview Schedule Version-III-Revised. Data about self-reported medical conditions were obtained from 1237 VETR members who participated in Vietnam Era Twin Study of Aging during which the average age of participants was 55 years (S.D. = 2.5; range = 51 to 60). We examined self-reported medical conditions with onset after participation in the HDS. Many significant relationships were observed between the 10 mental disorders and the 14 physical health problems, including, but not limited to: PTSD significantly predicted pulmonary disorders (asthma and bronchitis); depression also predicted pulmonary disorders as well as several cardiovascular disorders (angina and stroke); and conduct disorder symptoms before that age of 15 pre-

dicted gastrointestinal problems (ulcer and gastritis). Nicotine dependence was the psychiatric disorder that predicted the largest number of medical disorders. The finding that mental disorders earlier in life can predict the onset of medical disorders later in life suggests that mental disorders are a risk factor for the subsequent development of physical health problems.

### **EFFECTIVENESS OF AN ENHANCED, DEMENTIA-ADJUSTED TRAINING PROGRAM IN PATIENTS WITH DEMENTIA: TRANSLATIONAL MODEL OF GERIATRIC REHABILITATION**

K.A. Hauer, I. Dutzi, M. Schwenk, *Geriatric Research, Bethanien-Hospital at the University of Heidelberg, Heidelberg, Germany*

Background: Growing evidence is available for the trainability of patients with dementia in RCTs with highly selected participants. However, translational approaches for the use of effective programs in the therapeutic routine of clinical settings such as geriatric rehabilitation are lacking. Objective: To determine the effect of a dementia adjusted, standardized training program on motor status in frail, multi-morbid patients with dementia randomly allocated to 2 separated wards during geriatric rehabilitation (n=154). Methods: Motor status (primary endpoints: strength: 1RM leg-press; and function: 5 chair stand) were documented pre-post during a 3-week, geriatric ward rehabilitation. A dementia adjusted, progressive strength and functional training (intervention ward, IW) was compared to usual care in a control ward (CW). Patients of both wards received a comparable multiple rehab program including physiotherapy, functional training and group sessions. Results: The dementia adjusted training significantly improved primary study endpoints: maximal strength (Improvement 1RM: IW +52.6 (42.0)% vs. CW: +13.9 (52.9)%); p-value:<0.001; effect size:0.248) and functional performance (5-chair rise; IW: -19.5 (21.6)% vs. CW: -4.6 (31.3)%); p-value:0.021; effect size: 0.060. Effects were confirmed by most, but not all motor assessments. Participation and assessments were limited by impaired motor and overall health status resulting in floor effects in some measures. Conclusion: Study results demonstrate that an intensive, standardized dementia-adjusted training program improved motor status in frail, multimorbid, geriatric rehab patients with dementia. Assessments as well as training levels need to be adjusted hierarchically to the individual motor status in this vulnerable patient group.

## **SESSION 2720 (SYMPOSIUM)**

### **COMMUNITY INTEGRATION: THE ROLE OF HOUSING AND TRANSPORTATION IN LONG-TERM CARE SYSTEMS**

Chair: *J.L. Poey, IMPAQ International, LLC, Columbia, Maryland*  
Co-Chair: *J. Howard, IMPAQ International, LLC, Columbia, Maryland*

The purpose of this symposium is to discuss housing and transportation issues associated with aging in place and the ability to remain in the community. As demand increases for home and community based services (HCBS), states continue to shift their long-term supports and services (LTSS) systems toward meeting this need by increasing the availability of HCBS through programs and waivers. Such systems assure optimal health, well-being, and functioning for people across the lifespan in the most integrated setting possible. Central to the ability to remain in the community is the availability of affordable and accessible housing as well as transportation. In order to remain in the community, individuals must have a place to live. The definition of a home can vary, with many people with disabilities being moved into group homes. Older adults have different housing options available, such as assisted living facilities, although there is debate about whether this is considered community living. The ability to integrate into the community is also very dependent on mobility. Transportation services should allow individuals to go to doctors appointments, attend to personal needs (e.g., grocery shopping), and socialize or maintain employment in order

to most effectively integrate into the community. Without housing and transportation services, many older adults and people with disabilities may face institutionalization.

### **WORKING TOWARDS A FEDERAL DEFINITION OF THE QUALITIES OF LIFE THAT MAKE A HOME**

S. Terrell, *Office on Disability, Health and Human Services, Washington, District of Columbia*

Federal, state and local governments have developed HCBS for people with disabilities across the lifespan to promote community living and to avoid institutionalization. These agencies have different approaches in defining, funding and overseeing their respective HCBS programs. The variety of approaches and rules that govern myriad programs leave individuals to navigate a confusing maze of policies and bureaucracies which impedes timely access to needed services and contributes to fragmented services or duplicate efforts. Ideally, a comprehensive set of policies would apply to all agencies with responsibilities to provide, monitor, or oversee HCBS. This presentation will discuss the efforts of the HHS Office on Disability to convene a workgroup comprised of agencies across HHS to address key policy areas in HCBS, including defining the qualities of life associated with a home, community integration, and HCBS features such as person-centered planning, participant direction, and system-level structures as they relate to community living.

### **MEETING SUPPORTIVE TRANSPORTATION CHALLENGES TO ENABLE AGING-IN-PLACE**

N.M. Silverstein, *College of Public and Community Service, University of Massachusetts Boston, Boston, Massachusetts*

Paramount to the increased demand for home and community-based long-term supports and services (LTSS) is the ability of communities to address the supportive transportation challenges to enable aging-in-place. This qualitative study investigated the supportive mobility needs of community-residing older adults. The study explored the distinction between aging with disabilities and growing older and experiencing physical or cognitive limitations and how that distinction might impact transportation policy and service delivery. Key informant interviews were conducted with 30 policy leaders, transportation providers, and researchers. In addition, an expert gathering discussed major themes and identified areas of consensus as well as areas needing further research. Themes included levels of assistance provided/needed; the role of paid and volunteer escorts and special assistance related to persons with cognitive impairment. Several informants called for a national policy on senior mobility. Others presented the concept of person-centered or person-directed mobility.

### **DEVELOPING MEASURES TO ASSESS STATE EFFORTS IN PROVIDING COMMUNITY INTEGRATED LTSS THROUGH HOUSING AND TRANSPORTATION**

J.L. Poey, J. Howard, O. Urdapilleta, *IMPAQ International, LLC, Columbia, Maryland*

Despite efforts by states to provide person-driven long-term supports and services (LTSS) that meet the increased demand to age in place, there continues to be an absence of common indicators to assess state progress. One critical component of LTSS is the mechanisms to support community integration through transportation and housing. In order to assess the effectiveness of state LTSS systems in providing housing and transportation services that facilitate an individual's ability to remain in the community, measures must be developed that allow for comparison across states. Variation by state in the structure of housing and transportation services poses a challenge to developing measures to compare state systems and track state efforts. This presentation will discuss a CMS initiative to develop measures and challenges in developing feasible and comprehensive measures of states' progress in

providing affordable and accessible housing as well as transportation services.

## **SESSION 2725 (SYMPOSIUM)**

### **WHAT FUTURE FOR SOCIAL SECURITY?**

Chair: *H. Moody, AARP, Washington, District of Columbia*

Discussant: *C.L. Estes, Univ. of California-San Francisco, San Francisco, California*

Social Security is America's largest and, arguably, most successful program promoting public welfare. Social Security has made a major impact on reducing old age poverty while at the same time commanding enormous legitimacy and support from Americans of all ages. Yet the Social Security program faces an uncertain future. The payroll tax has temporarily been reduced at a time when most analysts agree that, after 2036, Social Security will not have sufficient revenues to pay full benefits. The finances of the Social Security Trust Fund have been brought into current debates about the federal deficit. And younger people, especially, are doubtful that Social Security will be there for them in the future. In this symposium we examine several dimensions of the challenge. Our first presenter (Achenbaum) describes the historical context for current concerns about Social Security, while another presenter (Polivka) identifies elements of the American political economy that have contributed to a broader combination of "fiscal crisis" and "legitimation crisis" (Habermas). Our third speaker (Reinhard) reports on results of AARP's 2012 listening initiative, "You've Earned a Say," which used a variety of methods to elicit opinions of AARP members and others concerned about the future of Social Security. In discussion, symposium members explore the implications of the recently completed 2012 elections and their impact on policy debates around Social Security. The Symposium will identify major barriers to better public understanding of social insurance programs and draw on experience in advocacy to suggest more effective methods of communication to Americans of all ages concerned to insure the sustainability of Social Security.

### **NEOLIBERALISM AND THE FUTURE OF SOCIAL SECURITY**

L. Polivka, *Claude Pepper Center, Florida State University, Tallahassee, Florida*

Debate over Social Security has occurred since its inception, included a failed initiative in 2005 to partially privatize the program. Collapse of the financial sector, the Great Recession, and the increase in the federal deficit have created an opportunity for well-funded critics of Social Security to launch a campaign to reform the program by cutting benefits. This presentation analyzes the latest effort to cut benefits in the context of changes in the U.S. and global political economies over several decades: namely, a neoliberal (conservative) political economy profoundly different from the neo-Keynesian economy of the post-war era. A major priority of neoliberal economists and pundits is diminution of public sector and taxes that support it. Social Security is the biggest single public program making it a major target of neoliberal critics. This is the larger context in which the struggle over the future of Social Security must be understood.

### **SOCIAL SECURITY: "YOU'VE EARNED A SAY"**

S.C. Reinhard, *AARP Public Policy Institute, Washington, District of Columbia*

In 2012, AARP released results of a national survey of 2000 respondents aged 52 to 70, in identifying areas of ignorance and misunderstanding about Social Security. Building on that survey, in 2012 AARP launched a new national listening initiative, "You've Earned A Say." This initiative was undertaken in response to widespread lack of confidence in how policy-makers in Washington at a time when all expenditures are under scrutiny. Both workers and beneficiaries perceive Social Security as an "earned benefit" but the AARP listening initiative revealed both factual uncertainty and differences of opinion about the most appropriate policy

steps to insure the integrity of the program into the future. "You've Earned a Say" in 2012 has provided an opportunity for civic engagement on a mass scale, and the lessons learned can be adopted by advocacy groups as we continue to debate the future of American social insurance programs.

### **SOCIAL SECURITY: VISIONS AND REVISIONS**

W. Achenbaum, *University of Houston, Houston, Texas*

One of the saddest ironies of U.S. social welfare history is that Social Security, the nation's greatest contribution to the well being of ordinary citizens (young and old), has been misunderstood from the day Franklin D. Roosevelt signed the omnibus legislation into law in 1935. Since 1935, conservative Republicans have sought to repeal Social Security as a "hoax," a "fraud," or to privatize old-age insurance. Democrats sometimes have acted equally irresponsibly in their willingness to use surpluses in Social Security trust funds to mask the costs of war or to claim that future deficits require cutbacks. This presentation argues that the so-called "vital center" has been too timid in extolling the benefits of Social Security to audiences deemed ignorant or hostile to the idea of "social insurance," and not sufficiently clear in disentangling misinformation about Medicare's prospects from fears of Social Security insolvency. As a result, sustaining our largest welfare network becomes problematic in a nation that too often ignores both its past and future for the sake present-day expediency.

### **SESSION 2730 (PAPER)**

#### **EMPLOYEE PERSPECTIVES ON OLDER WORKERS, TRAINING, AND HEALTH STATE ISSUES**

##### **KENTUCKY'S AGING WORKFORCE: A STUDY OF EMPLOYERS TO DETERMINE THEIR CHALLENGES, SOLUTIONS, AND BEST PRACTICES**

M. Wells-Lepley, L. Williams, J. Swanberg, A. Latimer, *Institute for Workplace Innovation, University of Kentucky, Lexington, Kentucky*

Individuals are working much longer than ever before, and most adults expect to work well past traditional retirement age. Unfortunately, employers are ill-prepared to accommodate the aging workforce. This study was designed to examine Kentucky employers' attitudes toward older workers, the challenges they face as the workforce ages, and solutions to help employers overcome them. Eighty-three Kentucky employers participated in 10 industry-specific focus groups and a survey. Results indicate that employers have a positive attitude toward older workers and believe there are 8 benefits to employing them (e.g., strong work ethic, good customer relations) which are presented in a model. However, the aging workforce presents 5 key challenges for employers. These challenges are presented in another model that includes 8 interdisciplinary solutions to overcome these challenges. Analyses indicate that organizations that have taken steps to ensure they are adequately staffed in the future already see the value of older workers and have established practices to attract, engage, and retain them. By providing solutions and best practices for each potential challenge of the aging workforce, this study is working to help older workers by informing business leaders how best to accommodate them. The results of this study have been shared with Kentucky business leaders and are guiding the development of an organizational multi-generational assessment and a toolkit to help employers meet the needs of the aging workforce.

#### **RETIREES RETURNING TO WORK: FINDINGS FROM THE HRS**

E. Gonzales, *Washington University, St. Louis, Missouri*

**OBJECTIVES:** To broaden our understanding of why retirees return to work, I examine not just the economic, but also the biopsychosocial factors that predict their return. I hypothesize that human and social capital is positively associated with returning; while retirement satisfaction is negatively associated. An exploratory approach was taken with assets

(wealth, income). Post-retirement work characteristics were also examined. **METHODS:** A sample of fully retired individuals 62+ were drawn from the Health and Retirement Study in 1998 and followed to 2008 (N=8,332). Bivariate analyses and logistic regressions were utilized. **RESULTS:** Average age was 74 (range 62-104). One out of ten retirees returned to work in subsequent waves. Factors predicting returning to work were gender (men more likely), age (younger), health (higher self-report and standardized measures), income, retirement dissatisfaction, and social capital of the household. Wealth, education, and years of work experience were insignificant. Retirees were more likely to return to professional, retail and business industries within the clerical/administrative support, professional, and sales occupations. **IMPLICATIONS:** While economic factors are important determinants of retirees returning to work, so are biopsychosocial factors. Retirees with work experience in physically demanding industries are less likely to return to work after retirement; re-tooling the human capital of this group to match labor sector needs and physical capabilities may enable them to return to work.

#### **CREDENTIAL ATTAINMENT AND OUTCOMES FOR OLDER PARTICIPANTS IN WORKFORCE INVESTMENT ACT PROGRAMS**

P. Cummins, *1. Sociology & Gerontology, Miami University, Oxford, Ohio, 2. Scripps Gerontology Center, Oxford, Ohio*

Policy experts advise that economic security in retirement and the solvency of social welfare programs are enhanced if Americans remain in the workforce later in life. Despite the desire of many older workers to do so, the economic downturn has resulted in historically high unemployment rates. When older adults become unemployed, it takes them longer than their younger counterparts to find new jobs. Unemployed older adults may not have the skills required for available jobs and may need to acquire new skills in order to become reemployed. For U.S. workers in general, and for older workers seeking employment, credential attainment is a significant trend. This study used secondary data obtained from the Department of Labor to examine outcomes for workers aged 55 to 74 who participated in training through the Workforce Investment Act Adult or Dislocated Worker Program between April 1, 2008 and September 30, 2010. Women were as likely as men to attain a credential whereas Hispanics and whites were more likely to attain a credential than were Asians or African Americans. Those who previously attained a credential, such a high school or college degree were more likely to attain a new credential. Those who attain a credential are more likely to become employed and remain employed, often at higher wages, compared to those who do not. Programs that encourage credential attainment by older workers will help improve economic security in retirement by allowing workers to remain in the workforce at older ages.

#### **LONGER WORK LIVES: WHAT WILL EMPLOYERS CONTRIBUTE?**

P. Taylor<sup>1</sup>, R. Williams<sup>1</sup>, E. Lynn<sup>1</sup>, E. Brooke<sup>2</sup>, *1. Monash University, Churchill, Victoria, Australia, 2. Swinburne University of Technology, Melbourne, Victoria, Australia*

While debate concerning extending working lives has primarily taken place at the macro level, the issue is being played out within employing organizations that are increasingly being drawn into the social sphere. Questions are being raised regarding the role employers should legitimately play in promoting 'age management'. This paper is based on analysis of qualitative data collected in an Australian Research Council research project, Retiring Women: Understanding Older Female Work-life Transitions. In-depth interviews were carried out with 56 Human Resource Managers across the finance, tertiary education, and

state and emergency services sectors in Australia. The findings demonstrate that despite external pressure, operational imperatives discouraged strong organizational support for older workers' continuing employment, even where relevant policy frameworks existed, thus disenfranchising employees and diluting the social role of the organization. In addition, employers were increasingly placing the onus on individual employees to be responsible for: i) their own awareness of HR policy and updates, ii) managing their ongoing professional development needs, iii) identifying opportunities for advancement, and iv) negotiating flexible work arrangements, thereby further diluting the social role of the organization. It is concluded that responsibility for the welfare of older workers by state and employers needs to be more clearly articulated; otherwise an increasingly important workforce segment will lack advocacy in the labor market.

### **BEST PRACTICES IN WORKPLACE ELDERCARE PROGRAMS**

D.L. Wagner<sup>1</sup>, G. Hunt<sup>2</sup>, A.E. Lindemer<sup>3</sup>, K. Niles-Yokum<sup>4</sup>, M. DeFreest<sup>5</sup>, 1. *College of Health and Social Services, New Mexico State University, Las Cruces, New Mexico*, 2. *National Alliance for Caregiving, Bethesda, Maryland*, 3. *UMASS/Boston, Boston, Massachusetts*, 4. *York College, York, Pennsylvania*, 5. *Self, Tacoma, Washington*

Employers have been offering some form of support for employees with eldercare responsibilities since 1985. Workplace programs have evolved since then and many innovations have been introduced by employers. This paper reports the findings of a "best practice" study of workplace eldercare conducted by the National Alliance for Caregiving and funded by an employer-based consortium (ReACT) designed to foster high quality programs. A snowball sample starting with the ReACT members resulted in 17 employer respondents. Employers ranged in workforce size from 35 employees to 118,000 employees. Respondents represented higher education, health care providers, the financial industry, insurance, manufacturing, media, the pharmaceutical industry, and IT firms. Although some research suggests that employers in the US have reduced program and benefits designed for employed caregivers during the current recession, one-third of our sample had begun their programs in the past three years. Innovations include models of paid time off, subsidized back-up home care services, a comprehensive planning initiative, and caregiving networks. Employers continue to experience low utilization of programs and only minimal evaluation efforts have been undertaken. Few employers conducted employee surveys to inform them of the needs of employees prior to starting programs. This paper outlines methodology, analysis and key findings of the study including new innovations, perceived employer benefits, recommendations for "best practice" modifications and the implications for public policy.

### **SESSION 2735 (PAPER)**

#### **MINORITY AGING; DIFFERENCES AND DISPARITIES**

##### **RACIAL DIFFERENCES IN THE MEASURE OF FUNCTIONAL DISABILITY FOR OLDER AMERICANS**

K.T. Chan<sup>1</sup>, T. Tran<sup>1</sup>, C. Stokes<sup>1</sup>, D. Kaplan<sup>2</sup>, 1. *Boston College, Chestnut Hill, Massachusetts*, 2. *Columbia University, New York, New York*

According to the US Census estimates in 2010, there are 40.5 million Americans aged 65 and older living in the United States. By 2050, this number is projected to exceed will 88.5 million people, or 20.1% of the total population. Population trends indicate that the racial composition of the US will drastically change, and that persons of Latino, Asian and African American descent will make up of over 41% of the total elderly population. This paper used data from the 2009 American Community Survey (ACS), collected annually by the US Census Bureau. Five functional disability items were included in the analysis. Reliability

and confirmatory factor analysis were conducted separately on the items for the aggregated race groups. The overall sample consisted of over 400 thousand individuals aged 65 and older. Separate CFA models were examined for each of the major race groups. Models with differing factor patterns yielded adequate goodness of fit results. Factor loadings for the items were somewhat similar, with the exception of Difficulty hearing, which was higher for the Asian and Hispanic samples. Results suggest that the five item scale for disability reasonably captures physical functioning for the overall older population. Public policy regarding funding for services should account for how physical functioning may be perceived differently among race groups due to inherent differences in culture and community resources. Future research should also establish a meaningful clinical cutoff score of physical functioning for both clinical services and interventions.

##### **CHARTING NEW FRONTIERS: MEASURING DISPARITIES IN MEDICARE HOME HEALTH PATIENTS' FUNCTIONAL STATUS**

J.K. Davitt, S. Chan, *School of Social Policy & Practice, University of Pennsylvania, Philadelphia, Pennsylvania*

Communities of color continue to experience differences in access, treatment, and quality of care in Medicare even after accounting for differences in age, education, and income. With increased emphasis on providing care in the least restrictive and most cost-effective manner, the demand for home health care is increasing. Thus, it is crucial to understand the interactions at play in this unique health care setting. Some studies have shown that access disparities exist in home health and others have demonstrated differences in outcomes by race/ethnicity. However, study limits prevent us from declaring these outcome differences to be indicative of a disparity. Understanding racial/ethnic disparities in the home health system is essential for advancing the overall health of the Medicare population, and reducing costs from morbidity and mortality. Utilizing existing Medicare data from the Outcome ASsessment Information Set (OASIS), and Provider of Services file for all home health assessments conducted in 2006, we tested the hypothesis that minority home care patients would have lower functional status at discharge compared to white patients. Multivariate regression procedures on composite measures of activities of daily living and instrumental activities of daily living employing Rasch modeling, demonstrated that minority home health recipients experienced greater deterioration in functional status during their home health episode relative to white patients. These results were significant for multiple minority groups. We discuss key strategies for modeling these trends including the use of Rasch models vs. Likert measures, and multilevel modeling procedures to account for clustering within agencies and neighborhoods.

##### **EXPLORING THE EFFECTS OF MEDICARE PART D ON RACIAL/ETHNIC DISPARITIES IN HEALTHCARE COST, HOSPITALIZATION, AND EMERGENCY VISITS**

E. Mahmoudi<sup>1,2</sup>, G.A. Jensen<sup>1,2</sup>, 1. *Institute of Gerontology, Detroit, Michigan*, 2. *Wayne State University - Institute of Gerontology, Detroit, Michigan*

Introduction. Medicare Part D, implemented in January 2006, provides affordable prescription drug coverage for all Medicare beneficiaries. This study evaluates effects of Part D on racial/ethnic disparities in healthcare cost, hospitalization, and emergency visits. Data. Medical Expenditure Panel Survey data covering 2002-2009 is used for the analysis of a nationally representative sample of White, African-American, and Hispanic Medicare beneficiaries. Seven measures of access and utilization of healthcare are examined: total healthcare cost, any hospitalization, number and cost of hospitalization, any emergency visits, number and cost of emergency visits. Methods. We evaluated the effects of Part D using a difference-in-differences methodology to compare the disparities in healthcare cost and utilization before and after implementation of the Part D. Our comparison group consists of the

near-elderly adults ages 55-63, and our treatment group consists of the Medicare beneficiaries ages 65 and older. We used a two-part generalized linear model to examine healthcare cost and utilization. Results. Part D had no effects on disparity in total healthcare cost. There were significant disparities in total healthcare cost prior and after Part D, with Whites spending significantly more in healthcare than minorities. Part D reduced hospitalization for all three sub-populations; it reduced disparities in number of emergency visits between Whites and minorities, and in number of hospitalizations between Whites and Hispanics. Conclusion. This study underlines the importance of access to affordable prescription drugs in reducing disparities in hospitalization and emergency visits.

### **RACIAL/ETHNIC VARIATION IN PAIN FOLLOWING INPATIENT PALLIATIVE CARE CONSULTS**

J. Laguna<sup>1</sup>, R.S. Goldstein<sup>2</sup>, S. Enguidanos<sup>1</sup>, 1. *Davis School of Gerontology, USC, Los Angeles, California*, 2. *Kaiser Permanente, Downey, California*

Studies have documented disparities in pain among hospitalized patients at end of life. In response, inpatient palliative care (IPC) teams have grown rapidly to manage pain among seriously ill patients. While research indicates that IPC teams effectively reduce and maintain control of patient pain, racial/ethnic differences in pain intensity following IPC consults remain unclear. This study examines pain trajectories following IPC consults among 385 seriously ill managed care white, black, and Latino/a patients ages 65 years or older. Using the 11-point NRS pain rating scale, patients were asked to rate their pain intensity at four time points during hospitalization (prior to IPC consult, two- and 24-hours following consult, and at hospital discharge). Analyses revealed no racial/ethnic differences in baseline pain. Although whites ( $F=16.528$ ), blacks ( $F=7.103$ ), and Latinos/as ( $F=10.902$ ) all experienced significant declines in pain following IPC consults ( $p<.05$ ), Latinos/as reported consistently higher levels of pain than other patients at 2 hours ( $F=4.029$ ;  $p<.05$ ), 24 hours ( $F=3.266$ ;  $p<.05$ ), and at discharge ( $F=7.256$ ;  $p<.05$ ). While all patients reported decreased pain following IPC consults, pain was significantly higher among Latinos/as at follow-up as compared with others. These findings, coupled with previous research on Mexican American beliefs about enduring suffering in later life, suggest that religious/cultural characteristics may contribute to pain differences following IPC consults and indicate a need for additional research to better understand and address the needs of this population.

### **SESSION 2745 (SYMPOSIUM)**

#### **CONTEXTS OF AGING: EXPLORING THE INTERSECTIONS OF GEOGRAPHY AND WELL-BEING AMONG OLDER ADULTS**

Chair: R. Oscarson, *South Dakota State University, Brookings, South Dakota*

Rural / urban disparities in access to health care and in well-being throughout life are well-documented. Past research has pointed to increased social isolation, increased poverty, and poorer health outcomes among some rural older adults. But rurality is diverse, and "rural" is not easily defined. For example, in some states, both the greatest wealth and the greatest poverty are located in rural areas. "Research 101" tells us that sample selection impacts research results, and that the distribution of data is as important as the mean. Further, one's theoretical perspective shapes research methods, and research methods impact data collection, which in turn impact the sample and results. Thus, research related to rural aging must go beyond rural/urban distinctions to include cultural beliefs, geographic disparities in access, and research methods tailored to the sample. By combining literature and research on diverse elders from diverse geographical contexts, we may gain a better picture of variations in rural aging and methods which might be used to better understand phenomena of "rural aging." Symposium presenters

represent rural contexts ranging from the upper Midwest to the deep South. Presentations examining older adults' beliefs and behaviors provide conceptual background from focus groups and the literature, descriptions of research methods used to study difficult to reach participants, and examples that illustrate variations in rural aging.

### **DO RURAL AND URBAN ELDERS DEFINE "HEALTH" DIFFERENTLY?**

C.E. Gessert, S.C. Waring, P. Conway, L. Bailey-Davis, M. Roberts, J.J. VanWormer, *Essentia Institute of Rural Health, Duluth, Minnesota*

Evidence from eight rural and urban focus groups conducted by one of us (CG) on end-of-life care preferences revealed that rural and urban participants often discussed "health" and "meaningful survival" differently. Rural participants were more likely to equate "health" with being able to function on one's own behalf, and to equate meaningful survival with being able to do so. A review of the literature suggests that rural elders tend to characterize good health as being able to "take care of what has to be done" and avoiding dependency. Rural elders assess their health on the basis of their ability to work and to reciprocate in social relationships. Rural concepts of health were reported to be closely associated with independence. Rural-urban differences in the definition of "health" present rich opportunities for research, as concepts of health affect self-description of health status, health behavior, and participation in health maintenance and preventive services.

### **ACTIVITY PARTICIPATION IN BLACK AND WHITE MISSISSIPPIANS FROM URBAN, MICROPOLITAN, AND RURAL CONTEXTS**

C. Adams-Price<sup>1,2</sup>, J. Turner<sup>2</sup>, S.T. Warren<sup>3,2</sup>, J.D. Wilmoth<sup>4,2</sup>, 1. *Department of Psychology, Mississippi State, Mississippi*, 2. *NSPARC Mississippi State U, Starkville, Mississippi*, 3. *Dept. of Ed Psych and Counselor Ed, Mississippi State, Mississippi*, 4. *School of Human Sciences Mississippi State U, Starkville, Mississippi*

There is strong interest at present in the relationship between activities and subjective well-being of older adults. This paper examines activity participation in a random telephone sample of 142 older black and 491 white Mississippians living in urban, micropolitan, and rural areas. Overall, activity participation among whites did not vary a great deal across the three settings. Hobby participation, volunteering, exercise, church, and visiting family and friends were frequent activities. Club participation, travel, and eating out were common, but less frequent. Rural older blacks seldom ate out or participated in clubs, but urban older blacks did so frequently. Participation in religious activities was high for all groups, but a sizable percentage of rural blacks saw family member infrequently. The link between activity participation and access to transportation, as well as ways to increase activities in rural communities is also explored.

### **VOICES FROM THE POOREST RURAL TOWN IN THE US: A CBPE PROJECT ON HEALTH ISSUES AND NEEDS**

K. Kopera-Frye<sup>1</sup>, P. Higgins Saulsberry<sup>2</sup>, D. Ndunda<sup>3</sup>, S. Robinson<sup>2</sup>, L. Henderson<sup>2</sup>, R. Coleman<sup>2</sup>, S. Morgan<sup>2</sup>, J. Oliver<sup>2</sup>, 1. *Gerontology, University of Louisiana at Monroe/ Institute of Gerontology, West Monroe, Louisiana*, 2. *University of Louisiana at Monroe- Social Work Dept., Monroe, Louisiana*, 3. *University of Louisiana at Monroe- Pharmacy School, Monroe, Louisiana*

Lake Providence, in northeast Louisiana, has experienced challenges of high poverty, a divided population in terms of income and education, lack of businesses, housing and employment shortages, decreased population because scant jobs, and limited rural healthcare. According to the 2000 Census, the population was approximately 5,000, with 80% African American, and about 1/3 of the residents being older adults. Currently, it is considered the poorest town in the US. A community-based participatory evaluation (CBPE) approach to needs assessment was utilized to discern the concerns and issues facing the residents

through their eyes and voices. Resident surveys (n = 466) revealed significant concerns of poor healthcare, no jobs, and high crime rates; these concerns varied by age group. Strengths of the community and strategic improvements were suggested by the residents. Lessons learned from this community in rural US will be shared in order to inform professionals working in such small towns.

## SESSION 2750 (SYMPOSIUM)

### INTERCONNECTIONS AMONG ACTIVITIES AND HEALTH AND WELLBEING FOUND IN THE WELL ELDERLY TRIAL

Chair: C. Vigen, *Occupational Science and Occupational Therapy, University of Southern California, Los Angeles, California*

An older adult's health and well-being are influenced by engagement in activity, stress, coping, and declining health. Therefore in an effort to support an older adult's well-being and quality of life, it is essential to support engagement in meaningful activity. The Well Elderly II Study, a randomized clinical trial, tested the effectiveness of a manualized intervention led by licensed occupational therapists which focused on facilitative lifestyle changes to support increased activity participation. It was hypothesized that this occupational therapy intervention would result in increased activity participation which would improve coping strategies, levels of stress, and quality of life measures (e.g. depression, life satisfaction). This RCT included 460 ethnically diverse participants aged 60-95 years, and is charting new frontiers in the area of occupational therapy preventative interventions among community-dwelling and ethnically diverse older adults. This symposium will present five papers highlighting results of this RCT including an overview of activity participation and engagement, participants' perceptions of the interconnections between their activities and their health and well-being, and how measures of well-being may be related to baseline measures of salivary biomarkers (cortisol, DHEA and alpha amylase) usually associated with stress. This symposium will then present findings on the relationships between the trial intervention, measures of stress, well-being, quality of life, and activity participation. The results of the Well Elderly Study provide important insights into the covariates of well-being among older adults, and our experiences with this trial illustrate the variety of analytic tools necessary to shed light on complex research questions.

### MEANINGFUL ACTIVITY PARTICIPATION IN INDEPENDENT-LIVING OLDER ADULTS

C. Vigen, F.A. Clark, M. Carlson, *Occupational Science and Occupational Therapy, University of Southern California, Los Angeles, California*

The Well Elderly Study collected data on participants using the Meaningful Activity Participation Assessment (MAPA) questionnaire, which asks participants to rate their participation over the last few months in 29 different activities. Additionally, 13 well-established instruments were used to assess well-being in various domains. Total activity and individual item activity differed considerably by demographic characteristics. Statistically significant differences by gender in individual item frequencies were generally consistent with gender stereotypes. Total activity frequency was significantly associated with better well-being in 12 of the 13 measures ( $p < .0001$  for each), but wide variety of relationships existed between individual item activities and measures of well-being. Exploratory factor analysis identified 3 activity factors, which we characterized as cultural, cognitive and social. All three factors were highly correlated with total activity frequency. After adjustment for total activity, cognitive and social activities were more highly associated with well-being. Possible interpretations for these results will be explored.

### ASSOCIATIONS AMONG CORTISOL, DHEA, ALPHA AMYLASE AND DEPRESSIVE SYMPTOMS IN OLDER ADULTS

R. Wilcox, *Psychology, University of Southern California, Los Angeles, California*

This study examined the association among salivary cortisol, dehydroepiandrosterone (DHEA) and alpha amylase, as well as how these biomarkers are associated with a measure of depressive symptoms. Modern robust methods for dealing with curvature, outliers, heteroscedasticity and skewness revealed complex associations not found using standard techniques. In particular, cortisol is found to moderate the association between depression and DHEA in a manner poorly reflected by the usual regression model for interactions.

### OLDER ADULTS' PERCEPTIONS OF RELATIONSHIPS AMONG PSYCHOSOCIAL CONSTRUCTS AND WELL-BEING INDICATORS

J. Blanchard, *Occupational Science and Occupational Therapy, University of Southern California, Los Angeles, California*

Maintaining well-being is important for older adults as they face health problems and other declines. Much of the research on elders has been quantitative. However, use of mixed methods can reveal important nuanced individual perspectives. This study explored, using qualitative interviews, how older adults perceived, within their own lives, the interconnections of health and well-being with healthy activity, active coping, social support/social networks, perceived control, stress, and positive reinterpretation-based coping. Participants (N=22) were selected from the USC Well Elderly 2 Study sample using intensity and stratified purposeful sampling. The interview data were classified into codes using modified analytic induction. In general, participants perceived that their health, well-being, and cognition were impacted by a variety of considerations including healthy activity, social support, social network size, perceived control, positive reinterpretation-based coping, stress, physical and social environments, transportation, routines, and issues surrounding death. These findings can inform intervention development for older adults.

### RELATIONSHIP OF GLOBAL SELF-EVALUATIONS OF ACTIVITY TO PSYCHOSOCIAL AND HEALTH-RELATED AGING OUTCOMES

M. Carlson<sup>1</sup>, A. Kuo<sup>1</sup>, C. Chou<sup>2</sup>, F.A. Clark<sup>1</sup>, *1. Division of Occupational Science and Occupational Therapy, University of Southern California, Los Angeles, California, 2. University of Southern California, Los Angeles, California*

We obtained older adults' self-rated judgments about their activity engagement considered as a whole (global activity evaluation) and, using cross-sectional survey data, tested the ability of such judgments to predict aging outcomes. Participants were 460 community-dwelling elders who responded to (a) a set of global activity evaluation items, (b) measures of participation frequency in specific activities, and (c) indices of life satisfaction, depression, and physical and mental health-related quality of life. Regression analyses indicated that global activity evaluation items produced stronger correlations with life satisfaction, depression, and mental health-related quality of life than did participation frequency ratings. However, participation frequency ratings and global activity evaluations were approximately equal in their ability to predict physical health-related quality of life. Overall, the results suggest that global activity evaluation is a viable, top-down measurement approach which complements ratings of specific activities, and should be incorporated in future research on activity in older adults.



## SESSION 2755 (SYMPOSIUM)

### IT TAKES TWO! UNDERSTANDING DYADIC RELATIONSHIPS IN ADULTHOOD AND OLDER ADULTHOOD

Chair: *A.M. Reamy, Human Development and Family Studies, The Pennsylvania State University, State College, Pennsylvania*

Co-Chair: *J. Lee, Human Development and Family Studies, The Pennsylvania State University, State College, Pennsylvania*

Discussant: *C.A. Berg, The University of Utah, Salt Lake City, Utah*

As adults age or become afflicted with chronic illness, they become increasingly dependent on others for support. In particular, family members (i.e., spouses, adult children) often step in to provide support in a dyadic context. Despite their inherent interdependent context, however, dyadic relationships have been traditionally examined by looking at reports from a single informant. More sophisticated data analysis techniques offer new perspectives on how dyadic issues can be examined using perspectives from both partners or family members. This symposium will, therefore, examine four distinct dyadic contexts and issues in adulthood that utilize statistical methods that account for the nesting of data within families or couples. A. M. Reamy will examine the discrepancy between individuals with mild to moderate dementia and their family caregivers' reports on individuals' with dementia values and preferences in daily care over time. J. E. Lee will present on couples' coping profiles utilizing data from a psychosocial intervention study. S. J. Wilson will discuss the role of spouses' other-orientation in understanding the relationship between shared possible selves and subjective health in couples where a spouse has prostate cancer. And, Y-P. Cheng will explore the similarities between support provided by middle-aged adults to their aging parents and support provided by young adults to their middle-aged parents. While each presentation will capture a unique interpretation of dyadic issues in adulthood, C. Berg will subsequently integrate cross-cutting issues of interdependence between dyadic members and potential implications for both individuals, while underscoring important future directions for dyadic research.

### DYADIC REPORTS OF VALUES AND PREFERENCES OVER TIME: INDIVIDUALS WITH DEMENTIA AND FAMILY CAREGIVERS

A.M. Reamy<sup>1</sup>, K. Kim<sup>1</sup>, S.H. Zarit<sup>1</sup>, C.J. Whitlatch<sup>2</sup>, *1. Human Development and Family Studies, The Pennsylvania State University, State College, Pennsylvania, 2. Benjamin Rose Institute on Aging, Cleveland, Ohio*

Family caregivers often become surrogate decision-makers for individuals with dementia (IWDs); yet, little is known about how caregivers' and IWDs' perspectives align over time. Using dyadic growth-curve modeling, we concurrently investigated the linear pattern of change in 198 dyads' (i.e., caregivers and IWDs with mild to moderate dementia) reports of IWDs' values and preferences in daily care over four years. Results indicate that, while IWDs' self-reports remain stable, caregivers' reports of importance of IWDs' values and preferences significantly decrease over time. After controlling for IWD characteristics and values, we found that changes in caregivers' reports are associated with greater discrepancy at baseline, IWDs' quality of life over time, and caregivers' perception of how involved the IWD is in care decision-making over time. These findings highlight the complexity and importance of accounting for the dyadic context when considering an IWD's care values and preferences.

### PROFILES OF COPING AMONG COUPLES DEALING WITH ARTHRITIS

J. Lee, L.M. Martire, S.H. Zarit, *Human Development and Family Studies, Penn State University, Solon, Ohio*

Recent dyadic coping literature has addressed the need to consider both patients and their spouses' appraisals on multiple stressors and resources. Using a psychosocial intervention study with arthritis patients and their spouses (n=220 dyads), we explore dyadic coping profiles of

couples dealing with arthritis. Latent profile analysis was applied to variables reflecting the domains of health, marital relationship, caregiving activities (total numbers of IADL), and perceived social support. A four-profile solution provided the best fit to the data. A large group of couples (56%) scored favorably across multiple domains. A small group of couples who were experiencing problems in marital relationships and/or caregiving activities were identified. Spouses were substantially similar in the patterns of their profile of aging. Profiles of dyadic coping discriminated on several measures of well-being (i.e., depressive symptoms, perceived stress, and mastery). Findings from the current study emphasize the importance of multidimensional coping among dyads dealing with chronic illness.

### SHARED POSSIBLE SELVES OF COUPLES WITH PROSTATE CANCER: SIGNIFICANCE OF EACH PARTNER'S CONTRIBUTIONS

S.J. Wilson<sup>1</sup>, M. Barrineau<sup>1</sup>, C.A. Berg<sup>2</sup>, *1. Human Development & Family Studies, Penn State University, University Park, Pennsylvania, 2. University of Utah, Salt Lake City, Utah*

Schindler and colleagues (2010) demonstrated the importance of couples' shared possible selves, or common goals, for both partners' subjective well-being. We examined how each partner's focus on the other contributes to shared selves and whether concordance in partners' other orientation predicted subjective health. Sixty-one men diagnosed with prostate cancer and their wives rated subjective physical health and listed possible selves. Possible selves were coded for being shared by the couple and orientation toward others. Multilevel modeling revealed that only wives' other orientation explained variance in shared selves (B=0.28, S.E.=0.12, p<.05). An interaction between partners' other orientation predicted husbands' subjective health (B=7.11, S.E.=2.5, p<.01), such that husbands reported better health when both partners were highly other-oriented. For wives, neither partner's other orientation was associated with better health. Sharing possible selves may be driven by the focus of wives' goals on their husbands, consistent with women's broader other orientation and caregiving role.

### INTERGENERATIONAL EXCHANGES AMONG THREE GENERATIONS

Y. Cheng, K. Fingerma, *University of Texas at Austin, Austin, Texas*

Intergenerational exchanges often occur among three generations. We examined whether upward support young adults provide their parents is similar to support parents provide grandparents; and whether the transmission of intergenerational exchange is evident for downward support to offspring. Older parents (G1, N = 337), middle-aged adults (G2, N = 633), and adult offspring (G3, N = 592) participated. Participants reported intangible (e.g., emotional) and tangible (e.g., financial) support provided. Multilevel models showed positive associations between intangible support provided from G2 to G1 and intangible support from G3 to G2. However, tangible support and downward intangible support from G1 to G2 were not associated with support from G2 to G3. Young adults may not model tangible support parents give to grandparents because they have limited resources. Transmission of downward support is not evident to individual children, but future research should examine total downward help to multiple children of the same family.

## SESSION 2760 (SYMPOSIUM)

### MULTIDISCIPLINARY EXAMINATION OF SOCIAL CAPITAL TO FURTHER ADVANCE ENVIRONMENTAL GERONTOLOGY

Chair: *J. Norstrand, Boston College, Chestnut Hill, Massachusetts*

Discussant: *G.D. Rowles, University of Kentucky, Lexington, Kentucky*

Environmental gerontology, which focuses on describing, explaining and modifying/optimizing the relationship between the aging person and the physical / social environment (at the neighborhood, state or

country level) has gained increased attention as we recognize the importance of the environment on aging. This symposium examines social capital from perspective of 4 disciplines, (i.e. anthropology, psychology, public health and social work), to achieve a more meaningful understanding of the person-environment exchange. This will be demonstrated through four papers: Kaspar and colleagues, from the perspective of psychology, will look at the relationship between social capital and healthy aging in relation to the living environment (e.g., urban identity), and engagement in the community (e.g., social participation). Norstrand, from the perspective of social work, will examine the relationship between multiple indicators of social capital with physical and mental health outcomes at the individual level; and will use hierarchical linear modeling, at the township level, to examine contextual effects. Rosso and colleagues, from the perspective of public health, will examine social capital and mobility in relation to the size of geographic area. Finally, Stafford, from the perspective of anthropology, will provide a theoretical discussion of ways of understanding the social environment in order to better understand the person/environment interaction. As explanation of behavior remains a major challenge, it is hoped these papers will further advance environmental gerontology by providing a deeper understanding of social capital and its role in terms of the person-environment exchange.

#### **SOCIAL CAPITAL AND OLDER ADULT'S MOBILITY – THE MODIFIABLE AREAL UNIT PROBLEM**

A.L. Rosso<sup>1</sup>, A. Auchincloss<sup>1</sup>, L. Tabb<sup>1</sup>, T. Grubestic<sup>2</sup>, J. Taylor<sup>1</sup>, Y.L. Michael<sup>1</sup>, 1. *Epidemiology and Biostatistics, Drexel University School of Public Health, Philadelphia, Pennsylvania*, 2. *Drexel University College of Information Science and Technology, Philadelphia, Pennsylvania*

Social capital can enhance health of individuals but the geographic area over which it acts for specific outcomes is unclear. We used data from 675 adults aged 65 years and older participating in a community-based survey conducted in Philadelphia in 2010. Social capital was aggregated at the neighborhood level from individual responses on trust, neighborliness and volunteerism. Generalized estimating equations adjusted for demographic characteristics and individual- and neighborhood-level socioeconomics were used to assess associations of individual-level mobility (Life-Space Assessment, range 0-104) with social capital using two neighborhood definitions: 45 locally-defined neighborhoods (census tract clusters) and 378 census tracts. There was no association at the locally-defined neighborhood level. An increase in mobility (5.8 points (95% confidence interval: 1.0, 10.5)) was observed for highest compared to lowest tertile of social capital at the census tract level. Social capital may act over smaller geographic distances in relation to mobility in the elderly.

#### **CONCEPTUALIZATION OF SOCIAL CAPITAL FROM SOCIAL WORK PERSPECTIVE: BUILDING ON ENVIRONMENTAL GERONTOLOGY**

J. Norstrand, *Boston College, Chestnut Hil, Massachusetts*

Introduction: Social capital may be a particularly useful concept for environmental gerontology. Yet social capital remains conceptually confusing. Goal: Relationship between social capital and health is examined to build on the conceptual understanding of the person-environment fit. Method: Logistic regressions with 5 social capital measures (trust neighbors, sense of belonging, neighbors willing to help, talk to friends/relatives, participation) are examined in relation to 5 health outcomes (self-rated health, ADL, IADL, depression and stress) for community dwelling older adults (N=2,334). Hierarchical linear modeling, at township level, is carried out to examine contextual effects. Results: Subjective measures of social capital (i.e. trust neighbors, sense of belonging and neighbors willing to help) may be more important for health than objective measures (i.e. participation and talk to friends/relatives). Preliminary analyses showed significant level of variance is

explained at contextual level for health. Conclusion: Social capital may provide useful tool for advancing environmental gerontology.

#### **MEANS AND MEANINGS OF NEIGHBORHOOD FOR HEALTHY AGING**

R. Kaspar, F. Oswald, U. Frenzel-Erkert, *Interdisciplinary Ageing Research, Faculty of Educational Sciences, Goethe University Frankfurt, Frankfurt am Main, Germany*

Environmental gerontology has adopted both a social cohesion and exchange perspective on social capital. This paper will discuss potentials for charting the relationship between social capital and healthy aging by focusing on the role of mediating concepts that may indicate relevance of the living environment (e.g., urban identity), as well as processes of engagement in the community (e.g., social participation). Individuals' perceptions of neighborhood characteristics are juxtaposed with geographical data to allow for a valid mapping of person-environment references. Preliminary results from an ongoing survey with targeted 600 community-dwelling urban citizens (Frankfurt am Main, Germany) stratified by age (70-79 vs. 80-89) and household composition (living alone vs. with partner) indicate that neighborhoods that exert a high degree of informal social control may hamper positive effects of social participation on healthy aging. The consequences of agency and belonging components of social capital for healthy aging in urban neighborhoods are revisited.

#### **FROM SENIOR SPACES TO HUMAN PLACES: SOCIABILITY AND SOCIAL HEALTH IN LATER LIFE**

P.B. Stafford, *Indiana Institute on Disability and Community, Indiana University, Bloomington, Indiana*

As a metaphor for environmental gerontology, an "exchange" model of person/environment interaction suggests a one/two, back and forth, stimulus/response process that can be described by vectors and forces. Alternatively, an interpretive, phenomenological model, as might be drawn from certain quarters in anthropology and sociology suggests that the "reality" of the person/environment relationship is an intersubjective, jointly constructed phenomenon. This echoes theory in communication studies, where the former model sees communication as an exchange of messages and the latter as the joint creation of meaning. This paper explores the concept of sociability, an attribute of social environments created by many, many elders worldwide. As a meaningful source of civic engagement and belongingness for elders, sociability contributes to social health, but can't be programmed by professionals. Can it be enabled? Perhaps yes, and the answer to that question is the central focus of the proposed paper.

#### **SESSION 2765 (SYMPOSIUM)**

##### **STEPFAMILIES IN LATER LIFE**

Chair: *S. van der Pas, Epidemiology and Biostatistics, EMGO Institute for Health and Care Research, Amsterdam, Netherlands*  
Co-Chair: *T.G. van Tilburg, VU University Amsterdam, Amsterdam, Netherlands*

Discussant: *M. Silverstein, USC Davis school of Gerontology, Los Angeles, California*

Background. The vast increase in divorce and remarriage rates are one of the main demographic changes over the last decades. Marital histories of older people are becoming increasingly complex; there are more older people who have been divorced and the number of later-life cohabiting relationships, remarriages and stepfamilies are likely to increase further as the baby boom generation reach retirement age. Objectives. The past decade's research has already shown the diversity and complexity of remarried families and stepfamilies.

Still much remains to be learned about the dynamics of contemporary remarriage of older adults and the complexity of stepfamily relationships. Using new data and novel approaches this symposium will enhance our understanding of how processes within remarriages and stepfamilies unfold over time. Also, the symposium will give insight in caregiving within the steprelationship. Papers. The first presentation focuses on the changes in ties of co-residence and proximity of stepmothers and stepchildren (Seltzer, Bianchi & Yahirun). Next, an overview will be given of cohort differences in the identification and contact with adult stepchildren (Suanet, Van Tilburg & Van der Pas). The third presentation will investigate the role of (step)children in the decision-making process of (step)parents for living-apart-together or for sharing a new household (Gierveld). The fourth presentation focuses on the structure and composition of remarried caregiver's social relations (Sherman, Webster & Antonucci). The last presentation will investigate the impact of repartnering and stepparenting on the availability of family members to provide care of older people (Glaser, Gjonca & Tomassini).

#### **WHO IS IN AND WHO IS OUT? IMPLICATIONS OF FAMILY STRUCTURE FOR BOUNDARY AMBIGUITY AMONG OLDER PARENTS WITH REGARD TO THEIR STEPCHILDREN IN 1992 AND 2009**

B. Suanet<sup>1</sup>, T.G. van Tilburg<sup>1</sup>, S. van der Pas<sup>2</sup>, *1. Sociology, VU University Amsterdam, Amsterdam, Netherlands, 2. EMGO Institute for Health and Care Research, Amsterdam, Netherlands*

Abstract Guided by the trends of increased prevalence, normalization and social acceptance of stepfamilies, we argue that the occurrence of older parents' boundary ambiguity with regard to their adult (step)children has become less prevalent across subsequent birth cohorts. Using data of 136 older parents aged between 55 and 64 years (birth cohorts 1928-1937 versus 1938-1947) from the 1992 wave of the 'Living Arrangements and Social Networks of Older Adults' study and the 2002 wave of the consecutive 'Longitudinal Aging Study Amsterdam', we determine whether the identification of stepchildren by Dutch older parents differs between 1992 and 2002. Our main finding is that the identification of stepchildren has increased between 1992 and 2002. Identification of stepchildren is much more likely by remarried respondents than by respondents having stepchildren from cohabiting or living-apart together relationships. The increase in identification of stepchildren among respondents in 2002 might have positive effects for the future care giving potential of (step)families.

#### **(STEP)CHILDREN AFFECTING PARENTS IN THEIR DECISION MAKING AT THE START OF A NEW PARTNER RELATIONSHIP**

J. Gierveld, E. Merz, *Social Demography, NIDI, The Hague, Netherlands*

Using the Netherlands Kinship Panel Study, this study investigates the process of repartnering of divorced and widowed adults, among which the determinants of starting lat relationships or remarriage/ cohabitation. Data showed that parents more frequently than childless adults opt for lat relationships. Additionally, based on in-depth interviewing of a selection of the parents (n = 46), parents' considerations behind the decision for lat or for sharing a new composite household were investigated. Data showed that a large majority of (step)children are involved in 'boundary work': (step)children try, verbally and via rebellious behavior, to guarantee the continuation of the family they are currently involved in. Many children were successful in that parents did refrain from sharing a household with the new partner. Conclusion: parents use a prudent approach in opting for continuation of the bonds with their children and 'adapting' their preferences and decision making.

#### **CAREGIVING IN THE CONTEXT OF LATER LIFE REMARRIAGE: STRUCTURE AND COMPOSITION OF SUPPORT NETWORKS**

C.W. Sherman, N.J. Webster, T.C. Antonucci, *Institute for Social Research, University of Michigan, Ann Arbor, Michigan*

Research has not accounted for Americans' increasingly diverse and complex marital and family histories with respect to care-specific social support. This paper reports on a mixed methods study of dementia caregiving and support among later-life remarried wives (N=61). We examined the structure and composition of caregivers' social relations networks, as well as their positive (e.g., emotional, instrumental) and negative (e.g., failure to assist, intrusive) caregiving support networks. Positive support was typically received from own family, friends, and professionals, with minimal support from stepfamily members. Negative caregiving networks predominantly included stepfamily members. All three networks were significantly associated with key demographic and well-being variables. Inclusion of both social relations and caregiving-specific networks highlights unique aspects of support in the remarried context. Discussion will address implications of latent and activated support networks to well-being of older remarried adults facing health and caregiving challenges and potential interventions that can address their unique needs.

#### **PARTNERSHIP DISRUPTION, STEPFAMILIES AND ONSET OF FIRST USE OF CARE AT OLDER AGES IN ENGLAND**

K.F. Glaser<sup>1</sup>, E. Gjonca<sup>1</sup>, C. Tomassini<sup>2</sup>, *1. Institute of Gerontology, King's College London, London, United Kingdom, 2. Università del Molise, Campobasso, Italy*

As the majority of care is provided by family members, partnership disruption (including repartnering and stepfamily formation) is likely to impact on the availability and propensity of family members to provide care. However, we know surprisingly little about the impact of partnership disruption on care transitions among older people. Employing data from the English Longitudinal Study of Ageing (ELSA), we investigated the association between various measures of partnership disruption and first use of care (both informal and formal) at older ages. We used discrete-time multinomial logistic regression models with time dependent covariates to model data across all three waves. Our results showed a significant association between partnership disruption, step family formation (when at least one child was a minor), and the onset of care even when health and socio-economic factors were taken into account. As expected, health status and changes in health status, showed the strongest associations with care transitions.

#### **CO-RESIDENCE AND GEOGRAPHIC PROXIMITY OF MOTHERS AND ADULT CHILDREN IN INTACT AND STEP FAMILIES**

J.A. Seltzer, S.M. Bianchi, J.J. Yahirun, *Sociology, UCLA, Los Angeles, California*

Children who live with or near a parent provide more care and receive more help from parents than geographically distant children. Parents and adult stepchildren are less likely to live together than parents and biological children, but we know little about the proximity of step and biological kin. We use data from the Health and Retirement Study to describe differences in co-residence and proximity and the factors associated with change in co-residence and proximity as mothers age. We find that stepchildren and stepmothers are less likely to live together than biological children and mothers. If they do live together, stepchildren and mothers are more likely to end co-residence by moving farther apart from each other. Among those who live far apart, stepchildren are less likely than biological children to move closer to their mother. We interpret these findings in light of children's competing obligations to biological and stepparents.

### STRESSOR ACCUMULATION, HEALTH AND WELL-BEING: THE EFFECTS OF ADVERSE, ADDITIVE LIFE EXPERIENCES

Chair: J.R. Piazza, *California State University, Fullerton, Fullerton, California, Human Development and Family Studies, The Pennsylvania State University, University Park, Pennsylvania*  
Discussant: D. Almeida, *Human Development and Family Studies, The Pennsylvania State University, University Park, Pennsylvania*

Research has long revealed age-related changes in cognitive, psychological, and physiological aspects of functioning. Yet, there is considerable variability across each of these domains. This symposium brings together research indicating that stressor accumulation may contribute to age-related variability in cognitive, psychological, and physiological functioning. Mogle and colleagues present research indicating that major life events are associated with prospective and retrospective memory failures at the daily level. Stawski and colleagues demonstrate that recent life events and chronic ongoing stressors are associated with low levels of both global and daily psychological well-being. Piazza and colleagues focus on the centrality of daily stressors, revealing that people are more reactive to daily stressors if they also experience chronic levels of strain in the same domain. Importantly, however, this association is moderated by age. Diehl and Schilling present findings from a 30-day diary study showing how adults' reactivity to stress pile-up is moderated by risk (i.e., self-concept incoherence) and resilience factors (i.e., control beliefs). They also present findings showing to what extent the influences of these risk and resilience factors vary by age. Finally, Gruenewald and colleagues examine the physiological ramifications of stressor accumulation. Their study identifies factors that confer increased risk of allostatic load (i.e., cumulative physiological dysregulation) among people reporting differing levels of lifetime socioeconomic adversity. The discussant, David Almeida, will conclude the presentation by integrating the five papers and identifying how research linking multiple stressor domains can contribute to our understanding of age differences in well-being across various aspects of functioning.

### MAJOR CHANGES IN LIFE ROUTINES IMPACT DAILY COGNITIVE FUNCTIONING

J. Mogle, M. Sliwinski, J. Smyth, *Center for Healthy Aging, Penn State University, State College, Pennsylvania*

Previous research suggests that the negative impact of major life events and not the raw number of events is an important predictor of objective cognitive performance (Klein & Boals, 2001). Less is known about how major life events affect everyday cognition. In the current study, participants ( $n = 142$ ,  $Mage = 49$ , range 20-80) reported on major life events from the past 12 months as well as daily memory failures for 7 consecutive days. Reporting more life events significantly predicted greater daily reports of both prospective and retrospective memory failures. These effects did not differ with age nor by the severity of the life events. Sensitivity analyses suggested these effects were due to events that led to major changes in one's daily routine, regardless of how negatively they were perceived by individuals. Discussion will focus on the role of the environment in daily cognitive functioning.

### THE IMPACT OF STRESSFUL LIFE EVENTS ON GLOBAL AND EXPERIENCED WELLBEING IN OLD AGE: FINDINGS FROM THE ROBUST STUDY

R.S. Stawski, T.L. Queen, L.H. Ryan, J. Smith, *University of Michigan, Ann Arbor, Michigan*

Research on wellbeing has noted the importance of distinguishing global evaluations of wellbeing from discrete emotional experiences. Stressful life events are well known predictors of poorer global well-

being; however, it is unclear whether these stressful life events also influence emotional experiences emanating from daily activities. The current study examined the impact of stressful experiences, including lifetime traumas, chronic stressors and recent life events on global and experienced wellbeing in old age. Data include a sample of 968 older adults ( $Mage=69$ ,  $SD=11$ ,  $Range=50-97$ ; 56% Women) who participated in a study of wellbeing and time use (ROBUST). Preliminary results indicate that stressful life events, particularly recent life events and chronic ongoing stressors, are uniquely associated with both lower levels of global and experienced positive affect, and higher levels of global and experienced negative affect. Discussion will focus on the role stressful experiences play in shaping older adults' overall and experienced wellbeing.

### CHRONIC STRAINS AND DAILY STRESSORS: THE IMPACT OF EVENT CENTRALITY ON DAILY WELL-BEING

J.R. Piazza<sup>1,2</sup>, S.H. Zarit<sup>2</sup>, D. Almeida<sup>2</sup>, 1. *Health Science, California State University, Fullerton, Fullerton, California*, 2. *Pennsylvania State University, University Park, Pennsylvania*

People react differently to the daily stressors they encounter: Whereas some people appear to take daily stressors in stride, others are much more reactive. One reason for these differences may be the extent to which daily stressors are related to ongoing, chronic strains. The current study tested this hypothesis by examining how people reporting differing levels of chronic interpersonal strain react to daily interpersonal tensions. Results revealed that people who reported higher levels of interpersonal strain were more reactive to daily stressors involving interpersonal tensions ( $\beta = .05$ ,  $p < .001$ ). However, these results were qualified by a significant age interaction, indicating that among people who reported high levels of chronic interpersonal strain, daily interpersonal tensions were more costly to younger adults' well-being compared to older adults' well-being. No age differences emerged for people who reported low levels of chronic interpersonal strain ( $\beta = -.003$ ,  $p < .01$ ).

### MODELING REACTIVITY TO STRESS PILE-UP: THE ROLE OF RISK AND RESILIENCE FACTORS

M.K. Diehl<sup>2</sup>, O.K. Schilling<sup>1</sup>, 1. *Department of Psychological Ageing Research, University of Heidelberg, Heidelberg, Germany*, 2. *Colorado State University, Fort Collins, Colorado*

This study presents findings on the effects of risk (i.e., self-concept incoherence-SCI) and resilience factors (i.e., age and beliefs of control) on adults' reactivity to stress pile-up, as assessed in terms of negative affect (NA), using data from a 30-day study with 289 adults (age 18-89 years). Stress pile-up was modeled over a 7-day period. Multilevel modeling showed that stress pile-up had a significant effect on daily NA above and beyond concurrent daily stress. The between-person variables age and SCI showed significant interactions with stress pile-up. A higher age decreased reactivity in NA, whereas higher SCI increased reactivity in NA to stress pile-up. The within-person variable of beliefs of control also significantly interacted with stress pile-up. Stronger beliefs of daily control reduced reactivity in NA. Findings provide an illustration of how daily stress unfolds over time and how this process is moderated by risk and resilience factors.

### LIFETIME SOCIOECONOMIC ADVERSITY AND ALLOSTATIC LOAD: EXPLORING VULNERABILITY IN THE OFF-DIAGONALS

T.L. Gruenewald<sup>1</sup>, M. Lachman<sup>2</sup>, T. Seeman<sup>3</sup>, 1. *Davis School of Gerontology, University of Southern California, Los Angeles, California*, 2. *Brandeis University, Boston, Massachusetts*, 3. *University of California, Los Angeles, Los Angeles, California*

Greater lifetime socioeconomic status (SES) adversity has been linked to higher levels of allostatic load (AL), a multi-system index of

physiological dysregulation. However, not all those with high lifetime SES adversity develop high AL, nor do all those of SES advantage escape poor outcomes. We explored the demographic, behavioral and psychosocial factors that predicted membership in such 'off-diagonal' groups in participants from the Study of Midlife in the U.S. Biomarker Substudy (analytic n=646). Among those with high lifetime SES advantage, being Black, higher levels of multi-domain stress in adulthood, smoking, and higher perceived mastery and constraints predicted discrepant (high) AL ( $p < .05$ ). Among those with high lifetime SES adversity, multi-domain adult stress also predicted lower likelihood of discrepant (low) AL ( $p < .05$ ). Moderate alcohol consumption played a protective role in both groups. Results indicate common and unique factors that may confer vulnerability to AL development at different ends of the SES spectrum.

## **SESSION 2775 (PAPER)**

### **INFORMAL FAMILY CAREGIVING**

#### **PSYCHOMETRIC PROPERTIES OF THE CAREGIVER REACTION ASSESSMENT SCALE AMONG INFORMAL CAREGIVERS FOR OLDER SINGAPOREANS**

R. Malhotra<sup>1</sup>, C. Malhotra<sup>1</sup>, A. Chan<sup>1,2</sup>, T. Ostbye<sup>1,3</sup>, 1. *Duke-NUS Graduate Medical School Singapore, Singapore*, 2. *National University of Singapore, Singapore, Singapore*, 3. *Duke University, Durham, North Carolina*

Psychometric properties of the 24-item Caregiver Reaction Assessment (CRA) scale, capturing caregiver reaction in five domains (schedule/finances/family support/health/esteem) have not been assessed among in Singapore. We assess the scale's validity and reliability among informal caregivers of older Singaporeans, and its measurement equivalence/invariance (ME/I) across language of administration. Data for 1,190 care recipient (aged 75+ with >1 activity of daily living limitation)-caregiver dyads was utilized. Measurement properties of constituent items of each domain of the 'original' CRA were assessed. Confirmatory factor analysis (CFA) was conducted on one half of the sample to test the fit of the 'original' five-factor model and the other half was subjected to exploratory factor analysis (EFA). The CRA was then modified and re-subjected to CFA. Construct validity of the domains of the 'modified CRA' and its ME/I across language of administration (Chinese/English/Malay) was assessed. CFA results conveyed a poor fit of the 'original' five-factor model. Instead, EFA suggested the presence of four factors, three items to have neither sufficient nor unique factor loadings and items on the schedule and health domains to load on a single factor. CFA of the 'modified' 21-item CRA, with four domains (schedule and health/finances/family support/esteem) supported the four-factor model. Construct validity of the 'modified' CRA was also supported. ME/I analysis demonstrated partial invariance of the 'modified' CRA across language of administration. The CRA scale, with the suggested modifications, can be used to assess the caregiver reaction in a multidimensional fashion among informal caregivers of older persons in Singapore.

#### **WHAT AFFECTS DEPRESSIVE SYMPTOMS AMONG SPOUSES TRANSITIONING TO CAREGIVING?**

R. Dunkle<sup>1</sup>, A.J. Lehning<sup>1</sup>, S. Feld<sup>1</sup>, H. Kim<sup>1</sup>, H. Shen<sup>2</sup>, M. Kim<sup>1</sup>, 1. *University of Michigan, Ann Arbor, Michigan*, 2. *University of Missouri St. Louis, St. Louis, Missouri*

Previous research indicates that those providing care to a spouse have more depressive symptoms than their non-caregiving counterparts. Few studies, however, explore spouses transitioning into caregiving and what factors contribute to their depressive symptoms. This study builds on our previous work, which documented that older adults from a representative sample who transitioned to spousal caregiving, but not those who continued caregiving, exhibited more depressive symptoms than

those who remained non-caregivers. Using data from 1,117 community-dwelling respondents in the 2000-2006 waves of the Health and Retirement Study who became spousal caregivers for ADLs and/or IADLs during a two-year period, we examined the relationship between factors from the Pearlin Stress Process Model and scores on the 8-item Center for Epidemiologic Studies Depression scale (CES-D). Findings from hierarchical regression models indicated background and contextual characteristics (i.e., gender, age, education, and respondent's baseline health and depressive symptoms) and secondary stressors (change in the caregiver's ADL limitations) were significantly associated with more depressive symptoms. Primary stressors reflecting intensity of care (i.e., hours of care and provision of ADL/IADL care) were no longer significant predictors once we added social and financial resources (i.e. caregiver employment, other caregivers, and wealth) to the model. Consistent with the Stress Process Model, findings suggest that these resources reduce the effects of primary stressors on new caregivers' depressive symptoms. Interventions aimed at alleviating depression among new spousal caregivers could benefit from focusing on increasing caregivers' access to social and financial support, as well as attention to improving their own functional limitations.

#### **IN SICKNESS AND IN HEALTH: COUPLES COPING WITH STROKE ACROSS THE LIFESPAN**

M. McCarthy, *University of Cincinnati, Cincinnati, Ohio*

Stroke survivors and their spouses experience an array of physical, social, and psychological consequences from stroke. Models of coping with chronic illness suggest that couples' experiences may be different depending upon partners' ages and the developmental stage of their relationship. Stroke may be distinctly disruptive to couple's anticipated life course depending on when in life it occurs. The theory of "biographical disruption" (Bury, 1982) has been articulated as a conceptual framework with which the experience of chronic illness may be investigated. Chronic illness leads to biographical disruption with three main aspects: disruptions to taken-for-granted assumptions and behaviors, disruptions to explanatory frameworks, and mobilization of resources. Few studies have investigated disruption from chronic illness from a dyadic perspective or focused on how illness impacts couple's relationships across the lifespan. We conducted semi-structured, in-depth interviews with 32 survivor-spouse dyads (N = 64) ranging in age from 21 to 90 years old and coping with the after-effects of stroke. Constant comparative analysis was used to identify aspects of biographical disruption unique to the experiences of couples at different developmental stages. We identified numerous, often modifiable, features of disruption not described in the prevailing, individually-oriented coping literature. Emergent themes included: instrumental and psychological challenges couples face, relationship challenges, unexpected changes in couple's anticipated life course, and marshaling of existing relationship strengths. Findings from this study contribute to our understanding of how chronic illness affects couples differently according to life stage and they may lead to more developmentally appropriate interventions for couples coping with stroke.

#### **FORMAL CAREGIVING LANGUAGE: LACK OF KNOWLEDGE BY ELDER MALE CAREGIVERS RESULTS IN DISCRIMINATION**

B. Torgusen, *Harbor, Port Lavaca, Texas*

A qualitative study of elder male caregivers of wives diagnosed with dementia suggests that the failure to know the language of caregiving results in caregivers being discriminated against by formal support networks. The caregivers in this study reside within both rural and small urban geographic regions of coastal Texas and are educated and successful in their given career paths. However, they relate unsuccessful attempts to navigate the formal networks of caregiving support due to language barriers, not knowing local resources and what questions to ask. While much has been written on the language of both formal and

informal caregiving across cultures, ethnicities, regions and societies (LaPointe, 2011; Graycar & Morgan, 2002; and Valle, 1999) little has been done to share this language with elder male caregivers, thus it is this author's contention that elder male caregivers are discriminated against when it comes to the use of caregiving language. Kramer and Thompson (2002) discussed two studies: Kramer & Lambert (1999) delineated the detrimental changes in the social integration of elder male caregivers in their informal settings and Coe and Neufeld (1999) spoke of formal supports used only during crisis. The language of caregiving is a barrier to receiving formal support and will continue to do so as and until these elder male caregivers strive to learn and integrate this new language.

### **THE OLDER SPOUSAL CAREGIVERS' MULTIPLE POSITIONS IN THEIR EVERYDAY LIFE**

P. Eskola<sup>1</sup>, E. Latvala<sup>2</sup>, T. Lyyra<sup>1</sup>, T. Rantanen<sup>1</sup>, *1. Health Sciences, Jyväskylä University, Jyväskylä, Finland, 2. University of Applied Science, Jyväskylä, Finland*

The purpose of this research was to describe the multiple positions that older spousal caregivers have in their everyday lives. The qualitative data was gathered by 25 semi-structured interviews. Participants were 12 women and 5 men aged 68-87 years, who took care of their spouses with dementia. Discourse analysis techniques have been used to analyze the data. The participants constructed their everyday life by positioning themselves in multiple ways. The participants described themselves as spouses and not necessarily care providers. Being a keeper of everyday routines included tasks such as performing basic activities necessary in everyday life. Being a social agent included acting as a contact person between the spouse and other people. Being a trustee included, among other things, defending the spouse's right to good formal care, as well as dealing with financial affairs. Being a leisure instructor included managing visits and trips outside the home. Older spousal caregivers carry multiple positions in caring for their spouse describing themselves as spouses rather than care providers with past years together forming the basis of their current relationship. Knowledge of the various positions older spousal caregivers have in their everyday life may help the formal care providers to better plan how to support spousal caregivers in their positions as care providers, keepers of everyday routines, agents, trustees and leisure instructors, all of which require different approaches.

## **SESSION 2780 (PAPER)**

### **RETIREMENT DECISIONS**

#### **OLDER WORKERS & RESILIENCE: FINDING THEIR WAY BACK ON THE JOB**

H.L. Sterns<sup>1</sup>, N. Dawson<sup>2</sup>, *1. The University of Akron, Akron, Ohio, 2. Cleveland State University, Cleveland, Ohio*

Although improved health and longevity are allowing older adults the option to remain in the workforce longer and postpone retirement, several sources including both AARP and the Sloan Center for Aging & Work report one of the greatest policy issues for older adults is the rising length of unemployment. Long-term unemployment, defined by unemployment greater than 27 weeks, is greater in older adults than younger workers. Older job seekers have a more difficult time than younger job seekers in returning to the workforce following a job loss primarily due to differences in job search technique and discrepancies in vocational retraining. Returning to employment, whether it is following an injury or because of financial reasons, requires a great deal of resilience on the part of the older worker in response to growing levels of workplace demand and adversity. These issues can include conditions of either the physical work environment, such as location, climate, or job demands, and/or the psychosocial work environment which may include attitudes of managers or co-workers towards older work-

ers. Four patterns of resilience discussed by Polk are considered including dispositional, relational, situational, and philosophical. Lifespan theory and approaches to developmental change are discussed in the context of resilience and challenges faced by older workers when attempting a return to work in later life. Changes in work demands, health, injury and disability, skills and abilities needed, training and retraining, organizational culture, as well as, worker purpose and fulfillment are included in this overview.

### **RETIREMENT CAREER PLANNING**

A.M. Woehrmann, J. Deller, *SMARD, Leuphana University Lueneburg, Lueneburg, Germany*

Due to demographic change many organizations are beginning to experience skill shortages. One option to act is to encourage employees to provide their knowledge and experience beyond regulatory retirement age. Research has shown that many retirees are already working to some extent, but little is known about retirement career planning of employees. However, career planning models exist, although for career entry. The purpose of this study was therefore to examine the applicability of Social Cognitive Career Theory's (SCCT) Choice Model (Lent, Brown, & Hackett, 1994) to planning the career exit phase, namely occupation-related activities in retirement. Survey results from 212 employees aged 50 to 65 years of a German aerospace company (mainly engineers) were used to test the applicability of the SCCT's choice model in this context. Results suggest that the model fits the data well (Chi-squared(3) = 3.64,  $p = 0.30$ ; RMSEA = 0.03; CFI = 1.00). Occupational self-efficacy and outcome expectations both had an indirect effect on the intention to engage in occupation-related activities in retirement through interest as mediator. Outcome expectations, but not self-efficacy, were also directly related to intention, which in turn was directly linked to retirement career planning activities. The results extend research on the process of retirement career planning through the application of SCCT. Especially the rewards expected from post-retirement activities seem to be highly influential. The results therefore provide valuable starting points for organizational interventions to strengthen employees' intentions to stay in the workforce, such as information events on working possibilities in retirement.

### **TRAJECTORIES OF RETIREMENT AND THE RISK OF POOR HEALTH AMONGST OLDER AMERICANS**

M. Hyde, H. Westerlund, *Stress Research Institute, Stockholm, Sweden*

Retirement represents a potential turning point in a person's life. Yet the relationship between health and retirement remains relatively under-researched and the existing evidence is ambiguous. One reason for this is that different retirement trajectories are often not examined separately. This presentation will present findings on the impact of different retirement trajectories on health amongst older Americans. Data are taken from all 10 waves of the Health and Retirement Study. This produced 70,946 person-measurement observations for 8,815 participants from 1992 to 2010. Generalized estimating equations (GEE) were used to model trajectories of self-rated health over 6 waves before and after retirement for different retirement routes: full-time work to full retirement; part-time work to full retirement; full-time work to partial retirement and part-time work to partial retirement. The analyses were controlled for age at retirement, sex, education and race/ethnicity. The results show that the prevalence of suboptimal health increased with age. For all retirement routes this increase was substantially steeper before retirement than after. The increase was particularly pronounced in the years immediately preceding retirement in all but the route from full-time work to part-time retirement. This suggests that retirement in the US is largely driven by poor health. Moreover retiring does not confer any great improvement in health for the average American retiree. However there is a substantial reduction in the incidence of new cases of suboptimal health following retirement.

## IMPACT OF RETIREMENT WORRY ON INFORMATION PROCESSING USING THE EMOTIONAL STROOP TASK

H.C. Gutierrez, D.A. Hershey, *Psychology, Oklahoma State University, Stillwater, Oklahoma*

Most American working adults are not saving enough to ensure a worry-free retirement (EBRI, 2010). In this study, individuals' financially-linked retirement worries were explored using a well-established cognitive information processing paradigm called the Emotional Stroop Task (EST). Rather than presenting color words (e.g., "RED") in a non-red color of ink and asking individuals to identify that ink color (i.e., the standard Stroop interference paradigm), the EST uses retirement "threat" words (e.g., "POVERTY;" "SAVINGS") and non-retirement "neutral" words ("SAIL-BOAT;" "TABLE"), each of which is presented in one of four ink colors. In the present study, individuals with retirement-linked fears ( $n = 32$ ) were expected to identify ink colors for threat words more slowly than neutral words, due to the occurrence of an emotionally-based interference effect for the former. No comparable interference effect was anticipated among low retirement-fear individuals ( $n = 28$ ). Millisecond-level timing revealed support for the hypothesized interaction. Among high-fear individuals, threat word responses took 808 milliseconds to identify on average, and neutral words took 790 milliseconds (an 18 millisecond difference;  $t[31] = 2.21$ ,  $p = 0.02$ , one-tailed). Among low-fear individuals, however, a 0 millisecond difference in identification speed was observed across word types (both threat and neutral means = 780 ms;  $t[27] = 0.04$ , ns). The interaction effect observed in this investigation may help researchers understand why individuals with retirement-related fears have difficulties planning and saving for retirement. It could be that negative emotional content associated with LTM-based retirement concepts disrupt processing among those with strong, financially-linked fears.

## EXPLAINING TRANSITIONS INTO SELF-EMPLOYMENT AFTER (EARLY) RETIREMENT IN THE NETHERLANDS

H. Van Solinge, K. Henkens, *Netherlands Interdisciplinary Demographic Institute (NIDI), The Hague, Netherlands*

A NIDI panel study among older workers in the Netherlands revealed that one in every three retirees re-entered the labor market after (early) retirement. Post-career transitions into self-employment are increasingly common. In this paper we explore the various trajectories older adults may choose in their pathway into full retirement. How common is the transition into self-employment after (early) retirement? What motives drives this transition? To what extent is the decision to become self-employed determined by the lack of opportunities for paid employment offered by employers. Self-employment in particular, may be an instrument in postponing the age at which workers finally leave the labour market. It remains to be seen whether self-employment is a 'solution' for different groups/types of workers. Is it as attractive for low skilled workers as for high skilled workers? Does it offer equal opportunities for women and for men?

## SESSION 2785 (SYMPOSIUM)

### AGING AND ORAL HEALTH IN THE U.S

Chair: *B. Wu, School of Nursing, Duke University, Durham, North Carolina*

This symposium aims to address oral health disparities among older adults in the U.S., and it also provides insight on the improvement of oral health among this segment of the population. Using data from the Behavioral Risk Factor Surveillance System (BRFSS), the first paper examined regional variation in the level of and improvement in the rates of significant tooth loss (6 teeth and above) between 1999 and 2010. Findings from this paper suggest there are persistent, or even rising, regional disparities in oral health outcomes. Using clinical examination data from participants age 50+ in the National

Health and Nutrition Examination Survey (NHANES) III and NHANES 1999-2004, the second paper found that oral health has improved in the past two decades. The number of decayed and missing teeth decreased over time while the number of filled teeth increased. Data came from repeated observations of 810 dentate individuals aged 65 years and over in North Carolina from 1988 to 1994. The study found that social stratification (i.e., age, gender, race, education, and household income) was significantly associated with the levels of both attachment loss and pocket depth but not their rates of change. The fourth paper used principles from the Diffusion of Innovation framework and implemented an interprofessional program of research based on data from a quality improvement program in oral care in a long-term care unit to inform the development of future implementation science protocols.

## REGIONAL VARIATION IN SIGNIFICANT TOOTH LOSS AMONG OLDER ADULTS IN THE U.S. (1999-2010)

M.M. Gorsuch<sup>2</sup>, S. Sanders<sup>3</sup>, B. Wu<sup>1</sup>, *1. Duke University School of Nursing and Center for the Study of Aging and Human Development, Durham, North Carolina, 2. Duke University Sanford School of Public Policy, Durham, North Carolina, 3. Duke University Sanford School of Public Policy and Population Research Institute, Durham, North Carolina*

Using data from the Behavioral Risk Factor Surveillance System (BRFSS), we examined regional variation in the level and improvement in the rates of significant tooth loss (6 teeth+). Between 1999 and 2010, the rate of tooth loss for those 65+ declined from 52.6% to 39.8%. Improvement in tooth retention in the East South Central region (61.9% in 1999 and 52.8% in 2010) and Appalachia (58.8% in 1999 and 51.2% in 2010) lag significantly behind the nation. This suggests persistent, or even rising, regional disparities in oral health outcomes. Moreover, we estimate the contribution of well water to these regional disparities in tooth loss. Controlling for demographic variables, fluoride of well water, well water usage, and availability of dentists explains 5.2 percentage points of the disparity in tooth loss in Appalachia in 2010. 6.4% of this explained difference is due to fluoride levels of well water and well water usage.

## IMPROVING ORAL HYGIENE IN LONG-TERM CARE RESIDENTS: IMPLEMENTATION SCIENCE PERSPECTIVES

E.S. McConnell<sup>1,2</sup>, C. Downey<sup>1,2</sup>, K. Lee<sup>2</sup>, M.V. Spainhour<sup>1</sup>, *1. Geriatric Research, Education and Clinical Center, Durham VA Medical Center, Durham, North Carolina, 2. Duke University, Durham, North Carolina*

Numerous studies indicate serious gaps in oral hygiene care for long-term care residents. Using principles from the Diffusion of Innovation framework, we launched an interprofessional program of research (nursing and dentistry) that uses a quality improvement program in oral care within a Department of Veterans Affairs long-term care unit to inform development of implementation science protocols. Interprofessional review of evidence-based practices for oral care, (frequency and duration of toothbrushing, flossing, techniques for managing resistance to care), resulted in specific, novel modifications to the oral care program to increase likelihood of staff adoption of new care techniques. Modifications targeted improving staff perception of the relative advantage of routine oral care, enhancing the visibility of oral care practices, and increasing compatibility of oral care with existing unit-level routines. Implementation science methods combined with quality improvement approaches represents a promising strategy to accelerate translation of evidence-based oral hygiene practices into routine care.

## **TRAJECTORIES OF PERIODONTAL DISEASE AMONG OLDER AMERICANS. DOES SOCIAL STRATIFICATION MATTER?**

J. Liang<sup>1</sup>, B. Wu<sup>2</sup>, B.L. Plassman<sup>2,1</sup>, J.M. Bennett<sup>1</sup>, J. Beck<sup>3</sup>, *1. Health Management & Policy, University of Michigan, Ann Arbor, Michigan, 2. Duke University, Durham, North Carolina, 3. University of North Carolina, Chapel Hill, North Carolina*

This study charted the trajectories of periodontal disease among older Americans and analyzed how they are related to social stratification. Data came from repeated observations of 810 dentate individuals aged 65 and over in North Carolina from 1988 to 1994. Attachment loss (AL  $\geq 4$ mm) and pocket depth (PD  $\geq 3$ ) were assessed through dental examination. Over time, the risk for AL increased, while the odds of PD decreased in an accelerated fashion. Social stratification (i.e., age, gender, race, education, and household income) was significantly associated with the levels of both AL and PD but not their rates of change. For both AL and PD, a lower risk was associated with female gender, being white, higher education, and income. In contrast, the risk of AL increased with age, whereas the odds of PD decreased as one became older. Supported by NIH/NIDCR (1R01DE019110)

## **TREND OF DENTAL CARIES EXPERIENCES: ANALYSIS OF NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES) (1988-1994) AND NHANES (1999-2004)**

B. Wu<sup>1</sup>, C. Hybels<sup>2</sup>, J. Liang<sup>3</sup>, B.L. Plassman<sup>4</sup>, L.R. Landerman<sup>2</sup>, *1. Duke University School of Nursing and Center for the Study of Aging and Human Development, Durham, North Carolina, 2. Duke University Center for the Study of Aging and Human Development, Durham, North Carolina, 3. University of Michigan School of Public Health, Ann Arbor, Michigan, 4. Duke University Department of Psychiatry, Durham, North Carolina*

Using clinical examination data from participants age 50+ in the NHANES III and NHANES 1999-2004, we found through trend analyses that oral health trends improved over time. The number of decayed and missing teeth decreased over time while the number of filled teeth increased. Older age was associated with more missing teeth and fewer filled teeth across time, while women had fewer decayed and more filled teeth. Non-whites had more decayed and missing teeth and fewer filled teeth compared to whites. More years of education and higher income were associated with fewer decayed and missing teeth and more filled teeth. Older age was associated with a greater decrease in decayed and filled teeth over time but a sharper increase in missing teeth. Higher income was associated with a sharper decrease in the number of missing teeth, but a less steep increase in filled teeth. Supported by NIH/NIDCR (R01DE019110)

## **SESSION 2790 (SYMPOSIUM)**

### **CHANGING THE FACE OF BEST PRACTICES IN GERONTOLOGICAL NURSING RESEARCH**

Chair: *D.L. Woods, Center for the Advancement of Gerontological Nursing Science, School of Nursing, University of California, Los Angeles, Los Angeles, California*

Discussant: *E. Beattie, Queensland University of Technology, Brisbane, Queensland, Australia*

It is well known that the number of older adults is increasing and will continue to increase dramatically in the next 20 years. We also know that as persons age there is greater heterogeneity. This heterogeneity, including ethnic diversity, requires specific considerations in gerontological research and nursing research. Moreover, older adults remain in the workforce for longer. There remains a paucity of gerontological nursing research that addresses issues on which best practices and policy can be based. Are we asking the right questions? This symposium will present perspectives on issues in gerontological nursing research. The first paper will examine best practices for interviewing methods

with ethnic elders in qualitative research. The second paper will discuss the inclusion of intraindividual variability in longitudinal studies such that a phenomenon can be characterized with a view to guide research and person centered practice. The third paper will examine the effect of direct care staff's ethnicity and social interaction on behavioral symptoms of Korean American older adults with dementia. The final paper will examine important factors to include such as job satisfaction, work environment and health when conducting research with older workers.

### **NURSING BEST PRACTICES FOR INTERVIEWING ETHNIC ELDERLY IN QUALITATIVE NURSING RESEARCH**

L. Williams, L.R. Phillips, *UCLA, Los Angeles, California*

Qualitative methods are often used to explore and characterize a phenomenon that is not well known. However, there are special considerations when dealing with older adults as research participants, especially those of diverse ethnic backgrounds. Best practices for interviewing methods must take into account the historical context of how elders grew up, their expectations of the interaction taking place, and intergenerational differences within the ethnic groups. Nurse researchers must also recognize how those interactions may change depending on political factors such as immigration status. Visual, cognitive, and hearing changes may alter the parameters of an interview and subsequently the participants' understanding of interview questions. Lastly, researchers must critically appraise their use of incentives in a population that may have scarce resources, as their use may alter research responses.

### **INTRA-INDIVIDUAL VARIABILITY IN LONGITUDINAL RESEARCH ON AGING**

M. Yefimova, D.L. Woods, *University of California, Los Angeles, Los Angeles, California*

In research with older adults, a key objective is to understand and predict change in events that occur over time. While age-related trajectories result from changes accumulated during an individual's lifetime, intra-individual variability of measures is manifested as fluctuations on short time scales, such as minutes, hours or days. This variability captures a person's dynamic characteristics, or capacity for change and adaptation. It is important to detect these traits in the heterogeneous population of older adults in order to develop person-centered interventions. Many longitudinal studies focus on trajectories over long periods of time that use aggregated data, discarding short term variability as measurement error or "noise". In this paper we argue that intra-individual variability should be included as an independent measure of change and discuss methodological considerations for incorporating these measures into longitudinal study design. Implications for gerontological nursing research are highlighted, with examples from studies of cognition and behavior.

### **CERTIFIED-NURSING ASSISTANTS' SOCIAL INTERACTION AND BEHAVIOR OF KOREAN-AMERICANS WITH DEMENTIA**

H. Kim, D.L. Woods, J. Mentis, J.L. Martin, A. Moon, L.R. Phillips, *UCLA, Los Angeles, California*

Few studies examine the association between behavioral symptoms of dementia (BSD) and social interaction. Certified-Nursing Assistants (CNAs) social interaction, whose ethnic background is different from the residents, may contribute to BSD. This study examined non-Korean CNAs' social interaction and BSD in Korean-American (KA) older adults with dementia. We recruited 29 CNAs and 20 KA residents from an ethno-specific NH. Research assistants observed and recorded CNAs' and residents' behavior simultaneously during routine care for 3 days. CNAs' dementia competent social interaction was significantly inversely associated with BSD when cultural competence was lower in the morning. In the afternoon, CNAs' dementia competence was significantly inversely associated with BSD. BSD decreased further as cultural com-



petence increased. This association was more prominent among those with high intensity BSD. The findings suggest that dementia competent care is critical to decrease BSD. The proportion of culturally competence influences the degree to which dementia competence impacts BSD.

### **OLDER WORKERS THE FINAL FRONTIER? SUCCESSFUL AGING, WORK ENVIRONMENT AND JOB SATISFACTION**

M. Wargo-Sugleris, *Nursing, Agoura Hills, California*

Michele Wargo-Sugleris RN, PHN University of California, Los Angeles, California, United States Successful aging is the ability to manage chronic conditions, maintain optimal cognitive and physical function and remain engaged in life. With the first baby boomers turning 65 in 2011 and one turning 65 every 7 seconds, almost all baby boomers will be in the 55-years and older age group by 2018. Older workers were the only group in 2008 to significantly increase. Several factors contribute to this increase in older workers such as people living longer and healthier lives, in addition to changes in Social Security legislation that increase the retirement age. The work environment also plays an important part in maintaining the health of older workers physically and psychologically which in turn contributes to enhanced job satisfaction. Many studies are aimed at 55-65 year olds. There is a lack of research on older workers, those over 65 years still in the workforce. This paper will discuss factors important to job satisfaction and the work environment in this group such that these older workers, representing important resources-Older Experienced Workers, can be retained.

## **SESSION 2795 (SYMPOSIUM)**

### **INTEGRATING THE ARTS AND HUMANITIES IN TEACHING GERONTOLOGY**

Chair: *H.Q. Kivnick, School of Social Work, University of Minnesota, Saint Paul, Minnesota*

Co-Chair: *D.J. Sheets, University of Victoria, Vancouver, British Columbia, Canada*

Discussant: *K. de Medeiros, Miami University, Oxford, Ohio*

**OVERVIEW:** This symposium will illustrate diverse ways the arts and humanities are taking an important role in facilitating empathy, stimulating new modes of thinking and intervention, and breaking down prejudice (e.g. ageism; raising critical consciousness; increasing individual and cultural competency) among nursing, social work, human services, and lifelong learning students. **OBJECTIVES:** (1) The symposium will familiarize participants with strategies and approaches for utilizing the arts and humanities in teaching diverse students, across disciplines, across the life cycle, and across educational settings. (2) Participants will learn what emerging approaches show promise with which groups of students. **PARTICIPANTS:** The symposium includes presentations by leading scholars, across disciplines and educational settings, discussing research, programs, and teaching examples from health care and social services university programs, human services taught at the community college level, and lifelong learning -continuing education in community-based institutions: Debra Sheets, Ph.D., MSN, RN-BC, CNE, Associate Professor, University of Victoria, BC Canada; Former Chair, GSA Committee for Humanities and the Arts; Helen Kivnick, Ph.D., L.P., Professor of Social Work, University of Minnesota; The Gerontologist Associate Editor for Humanities and the Arts; Pamela Braverman Schmidt, M.Ed, LMHC, Professor and Coordinator, Human Services, Bunker Hill Community College, Boston, MA; visual artist; Jan Maier, DEGREES AND LICENSES; PROFESSIONAL TITLE AND INSTITUTION; Community Education and Lifelong Learning; vocal recording artist. **DISCUSSANT:** Kate deMedeiros, Ph.D., Assistant Professor of Gerontology and Scripps Fellow in the Department of Sociology and Gerontology at Miami University in Oxford, Ohio; Immediate Past-Chair, GSA Committee for Humanities and the Arts.

### **SHIFTING PERCEPTIONS AND DISCOURSE ON AGE AMONG NURSING STUDENTS**

D.J. Sheets, *School of Nursing, Univ of Victoria, Victoria, British Columbia, Canada*

An ageist lens is common among undergraduate nursing students and reinforced by societal discourse and negative attitudes and beliefs about aging. Mezirow's theory of transformative learning forms the basis for challenging the assumptions of nursing students by Integrating humanities and arts perspectives on aging into teaching. Aging as represented in music, poems, paintings and new media (e.g. blogs, media, YouTube) was integrated into a gerontological nursing course. Rational as well as affective activities designed to foster discourse allowed students to assess their beliefs, feelings, and values about aging. Findings assess the extent to which perceptions can be shifted using the humanities and arts to transform static perceptions of aging into a more dynamic and realistic representation that reflects the heterogeneity and diversity of older adults. The implications for infusing a humanities and arts perspective into gerontological nursing curriculum to alter perceptions and discourse about aging are considered.

### **HUMANITIES AND ARTS STRENGTHEN SOCIAL WORK EDUCATION IN GERONTOLOGY**

H.Q. Kivnick, *School of Social Work, University of Minnesota, Saint Paul, Minnesota*

The social work profession expresses commitment to dismantling oppression, discrimination, and disadvantage by creating positive change at the levels of both person and society. Demographic shifts indicate that in the coming four decades, a large majority of social workers will find themselves working with elder clients and their families. Nonetheless, few social work students receive gerontological training as part of BSW or MSW degree programs. Enduring attitudes of ageism and lack of personal contact with elders contribute to a paucity of gerontological curriculum available to and selected by students. Within a general MSW curriculum, arts and humanities activities have demonstrated effectiveness in deeply engaging social work students in aging content in which they had been previously uninterested. To illustrate the value of arts and humanities in strengthening gerontological social work education, this presentation will highlight examples of innovations in programming and in teaching at the MSW level.

### **PRACTICUM IN HUMAN SERVICES: THE USE OF SELF-PORTRAITURE TO EXAMINE AGE BIAS AND DISPOSITIONAL INFERENCES**

P.B. Schmidt, *Human Services, Bunker Hill Community College, Salem, Massachusetts*

Individuals make snap judgments about others based on first impressions. How accurate are these dispositional inferences and how might they impact on human services delivery systems involving older adults? A growing body of evidence suggests that these split second assumptions are triggered by implicit associations or unconscious biases. These distorted social cognitive responses can adversely impact access to real-world services by older, marginalized populations. This presentation examines a stylistically varied series of self-portraits by Van Gogh, da Vinci, Titian, and Rembrandt that were analyzed and discussed by human services community college students to heighten their awareness of age bias related to dispositional inferences. Implications for using the arts in human services courses to tap into hidden, or automatic, stereotypes and prejudices that circumvent conscious control are discussed

### **SOMEWHERE BETWEEN MOZART AND PROZAC: OLDER ADULTS AND COMMUNITY-BASED ARTS ACTIVITIES**

J. Maier, *RTI International, Waltham, Massachusetts*

The rewards of participation in arts-based activities extend into lifelong learning and community education arenas. A variety of arts classes are frequently available in these venues, and research is beginning to

substantiate benefits such as improved mood, social bonds, and quality of life. These activities offer a rich environment for potential growth in social engagement, a sense of mastery, multicultural awareness, and involvement with the larger community through performance. An alternative to caregiver respite, some group-oriented arts activities involving family dyads can provide a rare opportunity for pleasurable normative social experiences and the potential to strengthen relationships and respect within the dyad, within the group, and with the larger community. The session will focus on models and benefits of community-based group singing in diverse older populations such as well elders, multigenerational groups, and family dyads. A participatory experience will demonstrate the more immediate social and neurobiological effects of group music-making.

## SESSION 2800 (SYMPOSIUM)

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### NEUROHORMONAL BLOCKADE AND OUTCOMES IN OLDER ADULTS WITH HEART FAILURE AND PRESERVED EJECTION FRACTION

Chair: *A. Ahmed, University of Alabama at Birmingham, Birmingham, Alabama, Birmingham VA Medical Center, Birmingham, Alabama*

Discussant: *D. Forman, Harvard Medical School, Boston, Massachusetts*  
Discussant: *G. Gambassi, Catholic University of the Sacred Heart, Rome, Italy*

The majority of older heart failure (HF) patients have HF with preserved ejection fraction (HF-PEF). Although drugs that block neurohormones, such as ACE inhibitors (ACEIs) or angiotensin receptor blocker (ARBs), beta-blockers (BBs) and aldosterone antagonists (AldoAs) improve outcomes in patients with HF and reduced ejection fraction (HF-REF), there is no such evidence of their benefit in older HF-PEF patients. Clinical effectiveness of these drugs in older HF-PEF patients were examined in four propensity-matched studies in an R01 project entitled "Neurohormonal Blockade and Outcomes in Diastolic Heart Failure" (Source of funding: American Recovery & Reinvestment Act; Sponsor: National Heart, Lung, and Blood Institute; PI: Ahmed A). Of the 48,612 OPTIMIZE-HF hospitalizations occurring during 2003-2004 in 259 U.S. hospitals, 20,839 were due to HF-PEF (EF  $\geq 40\%$ ). These patients were linked to the Medicare national claims data through December 31, 2008 for outcomes. Findings based on those studies were presented at the annual scientific sessions of the American Heart Association 2010 (ACEIs), American College of Cardiology 2011 (BBs), Heart Failure Society of America 2011 (ARBs) and American Heart Association 2011 (AldoAs). Updated results based on those four studies will be presented and discussed.

### ACE INHIBITORS AND OUTCOMES IN OLDER HF-PEF PATIENTS

*A. Ahmed, UAB and VAMC, Birmingham, Alabama*

Of the 48,612 OPTIMIZE-HF hospitalizations occurring during 2003-2004 in 259 U.S. hospitals, 20,839 were due to HF-PEF (EF  $\geq 40\%$ ). Of these, 13,270 hospitalizations could be linked to Medicare national claims data through December 31, 2008 and of these, 10,570 were unique patients age 65 years or older discharged alive. Patients with contraindications to ACEIs, those with prior use of ACEIs, prior use of ARBs, and those receiving a discharge prescription for ARBs were excluded. From the remaining cohort a balanced cohort assembled based on propensity scores for the receipt of a new discharge prescription for ACEIs. Clinical effectiveness of ACEIs on outcomes in this balanced cohort will be presented.

### ANGIOTENSIN RECEPTOR BLOCKERS AND OUTCOMES IN OLDER HF-PEF PATIENTS

*K. Patel, University of Alabama at Birmingham, Birmingham, Alabama*

Of the 48,612 OPTIMIZE-HF hospitalizations occurring during 2003-2004 in 259 U.S. hospitals, 20,839 were due to HF-PEF (EF  $\geq 40\%$ ). Of these, 13,270 hospitalizations could be linked to Medicare national claims data through December 31, 2008 and of these, 10,570 were unique patients age 65 years or older discharged alive. Patients with prior use of ARBs, prior use of ACEIs, and those receiving a discharge prescription for ACEIs were excluded. From the remaining cohort a balanced cohort assembled based on propensity scores for the receipt of a new discharge prescription for ARBs. Clinical effectiveness of ARBs on outcomes in this balanced cohort will be presented.

### BETA-BLOCKERS AND OUTCOMES IN OLDER HF-PEF PATIENTS

*A. Ahmed, UAB and VAMC, Birmingham, Alabama*

Of the 48,612 OPTIMIZE-HF hospitalizations occurring during 2003-2004 in 259 U.S. hospitals, 20,839 were due to HF-PEF (EF  $\geq 40\%$ ). Of these, 13,270 hospitalizations could be linked to Medicare national claims data through December 31, 2008 and of these, 10,570 were unique patients age 65 years or older discharged alive. Patients with contraindications to BBs and those with prior use of BBs were excluded. From the remaining cohort a balanced cohort assembled based on propensity scores for the receipt of a new discharge prescription for BBs. Clinical effectiveness of BBs on outcomes in this balanced cohort will be presented.

### ALDOSTERONE ANTAGONISTS AND OUTCOMES IN OLDER HF-PEF PATIENTS

*K. Patel, University of Alabama at Birmingham, Birmingham, Alabama*

Of the 48,612 OPTIMIZE-HF hospitalizations occurring during 2003-2004 in 259 U.S. hospitals, 20,839 were due to HF-PEF (EF  $\geq 40\%$ ). Of these, 13,270 hospitalizations could be linked to Medicare national claims data through December 31, 2008 and of these, 10,570 were unique patients age 65 years or older discharged alive. Patients with renal insufficiency (serum creatinine levels  $>2.5$  mg/dl for men and  $>2$  mg/dl for women), advanced chronic kidney disease (estimated glomerular filtration rate  $\leq 30$  ml/min/1.73 m.sq.), receiving combination therapy with ACEIs and ARBs, either during admission or discharge, and those with prior use of AldoAs were excluded. From the remaining cohort a balanced cohort assembled based on propensity scores for the receipt of a new discharge prescription for AldoAs. Clinical effectiveness of AldoAs on outcomes in this balanced cohort will be presented.

## SESSION 2805 (SYMPOSIUM)

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### NUTRITIONAL RISK AMONG OLDER ADULTS RESIDING IN THE COMMUNITY: HEALTH SERVICE UTILIZATION, MORTALITY, AND INTERVENTIONS

Chair: *J.L. Locher, Medicine, UAB, Birmingham, Alabama*

Discussant: *C.W. Bales, Duke University, Durham, North Carolina*

The Institute of Medicine held a Workshop sponsored in part by the National Institute on Aging on "Nutrition and Healthy Aging in the Community" in October of 2011. Participants concluded that demographic and economic imperatives highlight the reality that nutritional matters are too costly to ignore in our rapidly aging society. This is especially true in consideration of two important policy-related developments. First, there are increasing efforts directed toward improving transitions of care linking hospital and home health services with community-based services in order to reduce preventable healthcare utilization—especially, repeat hospitalizations. Research has demonstrated that nutrition-

related illnesses and complications are among those most likely to contribute to patients' re-hospitalization. Second, increasing initiatives emanating from both the federal and state levels to rebalance long-term care so that older adults can remain active and healthy in the community for as long as possible versus having to enter a nursing home prematurely repeatedly find that nutritional support and services are lacking at multiple potential points of intervention, particularly for those who are most vulnerable. Finally, there are rising rates of overweight and obese Baby Boomers who are entering into older adulthood with concomitant obesity-related comorbidities and disabilities present. This presents additional and pressing complicating challenges to trends in aging policy that have not been well-addressed. This symposium presents findings from three separate studies supported by the National Institute on Aging focused on community-dwelling older adults, nutritional risk, and health outcomes.

#### **A RANDOMIZED CONTROLLED TRIAL OF A THEORETICALLY BASED BEHAVIORAL NUTRITION INTERVENTION FOR HIGH-RISK OLDER ADULTS: THE B-NICE TRIAL**

J.L. Locher<sup>1</sup>, K.S. Vickers<sup>2</sup>, D.R. Buys<sup>1</sup>, A. Ellis<sup>1</sup>, J. Lawrence<sup>3</sup>, L. Newton<sup>1</sup>, D.L. Roth<sup>4</sup>, C. Ritchie<sup>5</sup>, 1. *Medicine, UAB, Birmingham, Alabama*, 2. *Mayo Clinic, Rochester, Minnesota*, 3. *University of Alabama, Tuscaloosa, Alabama*, 4. *John Hopkins University, Baltimore, Maryland*, 5. *University of California at San Francisco, San Francisco, California*

Objective: Older adults with multiple co-morbidities are often undernourished or at high risk for becoming so, especially following a recent hospitalization. The purpose of this study was to evaluate the efficacy and feasibility of a multi-level self-management intervention to improve nutritional status in a group of high-risk older adults. Methods: The Behavioral Nutrition Intervention for Community Elders (R21AG027560, PI: Locher) trial used a prospective randomized controlled design to determine whether the intervention, compared to standard care, increased caloric intake and stabilized body weight (BW). Participants were Medicare-eligible, >65 years old, homebound, and were consuming insufficient calories and/or had a history of BW loss > 5% over 6 months; they were randomly assigned to either standard care or the intervention. Results: The intervention had mixed results. Conclusions: Opportunities exist to refine and develop randomized controlled trials of effective, innovative interventions to support evidence-based approaches for solving nutritional problems in this population.

#### **NUTRITIONAL RISK PREDICTS HEALTH SERVICES UTILIZATION AND MORTALITY IN OLDER ADULTS PARTICIPATING IN THE UNIVERSITY OF ALABAMA AT BIRMINGHAM (UAB) STUDY OF AGING**

D.R. Buys<sup>1</sup>, C. Ritchie<sup>2</sup>, D.L. Roth<sup>3</sup>, P. Sawyer<sup>1</sup>, R.M. Allman<sup>1</sup>, J.L. Locher<sup>1</sup>, 1. *Geriatrics, University of Alabama at Birmingham, Birmingham, Alabama*, 2. *University of California, San Francisco, San Francisco, California*, 3. *Johns Hopkins University, Baltimore, Maryland*

Objective: This study examines the relationship between nutritional risk and subsequent health services utilization and mortality. Methods: We report on 1000 community-dwelling older adults aged 65 and older enrolled in the UAB Study of Aging (R01AG015062, PI: Allman), a longitudinal observational study of mobility among older black and white participants residing in Alabama. Nutrition risk was assessed using the 10-item DETERMINE checklist. Survival analyses were conducted to assess risk of hospitalization and death. Covariates included race, gender, marital status, educational level, rural vs. urban living status, body mass index, comorbidity, and life-space mobility. Results: Findings reveal that nutrition risk is associated with hospitalization ( $p=0.013$ ), mortality ( $p=0.0481$ ) and, specifically, non-surgical hospitalizations ( $p<0.0001$ ). Conclusions: This paper contributes to a growing body of research pointing to the need for increased attention directed toward

nutritional assessment, interventions, and services for older adults residing in the community who may be experiencing undetected nutritional risk.

#### **NUTRITIONAL RISK AT BASELINE PREDICTS HEALTH SERVICES UTILIZATION AND MORTALITY OVER A ONE-YEAR PERIOD IN OLDER ADULTS RECEIVING MEDICARE HOME HEALTH SERVICES**

Y. Yang<sup>1</sup>, C.J. Brown<sup>2,3</sup>, K.L. Burgio<sup>2,3</sup>, M. Kilgore<sup>3,4</sup>, C. Ritchie<sup>2,3</sup>, D.L. Roth<sup>3,5</sup>, D. West<sup>6</sup>, J.L. Locher<sup>2,4</sup>, 1. *Nutrition Sciences, University of Alabama at Birmingham, Birmingham, Alabama*, 2. *Birmingham/Atlanta Veterans Affairs Geriatric Research, Education and Clinical Center, Birmingham, Alabama*, 3. *Department of Medicine, Birmingham, Alabama*, 4. *Department of Health Care Organization and Policy, Birmingham, Alabama*, 5. *Department of Biostatistics, Birmingham, Alabama*, 6. *Department of Health Behavior, Little Rock, Arkansas*

Objective: The association between baseline nutritional status and subsequent health service utilization and mortality in older adults receiving Medicare home health services was evaluated. Methods: A longitudinal study (K01AG00994, PI: Locher) using questionnaires and anthropometric measures was conducted with 198 participants to assess nutritional status (Mini-Nutritional Assessment [MNA]) at baseline and health services utilization and mortality status at six- and twelve-months. Results: 63.0% of participants were Malnourished or At Risk for Malnourishment. 8.1% of participants were underweight and 28.8% were obese. Using binary logistic regression, participants who were Malnourished or At Risk for Malnourishment were more likely to experience subsequent hospitalization, emergency room visits, home health aide use, and mortality for the entire sample and hospitalization and nursing home stay for overweight and obese participants. Conclusions: Opportunities exist to address nutritional risk in patients receiving home health services, including those who are overweight or obese, to prevent adverse health outcomes.

#### **SESSION 2810 (PAPER)**

#### **MEDICATION MANAGEMENT FOR OLDER ADULTS**

#### **ANTIPSYCHOTIC MEDICATION USE AMONG DEMENTIA PATIENTS IN NURSING HOMES: RESULTS FROM THE SHELTER STUDY**

A. Foebe<sup>1,2</sup>, R. Liperoti<sup>2</sup>, G. Onder<sup>2</sup>, G. Gambassi<sup>2</sup>, F. Landi<sup>2</sup>, R. Bernabei<sup>2</sup>, 1. *School of Public Health & Health Systems, University of Waterloo, Waterloo, Ontario, Canada*, 2. *Universita Cattolica del Sacro Cuore, Rome, Lazio, Italy*

Background: Recently, the use of both conventional and atypical antipsychotic (AP) medications has been associated with increased risk of stroke and death in patients with dementia, prompting recommendations to avoid their use in this population. Nonetheless, AP medications are often used off-label for the treatment of behavioural and psychological symptoms of dementia. Purpose: This study aimed to determine the prevalence of use of AP agents, as well as potential correlates of this use, among older individuals with dementia in nursing homes (NH) in 7 European countries and Israel. Methods: This cross-sectional study utilized the SHELTER database. Comprehensive resident information on 2,091 individuals with dementia in 57 NH was collected using interRAI's Long-Term Care Facility (LTCF) instrument, which collects detailed demographic and clinical information about residents. Using multivariate logistic regression, demographic and clinical correlates of atypical versus conventional AP use were explored. Results: The prevalence of AP use was 31.7%, with use being highest in the Czech Republic (60.2%) and lowest in Israel (18.0%). Use of atypical agents (22.9%) was higher than that of conventional agents (11.9%), with relevant differences across countries. Anti-cholinesterase

use (OR=2.58; 95% CI=1.09, 6.09), Anti-Parkinson medication use (OR=3.75; 95% CI=1.05, 13.37), and presence of a pharmacist (OR=3.50, 95% CI=1.16, 10.54) or geriatrician (OR=2.13, 95% CI=1.03, 4.42) in the NH were associated with atypical AP use. Conclusions: Current care practices show that AP medications are widely used in dementia patients in nursing homes despite recommendations to avoid such use.

### BURDEN OF MEDICATIONS WITH ANTICHOLINERGIC EFFECTS AMONG NURSING HOME RESIDENTS WITH DEMENTIA

G.B. Rattinger, S.K. Dutcher, P.T. Chhabra, I.H. Zuckerman, P. Langenberg, L. Simoni-Wastila, L.D. Walker, *University of Maryland, Baltimore, Maryland*

Medications with anticholinergic properties are commonly prescribed and negatively affect cognition. We describe use of medications with anticholinergic properties (MAP), including changes in use over time, among nursing home (NH) residents with dementia. We used a retrospective cohort design with three years (2006-2008) of Medicare administrative and assessment data to identify and follow residents with dementia. The Anticholinergic Cognitive Burden (ACB) scale was applied to quantify anticholinergic effects based on the sum of each drug's anticholinergic activity. We report the proportion of NH residents receiving MAP and mean ACB, overall and by sex and race. ACB over time was modeled using a repeated measures generalized linear model with a Poisson distribution. NH residents with dementia (n=18,950) were predominantly female (75%), white (86%), aged  $\geq 75$  (86%) and averaged 3 comorbid conditions. At first assessment, mean ACB was 2.7 points ( $\pm 2.6$ , range 0-19). Women were more likely than men to receive MAP (79% vs. 72%,  $p < 0.0001$ ). Among residents receiving MAP, women had a higher mean ACB than men (3.5 vs. 3.1 points,  $p < 0.0001$ ). MAP use was higher among whites (79%) compared with blacks (71%), Hispanics (70%), and other races (69%) ( $p < 0.0001$ ). ACB increased over time at a rate of 1.22 points (99%CI 1.18-1.26) per year. A majority of NH residents with dementia are prescribed medications with anticholinergic properties, and this burden increases over time. The impact of these medications on cognition and function among NH dementia residents requires further study to facilitate their safe and effective use in this population.

### VARIATIONS IN MEDICATION USE PATTERNS AMONG DEMENTIA PATIENTS ACROSS CARE-SETTINGS

M. Burcu, G.B. Rattinger, M. Luong, S.K. Dutcher, I.H. Zuckerman, L. Simoni-Wastila, C.S. Franey, *University of Maryland, Baltimore, Maryland*

Psychopharmacological medications (PPM) used in the management of dementia have been associated with poor outcomes in older adults. Our objective was to characterize population-based patterns of PPM use across care-settings among Medicare beneficiaries with dementia. In a one-year (2008) cross-sectional study, we identified 52,754 dementia patients from a 5% random sample of Medicare beneficiaries and estimated use of cognitive-enhancers (acetylcholinesterase inhibitors/memantine) and PPM [antidepressants, antipsychotics, and mood-stabilizers (valproic acid/carbamazepine/oxcarbazepine)]. Multiple regression models were used to report adjusted prevalence ratios (PR) and 99% confidence intervals (CI) of individual drug classes across care-settings [community(NH-none), partial nursing home(NH-partial), full NH(NH-full)] adjusting for sociodemographic and clinical characteristics. Among PPM users, we estimated the adjusted-PR of multiple PPM-use compared with single PPM-use across care settings. Patients were predominantly female (79%), white (83%), aged  $\geq 75$  (87%) with  $> 1$  comorbid condition (52%). Care-setting distribution was 41% NH-none, 42% NH-partial, and 16% NH-full. Annual drug class prevalence was 9% mood-stabilizers; 34% antipsychotics; 56% antidepressants;

57% cognitive-enhancers. Compared to NH-none, NH-partial and NH-full had lower adjusted-PRs of cognitive-enhancers and higher adjusted-PRs of antidepressants, antipsychotics and mood-stabilizers. Among PPM users, adjusted-PR of multiple PPM-use compared with single PPM-use was significantly higher in NH-full (PR 1.57; 99%CI 1.47, 1.67) and NH-partial (PR 1.44; 99%CI 1.36, 1.53) residents relative to NH-none. Among a nationally representative sample of Medicare beneficiaries, PPM-use is higher among dementia patients with NH stays compared to those without NH stays. Increased use of PPM in NHs warrants careful monitoring to assure safe and effective utilization.

### RIVASTIGMINE AND COGNITIVE REHABILITATION IMPROVES MULTIDIMENSIONAL PROGNOSTIC INDEX IN AD OLDER PATIENTS

G. D'Onofrio<sup>1</sup>, F. Ciccone<sup>1</sup>, D. Sancarlo<sup>1</sup>, S. Bazzano<sup>2</sup>, G. Paroni<sup>1</sup>, F. Panza<sup>1</sup>, D. Seripa<sup>1</sup>, A. Pilotto<sup>1,2</sup>, *1. Geriatrics, I.R.C.C.S. Casa Sollievo della Sofferenza, San Giovanni Rotondo, Italy, 2. Azienda ULSS 16 Padova, S. Antonio Hospital, Padova, Italy*

In the present study we evaluate in a randomized clinical trial the efficacy of an integrated treatment with Rivastigmine Transdermal Patch (RTP) and Cognitive Rehabilitation (CR) in older patients with sporadic Alzheimer's disease (AD) patients at six-months of follow-up. We enrolled 90 patients (42 males, 48 females, mean age  $78.19 \pm 4.79$  years) consecutively admitted to the Alzheimer's Evaluation Unit with a clinical diagnosis of AD according to the NINCDS-ADRDA criteria. Patients were randomized according to treatment in RTP+CR (Group 1) or RTP alone (Group 2). All patients were evaluated at baseline and after 6-months with the Mini Mental State Examination (MMSE), Clinical Dementia Rating (CDR), Hamilton Rating Scale for Depression (HAM-D), Geriatric Depression Scale (GDS), Neuropsychiatric Inventory (NPI). Moreover a standardized 8-domain Comprehensive Geriatric Assessment (CGA) including information on functional (ADL, IADL), cognitive (SPMSQ), nutrition (MNA), Exton-Smith scale (ESS), Comorbidity (CIRS), drug use and social status was carried-out to calculate the Multidimensional Prognostic Index (MPI), a validated index for mortality. At baseline no significant differences between the two groups were observed in mean age, educational level, MMSE, CDR, HAM-D, GDS, NPI and MPI scores. After six-months, Group-1 patients showed a significant higher improvement in MMSE (6.39% vs 2.69%;  $p = 0.020$ ), CDR (6.92% vs 1.54%;  $p = 0.005$ ), HamD-21 (+60.7% vs -45.8%;  $p < 0.0001$ ), GDS (-60.9% vs -7.3%;  $p < 0.0001$ ), NPI (-55.2% vs -32.7%;  $p < 0.0001$ ), ADL (+13.88% vs +5.95%;  $p = 0.001$ ), IADL (+67.59% vs +18.28%;  $p < 0.0001$ ), MNA (+12.02% vs +5.91%;  $p = 0.019$ ), ESS (+3.35% vs +2.49%;  $p = 0.044$ ) and the MPI (-29.03% vs -12.90%;  $p < 0.0001$ ) than Group-2 patients. Integrated treatment with RTP and CR for six months is more effective than RTP alone to improve the cognitive, emotional, behavioral aspects and the mortality risk in AD patients.

### QUALITY OF PSYCHOPHARMACOLOGICAL MEDICATION USE IN NURSING HOME RESIDENTS

L. Simoni-Wastila, M. Luong, Y. Wei, C.S. Franey, G.B. Rattinger, T. Huang, I.H. Zuckerman, N. Brandt, *School of Pharmacy, University of Maryland, Baltimore, Maryland*

Suboptimal prescribing of psychopharmacological medications (PPM) in nursing homes (NHs) adversely influences morbidity and mortality. Using the Centers for Medicare & Medicaid Services Unnecessary Medication Guidance (UMG) for NH residents, this study provides national estimates of PPM prevalence, treatment patterns, and quality of prescribing. Using 2006-2007 Medicare data (Parts A, B, and D) linked to Minimum Data Set files, we developed a national cohort of continuously-enrolled Medicare beneficiaries in NHs for  $\geq 100$  days (n=69,832). Dependent measures included: 1) prevalence of PPM use (antipsychotics, antidepressants, anxiolytics, sedative-hypnotics); 2)

prevalence of PPM polypharmacy; and 3) appropriateness of use by indication, duration, and dose. Research team clinicians operationalized the UMG using geriatric prescribing compendia and practice guidelines. In 2007, 72.1% of Medicare NH residents used  $\geq 1$  PPM, with the highest proportions of residents using antidepressants (59.4%) and antipsychotics (31.5%), and less documented use of sedative-hypnotics (20.6%) and anxiolytics (8.1%). Among PPM users, 54.2% used  $\geq 2$  PPM classes. Prevalent PPM poly-use patterns involved antidepressants+antipsychotics (40.3%) and antidepressants+sedative-hypnotics (20.0%). Although 94.3% of PPM users had appropriate indications for use, indication appropriateness varied by class (sedative-hypnotics=59.4%, antidepressants=80.4%, anxiolytics=84.4%, antipsychotics=93.3%). Among appropriate antipsychotic users, mean duration of use was 216 ( $\pm 117$ ) days; 17.5% exceeded the maximum recommended geriatric dose. PPM use among Medicare NH residents remains high. Variability in appropriateness by indication by PPM class suggests providers have increased awareness of antipsychotic risks but not of other PPMs. Additional findings focusing on the associations of PPM dose, duration, and quality with falls, hospitalization, and mortality, will be presented.

## SESSION 2815 (PAPER)

### RESEARCH AND INTERVENTIONS TO FOSTER ASIAN AND ASIAN-AMERICAN OLDER ADULT HEALTH

#### THE ASSOCIATION BETWEEN SERUM OMEGA-3 FATTY ACIDS AND COGNITIVE FUNCTIONS AMONG THE OLDEST OLD IN OKINAWA, JAPAN: KOCOA PROJECT

H.H. Dodge<sup>1,2</sup>, G. Bowman<sup>1</sup>, Y. Katsumata<sup>1</sup>, Y. Ohya<sup>3</sup>, S. Yasura<sup>4</sup>, J. Kaye<sup>1,5</sup>, H. Todoriki<sup>3</sup>, 1. Oregon Health & Science University, Portland, Oregon, 2. University of Michigan, Ann Arbor, Michigan, 3. University of the Ryukyus, Okinawa, Japan, 4. Okinawa International University, Okinawa, Japan, 5. Portland VA Medical Center, Portland, Oregon

Background: The oldest old segment of the population in most developed countries is growing dramatically and they face a high risk of developing dementia. Identification of modifiable lifestyle factors associated with healthy cognitive aging could aid in designing effective strategies to prevent dementia. Studies have shown dietary intake of fatty fish and circulating omega-3 fatty acid levels were associated with reduced risk for cognitive decline, but the relationship in the oldest old is unknown. We examined the relationship between fasting serum phospholipid eicosapentaenoic (EPA), docosahexaenoic (DHA) and arachidonic acid (AA)/DHA ratio and cognitive function in the oldest old living in Okinawa, Japan. Methods: Sixty non-demented (CDR $<1.0$ ) elderly aged 85 and older who were participating in the ongoing longitudinal cohort study (the KOCOA project) were included in the cross sectional analysis using linear regression models. Fatty acids are expressed as percentages of total fatty acids. Results: Higher fasting serum DHA was associated with better global cognitive function measured by Japanese MMSE (J-MMSE) ( $p=0.04$ ), and a lower ratio of AA-to-DHA was associated with better memory function measured by the Scenery Picture Memory Test (SPMT) ( $p=0.03$ ), all analysis controlled for age, sex and education. Conclusions: Despite the small sample size, we found that higher serum DHA and lower omega 6 to omega 3 ratio represented by AA/DHA is associated with better cognitive function among community-dwelling oldest old. The combination of higher intake of seafood and limiting red meat consumption may promote cognitive function, even in the relatively healthy oldest old population.

### INCREASED MORTALITY RATE, LENGTH OF STAY AND AGGREGATE COST AMONG OLDER CHINESE INPATIENTS WITH CARDIOVASCULAR DISEASES COMPARED WITH THEIR YOUNGER COUNTERPARTS

B. Xu, H. Liu, G. Yu, L. Zhao, *Peking University, Beijing, China*

Cardiovascular diseases remain the leading cause of morbidity and mortality among older adults in recent decades. This study aimed to compare mortality, length of stay, and cost between older and younger inpatients from 3 teaching hospitals in Beijing, China. Data were obtained from the inpatient Electronic Medical Records summary report in these hospitals between 2006 and 2010. The ICD-10 codes (I 00-99) were used to select inpatients with cardiovascular diseases. Differences in mortality, length of stay and cost were compared between older ( $\geq 65$  years old,  $n=28,949$ ) and younger (30 to  $<65$  years old,  $n=36,243$ ) inpatients. Older inpatients had a higher mortality rate, longer length of hospital stay, more secondary diagnosis, higher aggregate cost of a single admission and lower daily cost than younger inpatients ( $P<0.001$ ). Daily costs for surgeries, exams and others were significantly lower for older inpatients than for younger inpatients ( $P<0.001$ ), while older inpatients had a higher daily cost for drug than younger inpatients ( $P<0.001$ ). However, aggregate costs for all surgeries, exams, drugs and others were significantly higher among older inpatients than among younger inpatients ( $P<0.001$ ). Monthly variation of mortality of cardiovascular diseases was more marked among older inpatients compared to younger inpatients. In conclusion, older inpatients with cardiovascular diseases show particular hospitalization patterns as compared to younger inpatients. The differences of the hospitalization patterns advance the understanding of cardiovascular Chinese inpatients with different ages and help establish effective strategies to improve quality and inpatient safety in hospitals.

### ADVANCE CARE PLANNING AMONG JAPANESE-AMERICAN MEN AGED 89-108 YEARS: THE HONOLULU-ASIA AGING STUDY

C.L. Bell<sup>1</sup>, B.K. Tamura<sup>1</sup>, M. Inaba<sup>1</sup>, H. Petrovitch<sup>3,2</sup>, G. Ross<sup>3</sup>, K. Masaki<sup>1,2</sup>, 1. The John A. Hartford Center of Excellence in Geriatrics, Department of Geriatric Medicine, John A. Burns School of Medicine, University of Hawaii, Honolulu, Hawaii, 2. Kuakini Medical Center, Honolulu, Hawaii, 3. Veterans Affairs Pacific Islands Health Care System, Honolulu, Hawaii

Background: Men aged  $>85$  years have high mortality risk. Advance care planning (ACP) is critical. We examined prevalence and factors associated with ACP. Methods: At the 47-year longitudinal Honolulu Heart Program/Honolulu Asia-Aging Study 11th exam (2009-10), closest relatives or caregivers (proxy) reported 380 participants' (ages 89-108, mean=92.1) ACP status. Surveillance identified cancer, COPD, diabetes, CHD, stroke, and Parkinson's disease; 62.1% participants had  $\geq 1$  chronic disease. Questionnaires elicited functional status, the cognitive abilities screening instrument (CASI) assessed cognitive function. Multiple logistic regression models analyzed factors associated with ACP discussion (ACPdiscuss) and written advance directives (AdvDir). Results: Of 380 men's proxies, 59.7% reported ACPdiscuss, 29.7% reported none, and 10.5% were unsure. While 71.8% men had AdvDir, 13.2% had none and 15.0% were unsure. Care preferred on AdvDir was comfort-focused (84.1%) vs. life-prolonging (intubation/resuscitation) (16.0%); no tube-feeding (71.2%) vs. tube-feeding acceptable (28.8%); no nursing home (NH) care (37.4%) vs. NH (62.6%). ACPdiscuss, AdvDir, comfort care, no tube-feeding and no NH were not different by prevalent chronic disease. Difficulty toileting was associated with increased likelihood of ACPdiscuss (OR=2.31, 95%CI=1.02-5.22,  $p=0.04$ ), after controlling for age, marriage, education, difficulty walking  $\frac{1}{2}$  mile, CASI and chronic disease. Controlling for covariates, difficulty toileting increased the likelihood of AdvDir (OR=3.72, 95%CI=1.11-12.43,  $p=0.03$ ); being married

decreased the likelihood of AdvDir (OR=0.44,95%CI=0.22-0.89,p=0.02). Conclusion: Among elderly Japanese-American men aged 89-108, ACP prevalence was surprisingly low despite presence of serious chronic diseases. Difficulty toileting best correlated with ACP discussions and advance directives. Clinicians should proactively engage elderly patients, especially with chronic diseases, and families, for ACP discussion.

#### **ASSOCIATION BETWEEN STEP LENGTH AND INDIVIDUAL COGNITIVE DOMAIN OF MMSE IN A GENERAL POPULATION OF OLDER JAPANESE**

Y. Taniguchi, M. Nishi, H. Murayama, H. Yoshida, Y. Fujiwara, S. Shinkai, *Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, Itabashi-ku, Tokyo, Japan*

**Background:** We have recently reported that step length is a better predictor for cognitive decline (MMSE) than overall gait speed (J Gerontol Med Sci, in press). However, it remains to be determined which cognitive domains contributed to such association between step length and cognition. This cross-sectional study aimed to address this issue. **Methods:** In a sample of 1,315 adults aged 65 years or older (mean age, 72.3 [SD 5.8] years; men, 52.5%), cognitive function (MMSE, TMT-A and B, and 10-words recall test), gait performance (gait speed and step length at usual pace), and potential confounders (demographics and biomarkers) were measured. The MMSE score was broken into each score of five domains, i.e., orientation, registration, calculation, recall, and language. **Results:** Among the five domains, orientation, calculation, recall and language performances were significantly correlated with gait speed and step length. After controlling for confounders with multiple regression analysis, only step length had significant associations with orientation ( $\beta=.084$ ,  $SE=.002$ ,  $p<0.05$ ), calculation ( $\beta=.111$ ,  $SE=.003$ ,  $p<0.01$ ) and recall ( $\beta=.104$ ,  $SE=.003$ ,  $p<0.01$ ). Step length showed similar associations with TMT-A ( $\beta=-.155$ ,  $SE=.107$ ,  $p<0.01$ ), TMT-B ( $\beta=-.132$ ,  $SE=.294$ ,  $p<0.01$ ), and 10-words recall test ( $\beta=.108$ ,  $SE=.005$ ,  $p<0.01$ ). By contrast, gait speed had a significant association with recall only ( $\beta=.068$ ,  $SE=.087$ ,  $p<0.05$ ). **Conclusions:** Step length showed specific associations with orientation, calculation and recall domains within MMSE, which was in line with its positive relations with TMT and 10-words recall test.

#### **THE CHANGING RELATIONSHIP OF OBESITY AND DISABILITY IN OLDER ADULTS:1997 AND 2006 CHINA HEALTH AND NUTRITION SURVEYS**

K. Chou, *Social Work and Social Administration, Univ Hong Kong, Hong Kong, Hong Kong*

The objective of the study is to determine whether the association between obesity (BMI  $\geq 25.0$ ) and disability has changed over time in Chinese population by using data from two cross-sectional studies, namely 1997 and 2006 China Health and Nutrition Surveys. 1,766 and 3,181 community-dwelling older adults aged 55 and older were interviewed in 1997 and 2006, respectively. The disability in five activities of daily living (dressing, walking, toileting, eating, and bathing), body mass index, age, sex, education, five medical conditions, smoking, and availability of health insurance were measured. The prevalence of ADL impairment decreased from 5.1% (95% CI=4.1%-6.1%) in 1997 to 3.8% (95% CI=3.1%-4.5%) in 2006, but obesity increased from 23.6% (95% CI=21.6%-25.6%) to 29.9% (95% CI=28.3%-31.5%). The link between obesity and ADL impairment went from significant and positive in 1997 to non-significant in 2006. The disparity between obese and normal-weight individuals has decreased over time. The prevalence of disability in the obese population decreased over time. The health improvements of obese older adults might be due to primary prevention efforts to reduce the burden of disease in old age. Future studies must be undertaken to examine the mechanism underlying the reduction in the association of obesity and disability.

## **SESSION 2820 (SYMPOSIUM)**

### **EXPANDING THE HORIZONS OF RESEARCH ON CIVIC ENGAGEMENT IN LATER LIFE**

Chair: *E.A. Greenfield, Rutgers, The State University of NJ, New Brunswick, New Jersey*

Co-Chair: *A. Cohen-Callow, University of Maryland Baltimore, Baltimore, Maryland*

Discussant: *N. Morrow-Howell, Washington University in St. Louis, St. Louis, Missouri*

Civic engagement has developed as a major paradigm shift in gerontology over the past decade. This shift emphasizes older adults not only as recipients of care, but also as contributors to others' well-being. Previous scholarship has highlighted the importance for additional research to address social institutions that can promote diverse forms of civic engagement in later life. This symposium seeks to advance this research by presenting papers that explore how older adults' civic engagement can be facilitated across nontraditional settings (i.e., beyond volunteer organizations) and through nontraditional ways (i.e., beyond formal volunteering). The first two papers present research on efforts to promote older adults' civic engagement within organizations that traditionally have focused on providing services to older adults: adult day health centers and community aging-in-place initiatives. The second two papers present research on foundation-funded programs that aim to empower older adults as community organizers and volunteer leaders. Implications for the future of research, practice, and theory development on civic engagement in later life are discussed.

### **BEYOND CARE RECIPIENT: A NATIONAL SNAPSHOT OF CIVIC ENGAGEMENT IN NORC PROGRAMS AND VILLAGES**

E.A. Greenfield<sup>1</sup>, A.E. Scharlach<sup>2</sup>, J.K. Davitt<sup>3</sup>, *1. Rutgers, The State University of NJ, New Brunswick, New Jersey, 2. University of California Berkeley, Berkeley, California, 3. University of Pennsylvania, Philadelphia, Pennsylvania*

NORC programs and Villages are leading national models for community aging-in-place initiatives. Although the models emphasize enhancing older adults' access to services, both models also focus on providing opportunities for older adults to become civically engaged and to develop meaningful roles within their neighborhoods and communities. This paper presents results from a 2012 national organizational survey of more than 60 NORC programs and Villages, which aimed to provide a national "snapshot" regarding how these initiatives have been implemented in practice. Findings demonstrate that NORC programs and Villages promote older adults' civic engagement in a variety of ways, such as by providing older adults opportunities to lead the initiatives, facilitating older adults' exchanges of support to each other, and, in some cases, organizing older adults to advocate for broader community-level changes. Results suggest that NORC programs and Villages are contemporary vehicles for promoting diverse forms of civic engagement in later life.

### **LEADERSHIP DEVELOPMENT AMONG RURAL OLDER ADULT VOLUNTEERS: PERCEPTIONS AND PATHWAYS INTO CITIZEN LEADERSHIP**

J. Crittenden, L.W. Kaye, D.C. Whiry, *University of Maine Center on Aging, Bangor, Maine*

There is scarce research on how rural older adults view, define, and execute leadership through volunteerism. Encore Leadership Corps (ENCORPS) is a statewide volunteer leadership initiative for older Mainers. Participants self-select into this program presenting a unique opportunity to understand motivational factors behind civic engagement and self-prescribed views of citizen leadership. Utilizing Vandenberg et al.'s model of community leadership, this presentation examines how participants define leadership, execute it locally, and reflect the attributes

that facilitate personal empowerment. Based on structured surveys and semi-structured interviews with program participants (N=62), leadership development is not a key motivational factor that drew older adults into ENCorps (28% reported this as influential) but it does emerge as a prominent benefit of participation over time (61% reported growth in leadership capacity). The lack of fit between traditional pathways to volunteer leadership and older adults' operational definitions of leadership has implications for future research and practice.

### **DRIVING COMMUNITY CHANGE: LEVERAGING BABY BOOMERS IN NON-TRADITIONAL VOLUNTEER ACTIVITIES**

A. Cohen-Callow, A.L. Jones, *University of Maryland The Founding Campus, Baltimore, Maryland*

Unlike traditional volunteer positions that address specific pre-defined needs, this study engages citizens 50+ in unique community capacity building opportunities driven by volunteers. Baby boomers are leveraged through knowledge, skills and leadership development to shape community change meant to strengthen social capital and initiate a cyclical process of community development. The study examined active "boomers" volunteering in three urban communities integrating concepts from three theories to explain civic engagement activities. Semi-structured interviews were conducted with 8 community volunteers in a variety of roles. Volunteer longevity varied from newly-engaged to long-term. Thematic analysis revealed four themes: 1) interest in building better communities through civic engagement, 2) reasons for participation, 3) challenges participating, and 4) support for participation. Findings contribute to knowledge regarding theory development and the role policy makers and human service staff can play to facilitate volunteer efforts in non-traditional civic engagement activities.

### **CIVIC ENGAGEMENT FOR OLDER ADULTS WITH LIMITATIONS: MOVING TOWARD INCLUSION**

K.A. Anderson, H. Dabelko-Schoeny, *College of Social Work, The Ohio State University, Columbus, Ohio*

Civic engagement initiatives for older adults have, until recently, focused almost exclusively on "well" older adults – those individuals without significant functional limitations. Older adults with physical and cognitive limitations have largely been cast as a group that receives services rather than a group that has something to offer to others. This presentation will focus on the issue of disabilityism within past efforts to understand and promote civic engagement in older adults. Specifically, the researchers will present the findings from a study of a civic engagement intervention for older adults (N = 43) attending adult day. Results suggest that civic engagement programs for older adults with cognitive and physical limitations can be feasible and sustainable, as well as effective in promoting purpose in life, self-esteem, and perceived well-being. Implications for larger scale efforts to include older adults with limitations in civic engagement programs and to challenge disabilityism will also be discussed.

## **SESSION 2825 (SYMPOSIUM)**

### **HEALTH RELATED QUALITY OF LIFE AMONG LONG-TERM SERVICES AND SUPPORT RECIPIENTS: A LONGITUDINAL ANALYSIS**

Chair: *K. Abbott, School of Nursing, University of Pennsylvania, Philadelphia, Pennsylvania*

Discussant: *W. Satariano, University of California at Berkeley, Berkeley, California*

For older adults receiving long term services and support (LTSS), health related quality of life (HRQoL) has emerged as a critical construct in assessing domains that are most meaningful to the recipients of care. A National Institute of Aging/National Institute of Nursing

Research supported (R01AG025524) prospective, longitudinal design was used to examine the natural history of changes in multiple domains of HRQoL among 470 English and Spanish speaking older adults who, at the time of enrollment, were new recipients of LTSS. Additionally, this study was designed to compare the patterns of change in each of these domains among a matched sample of older adults who receive LTSS in their homes (H&CBS), assisted living facilities (ALF) or nursing homes (NH). The goals of this symposium are to: 1) provide an overview of the conceptualization and design of the primary study; 2) examine major methodological considerations and analytical challenges in the conduct of this study; and, 3) report findings related to three key domains (emotional health, physical health, and quality of life) for a subgroup of 286 older adults through one year following enrollment. Study findings will advance knowledge related to measurement of HRQoL among the growing population of frail older adults and inform relevant delivery system change and health and LTSS policies.

### **CHANGES IN EMOTIONAL HEALTH AMONG LONG-TERM SERVICES AND SUPPORT RECIPIENTS: A KEY HEALTH RELATED QUALITY OF LIFE DOMAIN**

C. Zubritsky<sup>1</sup>, M. Toles<sup>2</sup>, J.H. Van Cleave<sup>3</sup>, L. Schnolis<sup>1</sup>, M.D. Naylor<sup>1</sup>, *1. School of Nursing, University of Pennsylvania, Philadelphia, Pennsylvania, 2. Duke University, Durham, North Carolina, 3. New York University, New York, New York*

Linear mixed effects models and generalize estimating equations were used to assess changes in emotional health over time. Emotional health was assessed using a composite score for mental health (SF-12 MCS, continuous variable) and depression (GDS-Short Form; dichotomous variable: 0-4 vs. 5-15). Significant independent predictors of lower overall mental health include increased physical and depressive symptoms, greater cognitive impairment, being younger, reporting less emotional/informational support, and receiving LTSS in ALF. Greater depressive symptoms were associated with more physical symptoms. Fewer depressive symptoms were associated with higher overall mental and physical health ratings, and higher ratings of quality of life. Higher levels of social support over time were associated with decreased depressive symptoms. The odds of having more depressive symptoms increased by 19% among older adults in ALF while depressive symptoms remained constant for those in NHs or H&CBS. Service delivery and policy implications of findings will be discussed.

### **CHANGES IN PHYSICAL HEALTH AND QUALITY OF LIFE: TWO KEY HEALTH RELATED QUALITY OF LIFE DOMAINS**

K.B. Hirschman<sup>1</sup>, S. Shah<sup>2</sup>, K.H. Bowles<sup>1</sup>, M.D. Naylor<sup>1</sup>, *1. School of Nursing, University of Pennsylvania, Philadelphia, Pennsylvania, 2. Visiting Nurse Service of New York, New York, New York*

Linear mixed effects models were used to assess changes in physical health (SF-12 physical composite score) and quality of life (QoL; single item) over time. Significant independent predictors of lower ratings of physical health included having more bothersome symptoms and less cognitive impairment. Larger decreases in physical health ratings over time were associated with larger increases in depressive symptoms. Significant independent predictors of higher QoL included fewer depressive symptoms, less cognitive impairment, younger age, higher ratings of mental and physical health and having more emotional/informational support. Larger increases in QoL ratings over time were associated with better cognitive function (i.e., less cognitive impairment). The overall decrease in QoL over time tended to be steeper for men than women. Non-Hispanics also had higher ratings of QoL than Hispanics. Future directions for research and the implications of these findings will be discussed.

## CONCEPTUALIZATION AND DESIGN OF HEALTH RELATED QUALITY OF LIFE AMONG LONG-TERM SERVICES AND SUPPORT RECIPIENTS

M.D. Naylor<sup>1</sup>, K.H. Bowles<sup>1</sup>, J.B. Foust<sup>2</sup>, K. Abbott<sup>1</sup>, K.B. Hirschman<sup>1</sup>, C. Zubritsky<sup>1</sup>, 1. *School of Nursing, University of Pennsylvania, Philadelphia, Pennsylvania*, 2. *UMass Boston, Boston, Massachusetts*

This session will provide an overview of the conceptualization, design and goals of the primary study. Examination of theoretical constructs and indicators of HRQoL among older adults receiving LTSS led an interdisciplinary team of scholars to the multidimensional conceptual framework proposed by Wilson and Cleary (1995). The team adapted this model to expand concepts related to cognition and behavior and to enable examination of environmental characteristics. The refined model allowed for measurement of a mix of structural, process and outcomes that may influence multiple domains of HRQoL for new recipients of LTSS (both cognitively intact and impaired) across a range of contexts. The prospective, longitudinal design enabled a study which focused directly on the perspectives of older adults throughout major transitions in health over a two year period. Service delivery and policy implications of study findings will be explored.

## METHODOLOGICAL CONSIDERATIONS FOR MEASURING HEALTH RELATED QUALITY OF LIFE

A.L. Hanlon<sup>1</sup>, K. Abbott<sup>1</sup>, C. Tocchi<sup>2</sup>, M.D. Naylor<sup>1</sup>, 1. *School of Nursing, University of Pennsylvania, Philadelphia, Pennsylvania*, 2. *Yale University, New Haven, Connecticut*

To advance the rigor involved in collecting data and analyzing changes in multiple HRQoL domains among frail older adults, this session will focus on important methodological considerations and challenges arising from the nature and complexity of frail older adults' needs, the diversity of these older adults and the range of services and settings designed to meet this population's needs. This presentation will highlight the challenges associated with observational studies, including missing data issues and multiple sources of data collection (e.g., interviews with cognitively intact and impaired LTSS recipients, proxy interviews for older adults with significant impairment, medical chart reviews). The challenges associated with the use of linear mixed effects models and generalized estimating equations to determine changes in HRQoL domains over time and propensity modeling to estimate unbiased effects associated with type of LTSS (e.g., ALF vs. NH) will be discussed.

## SESSION 2830 (SYMPOSIUM)

### USING A FINANCIAL EXPLOITATION MEASURE IN COMMUNITY BASED SETTINGS IN THE US AND CANADA

Chair: *M. Iris, Research, CJE SeniorLife, Chicago, Illinois*

Co-Chair: *K. Conrad, Chestnut Health Systems, Bloomington, Illinois*

Elder mistreatment and financial exploitation (FE) continue to be under-reported, resulting in inaccurate prevalence and incidence statistics, and increased suffering of older adults. In particular, FE can have devastating effects on victims, including loss of assets and financial security, loss of self-esteem, and a breakdown in the family support system. Furthermore, there are significant costs to society due to the potential impoverishment of older adults and increased opportunities for Medicare and Medicaid fraud. For example, one MetLife study reported that the annual financial loss by victims of elder financial abuse is estimated to be at least \$2.6 billion. Valid assessment is foundational for research and intervention for FE, but to date, there has been a dearth of progress in the development of assessment procedures to screen for FE, conduct comprehensive assessments, and support intervention. This symposium describes advances in the development of a screening and assessment tool for FE, and presents results of field tests using the OAMA (Older Adult Mistreatment Assessment) in multiple commu-

nity-based settings. The presentations will focus use of the FE screener as well as the long and short forms of the OAMA FE. Researchers from Illinois, California, Oklahoma and Ontario, Canada, will each discuss their use of the FE assessment measure and an overview of combined results will be presented. The symposium will include time for audience discussion of the research studies and results.

### USE OF THE OAFEM IN A COMMUNITY BASED SAMPLE

S. Wood<sup>1</sup>, P. Liu<sup>2</sup>, 1. *psychology, Scripps College, Claremont Ca, California*, 2. *Claremont Graduate University, Claremont, California*

The Older Adult Financial Exploitation Measure (OAFEM; Conrad et al., 2010) is a client self-report measure. In order to ascertain the viability of using the OAFEM in a community sample versus a sample of substantiated cases of financial exploitation, a pilot study was conducted including 93 older adults (aged 59–93) using the 30-item short form. Results indicated that significant and measurable acts of elder exploitation were present. Over half of the community sample endorsed at least 1 item on the short form of the OAFEM, with a mean of 1.52 items endorsed. In addition, multiple regression analysis revealed that retirement saving tendencies and financial risk tolerance together predicted FE ( $F=3.89, p<.05$ ). Higher financial risk tolerance ( $\beta=.07, p=.05$ ) and lower retirement saving tendencies ( $\beta=-.05, p<.05$ ) are risk factors of FE. This pilot data demonstrates that use of the OAFEM is potentially a useful measure to examine risk for FE.

### ESTABLISHING CUT SCORES ON THE OLDER ADULT FINANCIAL EXPLOITATION MEASURE (OAFEM)

K. Conrad<sup>1,2</sup>, J. Mazza<sup>1,2</sup>, M. Iris<sup>3</sup>, 1. *Chestnut Health Systems, Normal, Illinois*, 2. *Health Policy and Administration, Univ of Illinois at Chicago, Chicago, IL, Illinois*, 3. *CJE SeniorLife, Chicago, Illinois*

Based on diverse community-based samples of over 500 older adults (Illinois,  $N=227$ ; California,  $N=92$ ; Canada,  $N=128$ ; Oklahoma,  $N=100$ ), this paper presents a rationale and strategy for setting cut scores on the Older Adult Financial Exploitation Measure (OAFEM). The rationale recognizes that cut scores are never perfect and that setting cut scores involves informed judgment as well as statistical comparisons. The strategy uses the Rasch measurement model to develop an item hierarchy of FE severity. This strategy uses: 1) community samples to establish a baseline of no or low severity and, 2) a sample of substantiated victims of financial exploitation to establish a range from moderate to high severity. Additionally, theory-based variables are used to test the construct validity of the cut scores. For the OAFEM to be most useful in the community and in making decisions about services, it is important to suggest cut scores as decisional guidelines.

### TITLE: DEVELOPING A PARTNERSHIP TO UNDERSTAND FINANCIAL EXPLOITATION AMONG AFRICAN AMERICAN ELDERS

K.L. Jackson, J.S. Wilson, *Nursing, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma*

Evidence suggests that African American older adults are disproportionately affected by financial exploitation (FE) and FE has not been explored from the African American perspective utilizing adequate samples. In this study Community Based Participatory Research (CBPR) principles were used to establish a relationship between an African American faith-based community healthcare collaborative and academic researchers. Discussions with seminar organizers from two churches identified a need for financial exploitation information and FE risk factor identification. The 25-item Older Adult Financial Exploitation Measure (OAFEM) was used to identify risks, raise awareness, and provide data. In this presentation we discuss the importance of considering community needs and historical reluctance to participate in research prior to conducting research with a vulnerable minority population. CBPR principles, the OAFE, and shared cultural identity promoted the desire



to establish and maintain a trusting relationship between researchers and the community studied.

### USING A FINANCIAL EXPLOITATION MEASURE IN COMMUNITY BASED SETTINGS IN CANADA

L. McDonald<sup>1</sup>, A. Wilson<sup>2</sup>, 1. *Institute for Life Course and Aging, University of Toronto, Toronto, Ontario, Canada*, 2. *National Initiative for the Care of the Elderly (NICE), Toronto, Ontario, Canada*

The objective of this research was to conduct a pilot study of the Older Adult Financial Exploitation Measure (Conrad et al., 2010) in a community sample (N=82) of low income (Low Income Cut-offs, Canada), older women aged 55-81 in Canada. The 25-item short form was self-administered by the women who attended two-day financial literacy workshops across Canada. The findings indicated that 53.9 percent endorsed at least one question with a mean of 2.34 questions endorsed. The most frequent forms of exploitation reported or suspected were borrowing money with no payback (17.1 percent); felt entitled to use the older person's money for themselves (8.5 percent) and lied about how they were spending the older person's money (7.3 percent). Unattached, retired, immigrant woman were more likely to be exploited financially. The data suggest that the OAFEM has promise in identifying risk for financial exploitation amongst low-income women.

## SESSION 2835 (PAPER)

### NURSING HOME QUALITY OF CARE, SAFETY REGULATIONS, AND STAFF TURNOVER

#### IS THERE SUBSTITUTION OF CHEMICAL RESTRAINTS FOR PHYSICAL RESTRAINTS IN NURSING HOMES?

J. Engberg<sup>1</sup>, N. Castle<sup>2</sup>, 1. *RAND Corporation, Pittsburgh, Pennsylvania*, 2. *University of Pittsburgh, Pittsburgh, Pennsylvania*

In this research, we examine whether restrictions on physical restraints have led to increases in chemical restraints. We focus on 2006-07, a period during which nursing homes were under pressure to reduce physical restraints but had not yet come under scrutiny regarding chemical restraints. During this time physical restraint use decreased from 5.6% to 4.2% and chemical restraint use decreased from 23.2% to 22.6%. Our first analysis is at the facility level using MDS records from the first quarter of 2006 and the last quarter of 2007. Facilities that reduce their physical restraint use are more likely to reduce their chemical restraint use (N=15,503 facilities weighted by average number of residents, correlation=0.10, p-value<0.001). This does not suggest substitution, but could be confounded by changes in resident composition. Our second analysis uses the first two MDS assessments for all US nursing home residents that are approximately 3 months apart (N=193,855 residents). We find very little switching between only physical restraints and only chemical restraints (0.07% of the sample). When individuals who are in both types of restraints also are included, we find that the increase in the percentage of residents in chemical restraints (22.3% to 23.7%) is only slightly higher than the increase in physical restraints (4.9% to 5.9%). This analysis suggests very little substitution at the individual resident level, but instead a

gradual increase in restraint use of both types with longer stays. We also present findings for both measures of substitution disaggregated by facility characteristics.

### CRIMINAL OFFENDERS IN OHIO NURSING HOMES: FACILITY PRACTICES, PREVALENCE AND PROBLEMS

J. Straker<sup>1</sup>, P.P. Brown<sup>2</sup>, 1. *Scripps Gerontology Center, Oxford, Ohio*, 2. *University of Central Missouri, Warrensburg, Missouri*

In recent years, occasional violent incidents in nursing homes have drawn attention to the small population of residents with criminal backgrounds who currently reside in long-term care settings. This presentation takes an initial look at the prevalence of residents with criminal backgrounds in Ohio nursing homes, practices that facilities undertake to protect their residents, and the extent to which facilities have experienced violent incidents among their residents. In 2010, all 973 Ohio nursing homes were sent an invitation to the Biennial Survey of Long-Term Care Facilities. 871 facilities responded to at least some of the questions on criminal offenders. Fewer than 1 in 10 (57 facilities—7%) of facilities reported housing a resident with a criminal background. Over one-quarter (28%) were unsure whether they had residents with a criminal background. Most facilities learned about their resident's backgrounds from family or law enforcement. Regardless of criminal background, nearly 9 in 10 (86%) assess the aggression risk of prospective residents, and over three-quarters (78%) would deny admission to residents with a high risk of aggression. Fifty-three facilities had called the police in the previous year, regarding resident-to-resident sexual abuse or aggression. Most facilities (64.8%) have trained all of their staff in behavior management for aggressive residents. Our results show that the majority of facilities are addressing this issue to some extent. Nursing homes are challenged in their need to protect current residents, while providing care to all kinds of residents who need it. Implications for policy and practice will be discussed.

### THE NATURE OF NEGLECT IN NURSING HOMES: PATTERNS OF RELATED DEFICIENCY CITATIONS

K. Hansen<sup>1</sup>, A.A. Holup<sup>1</sup>, K. Hyer<sup>1</sup>, I.C. Freeman<sup>2</sup>, 1. *School of Aging Studies, University of South Florida, Tampa, Florida*, 2. *William Mitchell College of Law, St. Paul, Minnesota*

This study examines neglect in nursing homes, indicated by a facility receiving a citation for neglect (F-Tag 224), and the pattern of deficiency citations associated with its issuance. Related deficiencies include physical and chemical restraints (F-221 and F-222), residents receiving necessary care (F-309, F-310, and F-312), accidents and supervision (F-323), and medication errors (F-332 and F-333). Using Online Survey Certification and Reporting (OSCAR) data from 2002 – 2008 (N = 16,491), we created a nursing home longitudinal panel data set to analyze neglect and its related deficiencies. To model observations of the same facilities over time, we employed marginal models (e.g., generalized estimating equations (GEE) with a logit link) to estimate the probability of mutually exclusive events (e.g., citation or no citation). Facility-level control variables included profit status, chain membership, and total number of beds. Results indicate that all eight of the selected deficiencies were associated with the issuance of a neglect deficiency citation (p < .001). Odds ratios reveal when a citation for chemical restraints (F-222) is issued, it is three times as likely that F-224 will be issued, and twice as likely that F-224 will be issued when either F-309 or F-310 are issued (p < .001). Given the large sample size and controlling for intrafacility variation over time, a more comprehensive approach to analyzing the nature of neglect in nursing homes can be developed, including additional guidance provided to surveyors and facilities in the survey guidelines. Policy and practice implications are also considered and discussed.

## COMPETITION AND NURSING HOME STAFF TURNOVER

R. Pradhan<sup>1</sup>, R. Weech-Maldonado<sup>1</sup>, J. Epane<sup>1</sup>, K.S. Thomas<sup>3</sup>, K. Hyer<sup>2</sup>, 1. *Health Services Administration, University of Alabama at Birmingham, Birmingham, Alabama*, 2. *University of South Florida, Tampa, Florida*, 3. *Brown University, Providence, Rhode Island*

Nursing home direct care workers include either certified nursing assistants (CNAs) or licensed nurses (licensed practical nurses (LPNs) and registered nurses (RNs)). Limited career opportunities and low wages have led to high turnover rates especially for CNAs. The purpose of this study is to understand how market competition may affect turnover for CNAs and licensed nurses. Secondary data from the Online Survey Certification and Reporting dataset, Florida Nursing Home Staffing Reports, and Area Resource File are combined to construct a longitudinal dataset for the study period 2002-2007 in the state of Florida (n=3400). The study is organized as panel data regression with random effects with year level fixed effects. Dependent variables consist of licensed nursing (LPN/RN) and CNA turnover rates while competition is measured by two variables: Herfindahl-Hirschman index (HHI) and excess capacity. We control for organizational and market factors as well as supply for CNAs and licensed nurses. For licensed nurses, each 1% increase in competition as measured by HHI increases turnover by 3% ( $p < .01$ ); however, there is no significant influence of competition on CNA turnover. Excess capacity is non-significant. Results suggest that increased competition is associated with higher licensed nursing turnover, but this relationship is not maintained in the case of CNAs. Licensed nurses may be able to take advantage of more competitive markets because of their better educational qualifications and licensed status. Our results affirm that even in case of high competition, CNAs have limited job mobility and corresponding negotiating power with employers.

## EVALUATION OF THE EFFECTIVENESS OF GOLD STAMP INTERVENTIONS FOR PRESSURE ULCER REDUCTION

Y. Young<sup>1</sup>, A. Zendell<sup>1</sup>, T. O'Grady<sup>1</sup>, A. Winans<sup>2</sup>, J. Pappalardi<sup>2</sup>, 1. *University at Albany, Albany, New York*, 2. *New York State Department of Health, Albany, New York*

**Introduction:** This study evaluates the impact of the Gold STAMP (Success Through Assessment, Management and Prevention) intervention on reducing pressure ulcers (PUs) in four collaboratives across New York State. **Methods:** Forty-two nursing home (NHs) and home health agencies (HHAs) were invited to participate in a one-year study from September 2011 to August 2012. Assessment, care practice, communication, and collaborative interventions were provided to the case group (12/11 – 03/12). Clinical information was obtained from MDS, OASIS, and SPARCS secondary data, and nonclinical data collected through surveys mailed to NH and HHA medical directors (MDs) and directors of nursing (DONs). Survey questions focus on determinants of hospitalization, measures to avoid hospitalization, and care practices. Mixed-effects models will be used to compare effectiveness of Gold STAMP between case and control groups on PU reduction, and determine risk factors associated with PUs and hospital length of stay. **Results:** Preliminary data shows MDs/DONs agree that resident preference and family preference are the most important factors for hospitalization (mean = 4.55, 4.62 out of 5 respectively). Added treatment cost is the least important factor for hospitalization (mean = 1.79 out of 5). **Discussion:** Education on PU risk, prevention and management is frequently but not always being provided to residents and family members. Future intervention should focus on patient and family education.



**GSA SIXTY-FIFTH ANNUAL SCIENTIFIC MEETING** NOVEMBER 14-18, 2012  
SAN DIEGO, CALIFORNIA

# 2012 Late Breaker Poster Sessions

**Organized by the Biological Sciences and Health Sciences Sections,  
and the Research, Education and Practice Committee**

## 2012 Late Breaker Poster Sessions

The Late Breaker Poster Sessions are jointly sponsored by GSA's Biological Sciences and Health Sciences Sections, and the AGHE/GSA Research Education and Practice Committee. These sessions are a forum for the presentation of the newest, most pressing, and previously unreported results in aging research.

Participating posters will be grouped together in a special Late Breaker section of the hall and are easily identified by the "LB" in front of the poster number on each board. Late Breaker sessions will take place outside Exhibit Hall B, directly adjacent to Exhibit Hall A, GSA's Exhibit Hall in the San Diego Convention Center. The "LB" number on each board corresponds to the "LB" number in front of an abstract in this program.

Posters will be displayed during the times listed below.\* Presenters will be at their boards during the Face-to-Face Time for each session.

### **Wednesday, November 14**

6:00 PM to 8:00 PM

Face-to-Face Time: 6:00 PM - 7:00 PM

### **Thursday, November 15**

12:00 PM to 3:00 PM

Face-to-Face Time: 12:00 PM - 1:00 PM

### **Friday, November 16**

10:00 AM to 1:00 PM

Face-to-Face Time: 10:00 AM to 11:00 AM

### **Saturday, November 17**

11:45 AM to 2:45 PM

Face-to-Face Time: 11:45 AM – 12:45 PM

\*Presenters: Posters can be put up anytime the day of your presentation. All posters must be removed by the end of the day.

**Wednesday, November 14**

***Health Sciences Section***

**LB1. A Mixed Methods Study Exploring the Nurse Work Environment and Perceived Quality of Geriatric Care in Rural Hospitals**

**Daniel Cline**, University of Colorado College of Nursing Anschutz Medical Campus; **Elizabeth Capezuti**, New York University College of Nursing; **Christine Kovner**, New York University College of Nursing; **Victoria Vaughan Dickson**, New York University College of Nursing

**BACKGROUND:** The rapidly aging population and their frequent use of hospital services will create substantial quality challenges in the near future, especially in rural hospitals due to limited resources and health care providers. Redesigning hospital work environments is key to improving the quality of geriatric care, but a lack of research on rural hospital work environments and the quality of geriatric care limits effective redesigns.

**PURPOSE:** To explore how the nurse work environment influences perceived of quality of geriatric care in rural hospitals.

**METHODS:** A concurrent, embedded mixed methods research design, with emphasis on the qualitative data (in-depth, semi-structured interviews). Thirty-one RNs from three hospitals located in rural counties of Northern New York State participated in the study.

**RESULTS:** RNs identified several work environment factors that influence the quality of geriatric care in rural hospitals. Strong, collegial-RN relationships strengthen the quality of geriatric care, while deficiencies in geriatric specific education, inefficient and cumbersome technology, undesirable interactions with physicians, and poor use and shortages of nursing aides diminish the quality of geriatric care.

**CONCLUSION:** This study is innovative in its use of a mixed method research design to identify how the work environment influences the quality of geriatric care in rural hospitals. Rural hospital work environments are not optimized to facilitate the delivery of quality geriatric care. Targeted interventions by administrators are needed to improve the quality of geriatric care.

**LB2. A Multiple Mediation Model Examining the Relationship Between Confidence In Manual Wheelchair Users and Participation**

**Brodie Sakakibara**, University of British Columbia; **William Miller**, University of British Columbia; **Francois Routhier**, Centre interdisciplinaire de recherche en réadaptation et intégration sociale (CIRRS) Institut de réadaptation en déficience physique de Québec (IRDPOQ); **Catherine Backman**, University of British Columbia; **Janice Eng**, University of British Columbia

**Objectives:** Confidence with using a wheelchair is conceptualized as the belief individuals have in their ability to use a wheelchair. It is a novel construct for which evidence has only recently been published.

To advance our knowledge in this area of study, we hypothesized that in accordance with Social Cognitive Theory, confidence is a significant determinant of participation after examining for important interacting and confounding variables, and that the relationship is mediated by depression, pain, functional ability, wheelchair skills, and mobility.

**Methods:** This cross-sectional study included 118 community-living wheelchair-users (59% male), who were >50 years of age (mean=60 years). The Late Life Disability Instrument, and the Wheelchair-Use Confidence Scale measured participation, and confidence. Mediating variables were measured with the Hospital Anxiety and Depression Scale, Wheelchair User Shoulder Pain Index, Barthel Index, Wheelchair Skills Test, and Life Space Assessment.

**Results:** The final adjusted multiple regression model (R-squared=0.36) included confidence ( $\beta=0.48$ , 95% CI=0.14–0.26), number of health conditions ( $\beta=-0.17$ , 95% CI=-1.05–0.04), and social support ( $\beta=0.19$ , 95% CI=0.08–0.62), and had equivalent control of confounding relative to other models while providing greater precision in estimating confidence. Further analysis revealed a significant total indirect effect of confidence through the hypothesized mediating variables (point estimate=0.09, 95% bias corrected bootstrap CI=0.00–0.18).

**Conclusion:** Our results indicate that the important relationship between confidence in wheelchair-users and participation is mediated by a combination of depression, pain, functional ability, wheelchair skills, and mobility. Because prevalence studies indicate low confidence is common among older wheelchair-users, confidence-enhancing interventions are warranted.

### **LB3. Association of Inflammatory Markers with Socioeconomic Status in Older Adults: Does Race/Ethnicity Matter?**

**JiHyun Cho**, Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor; **Jennifer Weuve**, Rush Institute for Healthy Aging, Department of Internal Medicine, Rush University Medical Center; **Lisa L. Barnes**, Rush Alzheimer's Disease Center, Department of Neurological Sciences and Department of Behavioral Sciences; **Denis A. Evans**, Rush Institute for Healthy Aging, Department of Internal Medicine, Rush University Medical Center; **Carlos F. Mendes de Leon**, Department of Epidemiology, School of Public Health, University of Michigan

**Background:** Inflammatory processes are one of downstream biological pathways by which socioeconomic status (SES) affects disease risk. Studies have demonstrated that chronic health conditions are associated with elevated inflammatory marker levels. SES differences may persist or widen with age, leading to greater chronic disease risk in those of lower SES. Given the SES differences among subpopulations of different racial backgrounds, it is important to examine how SES is associated with inflammation within specific racial groups.

**Method:** A cross sectional analysis was conducted for a sample from the Chicago Healthy Aging Project (CHAP) separately for black and non-black population (n=3618, aged 65 or older). The participants' CRP and IL-6 levels were measured and assayed. Their SES as well as behavioral variables and medication status were obtained.

Results: The pattern of the association between inflammation and SES varied across different racial groups. Among blacks, lower-SES groups had higher CRP and IL-6 compared to the highest-SES group, although the inverse gradient was not perfectly linear. The association between CRP and income demonstrates only a marginally significant inverse gradient between low- and middle-income groups. Among whites, there was a significant inverse gradient of association between income and IL-6, but not between education and both CRP and IL-6. Compared to the highest-income group, low-income whites were more likely to have higher CRP.

Conclusion: Distinct SES gradient of inflammatory marker levels in blacks and whites suggest that well-targeted interventions are necessary to solve both racial and SES disparities altogether.

#### **LB4. Determinants of Retention for Regulated Staff in Low-Turnover Long Term Care Facilities.**

**Veronique Boscart**, Schlegel Research Institute of Aging, University of Waterloo and Conestoga College; **Katherine McGilton**, Toronto Rehabilitation Institute; **Barbara Bowers**, Institute on Aging, University of Wisconsin-Madison

An adequate supply of nursing staff in Long-Term Care (LTC) facilities is essential to provide stable and high quality care. Therefore, current turnover rates of up to 30% of regulated nursing staff have raised great concern. Implications of high turnover include staff shortages and dissatisfaction with quality health services for resident care. In addition, unregulated staff depend largely on the regulated nursing staff for leadership and support. Knowing which factors retain regulated nurses within LTC is crucial. This study explored administrations' views of what keeps their regulated nursing staff in LTC. Semi-structured interviews with 15 administrators at low-turnover facilities were conducted. Factors discussed included building a community of leaders, personal recognition, actively lived mission and values, administrative and managerial support, strong staff relationships, and deliberate team building. Findings of this study provide administrators and policy makers with an understanding of what factors affect regulated staff retention in LTC and will be used to develop evidence-based strategies to retain nurses in these positions.

#### **LB5. Effects of Lower Body Positive Pressure Treadmill Training on Balance, Mobility and Lower Extremity Strength of Community-Dwelling Older Adults**

**Rolando Lazaro**, Associate Professor, Samuel Merritt University; **Gaye Raymond**, Assistant Professor, Samuel Merritt University

Purpose/Hypothesis: There is growing evidence that confirms the benefits of partially supporting a person's body weight during exercise. Lower body positive pressure (LBPP) unweighting is a new method of providing partial body weight support. This is achieved by using the AlterGTM, a treadmill device with a pressurized chamber that unloads the lower extremities while a person exercises. Currently there are no published studies detailing the benefits of LBPP treadmill training in the geriatric population. This study aims to investigate the effect of LBPP treadmill training on balance, mobility and lower extremity strength in community-dwelling older adults. Subjects: Ten community-dwelling

individuals (ages 60-85 years) with no neurological conditions or musculoskeletal injuries within the past year participated.

**Methods and Materials:** The subjects participated in twice weekly treadmill training sessions using LBPP at 80% of body weight. They exercised using their self-selected speed and incline for twenty minutes each session for eight weeks. Blood pressure and heart rate were taken before, after 10 minutes and at the conclusion of each training session. Pre- and post-test measures included Performance Oriented Mobility Assessment (POMA), 10 meter walk test (10MW), Computerized Dynamic Posturography (CDP), modified Timed Up and Go (mTUG) and lower extremity dynamometry. **Results:** All 10 participants were female. Wilcoxon signed ranks test results showed statistically significant improvement in POMA ( $p=.024$ ), composite score of the CDP ( $p=.025$ ), the sit-to-stand split of the mTUG ( $p=.005$ ), and lower extremity strength ( $p=.008$  to  $.015$ ). Average self-selected speed more than doubled from 1.92 to 3.90 mph (mean=2.44). All subjects exercised within their safe limits, with no unsafe increases in blood pressure or heart rate, and no complaints of extremity pain or muscle soreness throughout the entire training period.

**Conclusions:** In a sample of community-dwelling older adults, an eight-week regimen of treadmill exercise with LBPP unweighing resulted in improvements in balance, mobility and lower extremity strength. All participants exercised within safe limits, and reported no adverse effects from the training.

**Clinical Relevance:** The study provides preliminary support for safe and effective use of LBPP treadmill training in community-dwelling older adults. The positive effects of LBPP in minimizing biomechanical risks, decreasing pain while weight-bearing and facilitating mobility are of benefit in geriatric populations.

#### **LB6. Income Inequality and Self-rated Health: Race and Gender Matter**

**Amanda Sonnega**, Institute for Social Research/University of Michigan; **Jessica Faul**, Institute for Social Research/University of Michigan; **Beth Simmert**, Wayne State University

Progress has been made in explaining the well-documented socioeconomic status (SES)-health gradient, yet much remains to be done. The social causation model is the most common framework for investigating explanatory variables. This model posits that a host of social conditions put poorer individuals at risk of illness. Increasingly, researchers are considering contextual variables as risk factors. Thus, for example, an individual's lower personal income may put her at risk of illness, but her wider economic context may be an additional risk. This study investigated income inequality as a contextual risk factor for self-reported health status. Data from the Health and Retirement Study (HRS), a large nationally representative sample of older U.S. households, were linked at the individual level with the county-level Gini Index from the U.S. Census Bureau's American Community Survey (ACS). The matched sample from 2006 is 16,290 respondents. The Gini Index ranges from 0 to 1, where 0 is perfectly evenly distributed income and 1 is complete inequality. Stepwise logistic regression analysis was used to evaluate the contribution of 1) Gini, gender, age, education, 2) plus natural log income, natural log wealth, natural log median county income, 3) plus race on self-reported health. Gini remained a significant risk factor for poor self-reported health in all three models. A second set of models stratified



by gender found Gini to be a significant risk for men only. Models stratified by race found the index to be a highly significant risk for non-Hispanic whites but slightly protective for non-Hispanic blacks.

#### **LB7. Incontinence Prevalence by Race and Ethnicity of Older Adults Admitted to Nursing Homes**

**Donna Bliss**, University of Minnesota; **Susan Harms**, University of Minnesota; **Judith Garrard**, University of Minnesota; **Kay Savik**, University of Minnesota; **Olga Gurvich**, University of Minnesota; **Christine Mueller**, University of Minnesota; **Jean Wyman**, University of Minnesota; **Lynn Eberly**, University of Minnesota

Racial/ethnic disparities in incontinence prevalence have been reported in community-living residents (of which 46% are estimated to seek nursing home (NH) care), in health problems that are risks for incontinence, and by US region. Little is known about incontinence in NH admissions by race/ethnicity. Admission is a critical time for NHs to be aware of disparities in order to identify and manage health problems and resources to achieve better resident health outcomes. This cross-sectional analysis of Minimum Data Set (2000-2002) and 2000 US Census data described incontinence prevalence among new admissions to NHs by race/ethnicity at three levels: resident, NH, and national. There were 111,640 admissions aged  $\geq 65$  years to 457 NHs of a national, for-profit chain in 31 states and all 9 Census divisions. Incontinence outcomes were: Any Incontinence, Any Urinary Incontinence (UI), Any Fecal Incontinence, Dual Incontinence, Only UI, and Only Fecal Incontinence. Asians (67%), Blacks (66%), and Hispanics (58%) had a higher prevalence of Any Incontinence compared to Whites (48%) and American Indians (46%). Among NHs, the greater the percentage of White admissions, the lower the incontinence prevalence was for all outcomes (except Only UI). Nationally, prevalence of all incontinence outcomes (except Only UI) was lowest in the two Census divisions with the highest percentage of White NH admissions. In conclusion, incontinence prevalence was associated with the race/ethnicity of NH admissions at resident, NH, and national levels, which may further disadvantage NHs with a concentration of minority residents, fewer resources, and lower care quality.

#### **LB8. Long Term Outcome Of Frailty Indicators And ADL Following “Continuum Of Care For Frail Elderly People”**

**Kajsa Eklund**, 1.Vårdalinstitutet, The Swedish Institute for Health Sciences, University of Gothenburg and Lund, Sweden Department of Clinical Neuroscience and Rehabilitation, The Sahlgrenska Academy at University of Gothenburg, Gothenburg, Sweden; **Katarina Wilhelmson**, Vårdalinstitutet, The Swedish Institute for Health Sciences, University of Gothenburg and Lund, Sweden Department of Public Health and Community Medicine/Social Medicine. Institute of Medicine The Sahlgrenska Academy at University of Gothenburg, Gothenburg, Sweden; **Helena Gustafsson**, Sahlgrenska University Hospital, **Sten Landahl**; Vårdalinstitutet, The Swedish Institute for Health Sciences, University of Gothenburg and Lund, Sweden; **Synneve Dahlin-Ivanoff**, Vårdalinstitutet, The Swedish Institute for Health Sciences, University of Gothenburg and Lund, Sweden Department of Clinical Neuroscience and Rehabilitation, The Sahlgrenska Academy at University of Gothenburg, Gothenburg, Sweden

The current trend in Western societies facing a growing proportion of older people is to support frail older persons to remain in their homes as long as possible, so-called ageing in place. Older persons

comprise a group whose reserve of strength is decreasing, and whose activity and participation levels will deteriorate with increasing frailty, often leading to dependence in daily activities. Frail older persons need integrated care from different caregivers at different care levels with multi-professional competences. An intervention study for frail community-dwelling older people was designed, creating a continuum of care from the hospital through and back to their own homes. Objectives were to evaluate its effects on activities of daily living (ADL) and frailty up to one year.

The study design was a RCT with participants randomized to either the intervention or a control group with follow-ups at three-, six- and 12 months. The study group includes 161 older people who sought care at the emergency department at Mölndal hospital, Sweden, and discharged to their own homes. Inclusion criteria were age 80 and older or 65 to 79 with at least one chronic disease and dependent in ADL. Frailty was measured as a sum of eight core frailty indicators and ADL with the ADL staircase. The analyses were made on the basis of the intention-to-treat principle. At both three- and twelve-month follow-up the intervention group had a higher OR in improved number of ADL managed independently. There were no significant differences between the groups regarding frailty.

#### **LB9. Novel Approaches to Evaluating the Cost-Effectiveness of a Nonpharmacological Depression Intervention for Older African Americans: Results from the Beat the Blues Trial**

**Laura Pizzi**, Thomas Jefferson University; **Eric Jutkowitz**, University of Minnesota, Division of Health Policy and Management; **Kevin Frick**, Johns Hopkins Bloomberg School of Public Health, Department of Health Policy and Management; **Dong-Churl Suh**, Department of Pharmacy Practice and Administration, Ernest Mario School of Pharmacy, Rutgers University; **Katherine Prioli**, Thomas Jefferson University; **Laura Gitlin**, Johns Hopkins University School of Nursing Center for Innovative Care in Aging, Johns Hopkins University

**BACKGROUND:** In older African Americans, depression is often underdetected and undertreated. Beat the Blues (BTB) is a novel nonpharmacological intervention that employs trained licensed social workers who engage participants through behavioral activation, assist in care management, make referrals/linkages, provide depression education, and teach stress reduction. **METHODS:** BTB was tested using a prospective two group randomized trial. Subjects were assessed at baseline and 4 months on depression severity (PHQ-9). The cost-effectiveness analysis (CEA) was conducted alongside the trial. Intervention costs, depression healthcare use, and health utility were captured. CEA effectiveness measures were: 1) quality-adjusted life years (QALYs) obtained from the EQ-5D and HUI-3, 2), percent experiencing clinically significant improvement in PHQ-9 score, and 3) percent experiencing depression remission. For each measure, an incremental cost-effectiveness ratio (ICER) was calculated (difference in cost between BTB and control divided by difference in effectiveness between BTB and control). **RESULTS:** BTB cost \$584 to deliver over the 4 months. The cost difference between BTB and control was \$491. BTB participants experienced an incremental QALY gain of 0.0076 (EQ-5D) and 0.0133 (HUI-3). In addition, versus control, 14% more in the BTB group experienced clinically significant depression improvement, and 16% more had remission. The ICERs were \$64,896 (EQ-5D); \$36,874 (HUI-3); \$3,507 (clinically significant improvement); \$2,906 (clinical remission of symptoms). **CONCLUSIONS:** BTB cost-utility ratios fall within acceptable societal thresholds. However, choice of outcome significantly impacts

the ICER. Including multiple outcome measures when reporting CEAs helps provide a robust range of estimates for nonpharmacological programs.

#### **LB10. Nurse Home Visits With Or Without Alert Buttons Versus Usual Care In The Frail Elderly: A Randomized Controlled Trial.**

**Carmen Garcia-Peña**, Instituto Mexicano del Seguro Social; **Jesus Favela**, Centro de Investigación Científica y de Educación Superior; **Luis A Castro**, Centro de Investigación Científica y de Educación Superior de Ensenada, Baja California, México; **Julia Mora**, Instituto Mexicano del Seguro Social; **Francisco Franco-Marina**, Instituto Nacional de Enfermedades Respiratorias; **Marcela D Rodriguez**, Facultad de Ingeniería, Universidad Autónoma de Baja California

Design Randomized, controlled trial, unblinded

Setting Insured population covered by the Mexican Institute of Social Security (IMSS) living in the city of Ensenada, Baja California, Mexico

Participants Older than 60 years with a score on the frailty index higher than 0.14.

Intervention After screening and informed consent, participants were randomly allocated to the CG, IA or IB groups. Primary outcome was the frailty score nine months later. Quality of life, depression, comorbidities, health status and health service utilization were also considered.

Results. Framing sample included 819 patients. Of those, 591 were not located because they did not have a land line/telephone (341), they had died (107), they were ill (50 cases), or they were not currently living in the city (28 cases). A screening interview was applied to 228 participants, and 57 had a score  $\leq 0.14$ ; 171 had  $\geq 0.14$ , and 16 refused to complete the baseline questionnaire. A home visit was scheduled for 155 patients; however, 22 did not complete the baseline questionnaire. The final 133 subjects were randomized into the IA (n=45), IB (n=45) and CG (n=44) groups. There were no statistically significant differences in the baseline characteristics. The mean age overall was 76.3 years (SD 4.7) and 54% were women. At the baseline, 61.65% were classified as frail, and 57.39% were in the final phase. The IA intervention reduced the final frailty percentage from 57.78% to 43.59%.

Conclusion An intervention based on nurse home visits plus alert buttons seems to have a positive effect on frailty scores.

#### **LB11. Preferences for information feedback and privacy for a wrist-worn physiological monitoring device.**

**Ryan Best**, Florida State University; **Neil Charness**, Florida State University

Younger (n=30, mean age 19.77, SD 1.45), middle (n=27, mean age 56.11, SD 7.56), and older adult (n=35, mean age 75.69, SD 6.35) participants answered questions pertaining to their preferences for information feedback and privacy related to a hypothetical wrist-worn physiological monitoring device. An exploratory factor analysis resulted in the measure items loading onto four factors. These included

preferences for the accessibility of recorded health information to medical professionals and family members, the display and functionality of the device, concerns about leakage of health information to unauthorized recipients, and accessibility of recorded health information to the government and insurance companies. After controlling for gender, age significantly predicted the factors associated with concerns about leakage of health information to unauthorized recipients and accessibility of recorded health information to the government and insurance companies. These age differences trended towards older adults indicating less concern related to the leakage of health information and greater comfort with accessibility of recorded health information by the government and insurance companies. There were no observable age differences in preferences for the accessibility of recorded health information to medical professionals and family members and the display and functionality of the device. These results provide further support to previous focus group findings indicating that younger adults are more concerned with privacy of information than older adults (Kwasney, Caine, Fisk & Rogers, 2008), including information related to health.

### **LB12. Profiles of Comorbid Illnesses Predict Inpatient Length of Stay and Costs for Older Adults Hospitalized with Heart Failure**

**Julie T. Bidwell**, Oregon Health and Science University School of Nursing; **Quin E. Denfeld**, Oregon Health and Science University School of Nursing; **Christopher S. Lee**, Oregon Health and Science University School of Nursing

**Introduction:** Heart failure (HF) is the number one cause of hospitalization for adults >65 years and is projected to cost \$94 billion by 2030 in the U.S. As older adults with HF often have significant comorbid burden, we hypothesized that patterns of comorbidities could predict inpatient costs and length of stay (LOS).

**Methods:** We analyzed HF hospitalizations of adults  $\geq 65$  years from the 2009 Agency of Healthcare Research and Quality National Inpatient Sample ( $n=236,109$ ). Using latent-class mixture modeling, we identified distinct profiles of comorbid conditions, each labeled by dominant comorbidities. Generalized linear modeling was used to quantify inpatient costs and LOS by profile, adjusting for age, gender, race, median income, payer, weekend admission, hospital size/control, urban/rural location, and teaching status.

**Results:** Four profiles (entropy=0.68, LMRT=22,836, all  $p<0.0001$ ) were identified: “common variations” (48.2%; patients with few, diffuse comorbidities), “renal/endocrine” (28.4%; greatest proportion of renal disease, anemia, electrolyte imbalances, complicated diabetes, and hypothyroidism), “lifestyle/COPD” (17.8%; greatest proportion of uncomplicated diabetes, hypertension, chronic lung disease, and obesity), and “vascular/ischemic/neuro” (5.6%; greatest proportion of cerebrovascular disease, paralysis, myocardial infarction, peripheral vascular disease, and neurological disorders). In comparison to patients within the “common variations” profile, patients within the remaining profiles had a significant relative increase in costs (“renal/endocrine”=20%, 95%CI=18-21%; “lifestyle/COPD”=11%, 95%CI=10-12%; and “vascular/ischemic/neuro”=22%, 95%CI=19-25%) and longer LOS

(“renal/endocrine”=25%, 95%CI=24%-26%; “lifestyle/COPD”=14%, 95%CI=13-15%; and “vascular/ischemic/neuro”=23%, 95%=21-25%) (all  $p < 0.0001$ ).

Conclusions: In older adults admitted for HF, comorbid illness profiles may be helpful in predicting patients at higher risk of greater inpatient costs and LOS.

### **LB13. Sales of Health-Promoting Foods Have Grown Faster than Candy and Cereal Sales at This Blue Zones Supermarket**

**Rolf Martin**, MMT Corporation; **Michael May**, Albert Lea Hy-Vee; **Amy Pleimling**, Albert Lea Hy-Vee

**BACKGROUND:** The Blue Zones Project (Bluezones.com) focuses on community engineering to make healthy lifestyles more attractive and thereby increase the healthspan of those who participate in the Blue Zones initiative. Actual longevity increases and long-term maintenance of healthier lifestyles have not, to our knowledge, been documented in the scientific literature. We therefore analyzed sales of healthful and other food groups in a large supermarket in Albert Lea, Minnesota, the first city to become a Blue Zones pilot community, to determine if consumption of health-promoting foods increased and whether this increase has been maintained.

**METHODS:** We queried the Albert Lea Hy-Vee Supermarket database to obtain 8,709 sales totals for selected healthy foods, candy and cereals for six months before the Blue Zones project began in 2010, for a six-month period after implementation, and for the most recent six months ending August 31, 2012. Sales total ratios for items sold during consecutive time periods were computed and converted to log values to approximate normal distributions for statistical analysis.

**RESULTS:** Sales increased most for healthy foods compared to candies and cereals. Ratios for the health market category were 30.2% higher compared to candies and 49.1% higher compared to cereals (parametric t-test p values and also nonparametric Kolmogorov-Smirnov p values were below 0.001 for each comparison).

**CONCLUSION:** Relatively large increases in sales of health-promoting foods suggest that the Blue Zones initiative has the potential to significantly improve community health. Sales totals from neighboring businesses are needed before general conclusions can be reached.

### **LB14. Screening of Patients with Obstructive Sleep Apnea/ Hypopnea Syndrome by Subjective and Objective Indicators**

**Li Li**, Dept of Medical & Surgical Nursing, School of Nursing, Peking University, Beijing, China ; **Su ZHANG**, Peking University People's Hospital, Beijing, China.

**Objetives:** To evaluate the sensitivity and specificity of the Epworth sleepiness scale (ESS) for predicting a diagnosis of OSAHS, in patients suffering from Obstructive Sleep Apnea/Hypopnea Syndrome (OSAHS), and to construct a screening system for OSAHS combined subjective and objective factors.

Methods: 104 participants completed the questionnaire regarding the body mass index grade, Epworth Sleepiness Scale, and visual analog scale for snoring which all obtained prior to polysomnography (PSG). Sensitivity and specificity were determined for the Epworth sleepiness scale (ESS). Patient data were subjected to multivariate stepwise discriminant analysis to propose a screening system based on the Fisher's linear classification equation. Results were cross-validated by PSG findings.

Results: Neither sensitivity (0.364) nor specificity (0.615), the single tools of ESS were lower for predicting a diagnosis of OSAHS ( $AHI \geq 5$ ). When applied case-wise to the study population, this equation correctly predicted 79.3 percent of diagnoses.

Conclusions: By combined subjective and objective factors into a single predictive equation, sensitivity and specificity were maximized for diagnosing OSAHS, and 79.3 percent of diagnoses were accurately predicted.

### **LB15. The Effect of Physical Function on the Relationship between Gerotranscendence and Subjective Well-being**

**Takeshi Nakagawa**, Osaka University; **Yukie Masui**, Tokyo Metropolitan Institute of Gerontology; **Kei Kamide**, Osaka University; **Kazunori Ikebe**, Osaka University; **Yasumichi Arai**, Keio University; **Megumi Tabuchi**, Kwansai Gakuin University; **Yasuyuki Gondo**, Osaka University; **Ryutaro Takahashi**, Tokyo Metropolitan Institute of Gerontology

The theory of Gerotranscendence has been proposed as a developmental theory of positive aging, and the concept is defined as a shift in meta-perspective from a materialistic and pragmatic viewpoint to a more cosmic and transcendent one. Gerotranscendence is hypothesized to increase subjective well-being among frail older adults. Nevertheless, only a few empirical studies examined gerotranscendence. The study aims to test hypothesis that low physical function enhance the positive influence of gerotranscendence on subjective well-being.

Participants were 1,000 septuagenarians and 973 octogenarians living in Japan. A questionnaire survey was conducted to assess gerotranscendence and subjective well-being that included life satisfaction, positive affect, and negative affect. Gerotranscendence was measured by using the Japanese Gerotranscendence Scale consisting of 8 sub-factors. A short physical performance battery was conducted to evaluate physical function.

Six sub-factors of gerotranscendence were positively related with subjective well-being, but one of them was considered to conceptually overlap subjective well-being. So, five sub-factors of gerotranscendence were chosen as independent variables. The results of hierarchical multiple regression analyses showed that the interaction of 2 sub-factors of gerotranscendence and physical function only on positive affect was significant. Lower physical function enhanced the positive influence of "Release from the social self" on positive affect. However, lower physical function reduced the positive influence of "Awareness of "arigatasa" and "okage"" on positive affect.

The study indicates that the self dimension of gerotranscendence increases positive affect among frail older adults. However, frailty could diminish the positive influence of the cosmic dimension of gerotranscendence on positive affect.

### ***Research, Education, and Practice Committee***

#### **LB16. “Are You Crazy? Not in My Lifetime”: An Exploratory Study on Older Adults’ and Their Family Members’ Attitude Towards Institutional Care in Bangladesh**

**Syeda Jesmin**, University of North Texas at Dallas; **Iftekhhar Amin**, University of North Texas at Dallas

In many low-income countries although the elderly people solely depend on their families for care until death, providing eldercare has become quite a challenge for the family members. We examine whether older adults and their caregivers in Bangladesh consider nursing home or institutional care as an option. The objectives of our study are to understand: What is the Bangladeshi older adults’ and their family members’ attitude toward nursing homes? Is there a need for nursing homes? How is their need for long-term care met? Are nursing homes culturally appropriate living arrangements for elders in Bangladesh? Using snow-ball sampling technique we collected data from a sample of 18 elders and 50 caregivers. We found a strong negative attitude towards relocation of older adults in nursing homes. However, while western style of institutional care for elderly people is culturally not acceptable yet, the living arrangements of many older adults are not much different from the concepts of ‘independent living’ and ‘assisted living.’ We found an association of family income and attitudes towards nursing home placement, and reported caregiver burden. Community and informal networks play an important role for the low-income families. Among the upper class an emerging trend is the hiring of professional help for eldercare. For middle class families the discussion of nursing home placement is a taboo and considered synonymous with abandoning the close ones. Findings of this study highlight the need for developing culturally sensitive long-term care options for older adults in Bangladesh.

#### **LB17. A Personalized Medicine Observational Study Using a Gene Expression Test to Evaluate Patients $\geq 65$ Years Old Presenting with Symptoms of Suspected Obstructive Coronary Artery Disease**

**Michael Conlin**, Johns Creek Primary Care; **Lee Herman**, Johns Creek Primary Care; **Mark Mouton**, Mouton Clinic; **Larry Wilson**, Wake Forest Family Physicians; **Rakesh Patel**, Arizona Sun Family Medicine; **May Yau**, CardioDx, Inc; **Michael Elashoff**, CardioDx, Inc; **Mark Monane**, CardioDx, Inc

The GES is a validated diagnostic test, measuring expression levels of 23 genes to determine the likelihood of a patient having at least one coronary artery with  $\geq 50\%$  stenosis. Of the 317 patients without a history of CAD presenting to 4 primary care clinics with symptoms of suspected CAD from January 2011 to September 2011 in our retrospective study, there were 98 stable patients that were 65 years or older. Each patient had a peripheral blood sample sent to a central reference laboratory for gene expression testing. The GES was reported to the physician within 3 days on average. The median patient age was 72 years, and 52% were female. There were 15 (15%) patients with low GES (mean=12) and 83 (85%) with elevated GES (mean=28). A total of 49/98 (50%) patients were referred to cardiology: only 1/15 low GES patients (7%) were referred on to cardiology, whereas 48/83 (58%) of elevated scores

are referred (OR 0.09,  $p=0.04$  adjusted for age, sex, practice and symptoms). Among the 71 (72%) patients with average follow-up of 180 days, there were no major adverse cardiac events noted. Thus the GES was incorporated into clinical practice to rule out CAD and showed clinical utility in the elderly population by helping the physicians to manage the geriatric patient in the primary care setting, thus optimizing the delivery of care.

### **LB18. Community Needs Assessments: An Effective Tool for the Planning of Aging Services in Rural Communities**

**Patricia Huffman-Oh**, University of Massachusetts, Boston; **Hayley Gravette**, University of Massachusetts Boston

Rural communities across the United States are not immune to the coming 'age wave' and are expected to see continued growth in their older adult populations. Increased life expectancy, aging of the Baby Boomers, relocation of retirees to rural destinations, and older adults' preference to age in place all contribute to the growth in the percentage of the rural population that is over age 65. Community needs assessments of aging services offer a practical tool for rural communities preparing for the aging of their population. Many towns are using needs assessments to identify the physical, financial, environmental and social supports needed to make their community more aging-friendly and to determine how they can prepare to assist an aging population without the resources and funds of urban areas. In response to these objectives and in partnership with a small town in mid-coast Maine, this study offers a narrative exploration of what older and Boomer-age adults in one community envisioned for the future of the town's aging services. Four focus groups with 32 community members were conducted in July of 2012. Identified themes described residents' perception of aging in place and their anticipated, as well as current, service needs. Suggestions for developing partnerships between formal social services and community-based supports to meet the needs of an aging rural population were highlighted. A key practice implication includes gaining a better understanding of the differing social service interventions required by rural-dwelling in-migrant retirees and long-term residents.

### **LB19. Family Support for Aging in Place: How Women Differ from Men**

**Emma Quach**, University of Massachusetts, Boston

Although aging in place is desirable from the perspectives of public policy and older individuals, aging in place is predicated on marshalling available supports to counteract declines in independence. Recent research indeed demonstrates the importance of social support and social integration as personal attributes in contributing to aging in place expectations. Yet, it is unknown whether the relationship between social support and aging in place expectations is moderated by gender. In addition, do some sources of support facilitate aging in place more so than others?

A sample of 1487 adults 50 years of age or older from the 2004 Health and Retirement Survey was used in a cross-sectional analysis of older adults' relocation expectations, which were defined as having a 20% or higher probability of moving in the next two years. Logistic regression results show that persons with higher social support had significantly higher odds of expecting to age in place (or lower odds of



expecting to relocate). Furthermore, support from children significantly increased the odds of women's aging in place expectations whereas support from relatives was significant to men's expectations of aging in place, after controlling for key factors such as health and homeownership. These results suggest that men and women tap into different family sources for assistance to age in place. Therefore, services that promote aging in place, such as family support services, may need to target both immediate and extended kin of older adults at risk of relocation.

#### **LB20. Food Deserts and Healthy Living for Older Adults with Diabetes**

**Anna Faul**, Kent School of Social Work, University of Louisville; **Joseph D'Ambrosio**, Kent School of Social Work, University of Louisville; **Pamela Yankeelov**, Kent School of Social Work, University of Louisville, **Barbara Gordon**, Kipda Area Agency on Aging

To understand the influences the food environment have on the health of rural older adults with Type 2 diabetes, a food desert study was executed in three rural counties using the methodology from Subramanian et.al. (2006). With GIS software (ArcMap10), food resources in the counties were geo-coded within census tracts and grouped into fast food outlets, convenient stores, independent grocers, and chain supermarkets. The home addresses of 320 older diabetic patients living in these three counties were geo-coded to determine in which census tracts they reside. The outcome variable was a count of health indicators (A1C, blood pressure, blood cholesterol) that were in the acceptable range for diabetic patients as reported by their primary health care professionals. We controlled for individual poverty levels, educational attainment, age and ethnicity. Census tract level control variables were the proportion of the population living below poverty, the median income, the proportion of the population 65 and older, the population size, and the proportion of the population with some college. Analysis was done using multilevel modeling, with the individuals nested in 23 census tracts. Results indicated a significant impact of the availability of the different food resources on the health of diabetic patients. The control variables were significant in the predictor model, indicating that they were important indicators to consider in creating healthy communities. However, even after these variables were controlled for, the availability of healthy food resources was still a strong predictor of the health status of older adults with diabetes.

#### **LB21. Gambling Motivation and Psychosocial Outcomes for Older Adults: A multi-groups analysis based on impact of age and gender**

**Irene Garrick**, University of Rochester; **Margaret Warner**, Graduate School of Education

With gambling identified as one of the most popular social activities among older adults, and aging baby boomers representing a sharp increase in the number of adults older than 65 years of age, there will likely be a concomitant increase, in the coming years, in the number of older persons counting themselves among those who gamble. Due to the recent emphasis on the marketing of gambling toward senior citizens, newer research has focused on motivation behind gaming activities of older adults and the concern that they may develop a pathological gambling disorder. The majority of studies begin with the assumption that older adults are vulnerable and are thus at-risk for developing pathological or problem gambling due to factors common to later life such as illness, frequent and

multiple loss, boredom, loneliness, and cognitive vulnerabilities such as Alzheimer's disease and other types of dementia. This study challenges the assumption that gambling is inevitably a negative force in older persons' lives and shows that there are some instances when gambling may not be associated with negative outcomes. Results based on an analysis of a secondary dataset using self-determination theory as a framework and Structural Equation Modeling as a quantitative method suggest a strong association between gambling for extrinsic reasons and relationship difficulties and emotional problems for all adults (ages 18+) as well as a lower occurrence of relationship difficulties for older adults (65+) and women who gamble for intrinsic reasons.

## **LB22. Health-Related Quality of Life and Future Care Planning Among Older Adults: Exploring the Role of Hope as a Moderator**

**Jodi Southerland**, Department of Community & Behavioral Health College of Public Health East Tennessee State University; **Jameson K. Hirsch**, Department of Psychology East Tennessee State University; **Deborah L. Slawson**, Department of Community & Behavioral Health College of Public Health East Tennessee State University; **Robert Pack**, College of Public Health East Tennessee State University; **Jeffrey M. Lyness**, University of Rochester Medical Center School of Medicine and Dentistry; **Silvia Sörensen**, School of Medicine and Dentistry University of Rochester Medical Center

Older adults are at increased risk for chronic medical problems and functional impairment, factors which may intensify the need for daily assistance. As such, planning for long-term care needs is an important component of healthy aging. Yet, perhaps due to differences in intrapersonal characteristics, many older adults fail to engage in advanced planning.

We examined the moderating effects of trait hope on the relationship between health-related quality of life (HRQoL) and preparation for future care needs (PFCN), in a sample of 66 older adult primary care patients. Participants completed an assessment of PFCN processes, including awareness, information gathering, decision making, and concrete planning; the SF-36v1 Health Survey; and, the Adult Trait Hope Scale.

At the bivariate level, social, physical, and emotion-based role functioning were inversely related to PFCN and positively related to hope. Multivariate moderation models, covarying age, sex, race, education, illness burden, and functional impairment, indicated that hopefulness, particularly agentic thinking or goal identification, moderated the relationship between those three HRQoL dimensions and PFCN behaviors.

Among those with greater emotion-based role limitations, lower hope was associated with more awareness of risk and information gathering, and less concrete decision making; whereas, among individuals with fewer role limitations and better social and physical functioning, higher levels of hopefulness were associated with increased decision making.

Our results may have implications for both clinical and public health practice. For instance, health professionals should consider patients' intrapersonal characteristics, particularly ability to identify and enact meaningful health goals, when encouraging and developing future care plans.

### **LB23. Interprofessional (IP) Chief Resident Immersion Training (IP-CRIT): Supporting the Triple Aim**

**Jane Mohler**, Arizona Center on Aging; **Conrad Clemens**, University of Arizona College of Medicine; **Amy Waer**, University of Arizona College of Medicine; **Vicki Began**, University of Arizona College of Nursing; **Lisa O'Neill**, Arizona Center on Aging; **Karen D'Huyvetter**, Arizona Center on Aging; **Rebecca Mandel**, Arizona Center on Aging; **Mindy Fain**, Arizona Center on Aging

**Background/Rationale:** The national Chief Resident (CR) Immersion Training Program in the Care of Elders (developed by Sharon Levine, MD and supported by Hartford Foundation, ADGAP and the Hearst Foundation) is targeted to incoming CRs because of their key role in: ensuring safe, high quality care; medical student and resident training; and working with faculty, interprofessional (IP) staff, and patients. A year-long quality improvement (QI) capstone project is part of this curriculum.

**Objectives:** Our objectives were to: 1) make this training interprofessional (IP), and 2) systematically integrate the Institute of Healthcare Improvement's "triple aim" (better health, better healthcare, and lower cost), QI components, and cross-disciplinary collaboration into the CRIT curriculum.

**Methods:** Using an interprofessional (medicine, nursing, pharmacy, social work, quality improvement (QI) and public health) faculty, we: 1) Reviewed all curricular components, building to IP competencies and integrating the triple aim; 2) Used IP faculty as small group facilitators in case-based discussions and mini-lectures; 3) Incorporated our Integrated Health System's QI priorities into CR QI project planning; and 4) Invited key institutional leaders to deliver inspirational talks, embodying the triple aim.

**Conclusions:** Evaluations were positive. We educated CRs about value-based cost-conscious care, and linked them to key interprofessional staff to build team-based care. Together they addressed QI issues identified as important by the Network. Chiefs are now better prepared to train medical students and residents using a team-based, patient-centered approach, and a culture of continual quality improvement. QI projects will continue over the year, and will be evaluated at year's end.

### **LB24. Profit and Performance in Medicare Home Health: Research Results**

**William Cabin**, City University of New York Public Health Doctoral Student

There have been no studies of the relationship of ownership, profitability, and mandated quality outcomes in Medicare home health since the new prospective payment system began in 2000. The present study merges two public Medicare databases with a sample of over 8,000 agencies to address the relationship of ownership to profitability, cost, and quality. Using bivariate analyses, the study finds proprietary agencies are more costly and more profitable than non-profits while producing lower quality.

## **LB25. Seniors in Maryland Adapting Local Communities in New Ways to be in Charge of Their Aging Process**

**Priyanthi Silva**, Westat; **Carol Cober**, Westat; **Cynthia Thomas**, Westat

Baby boomers and other seniors as they age often prefer to continue living within their home community in the environment they are accustomed to. We examined different neighborhoods in Maryland, where the 65+ population has increased by 18.2 percentage points from 2000 to 2010. Seniors in at least 14 different neighborhoods have developed or are in the process of developing “village” programs to provide services and supports to neighbors to enable residents to remain at home despite increasing levels of frailty. Half of these Maryland villages have been in existence for 5 years or less. Village groups within suburban, small town and urban sites have tailored their programs to meet the unique needs of each community. Using telephone and face-to-face interviews with village leaders, we identified factors that help to build and sustain these efforts to age in place. Our initial examination found many similarities as well as differences in the size of areas served, for establishing membership criteria, sources of funding, and range of services offered. The dedicated efforts of strong, leadership many with diverse professional backgrounds and extensive time invested by founders and volunteer board members were critical factors maintaining villages. We developed an initial typology to identify the types of village models. Although the types of resources available in each village varied, all have managed so far to provide social support and promote self-efficacy, and have capitalized on community partnerships.

## **LB26. Standardizing Antibiotic Use in Long-Term Care Settings: The SAUL Study**

**Darcy McMaughan Moudouni**, Texas A&M Health Science Center School of Rural Public Health; **Obioma Nwaiwu**, Texas A&M Health Science Center School of Rural Public Health; **Hongwei Zhao**, Texas A&M Health Science Center School of Rural Public Health; **David Mehr**, University of Missouri Health System School of Medicine; **Elizabeth Frentzel**, American Institutes for Research; **Steven Garfinkel**, American Institutes for Research; **Charles Phillips**, Texas A&M Health Science Center School of Rural Public Health

**OBJECTIVES:** To determine if the Communication and Order Form (Form) for suspected UTIs reduced antibiotic use in nursing homes.

**DESIGN:** A pre- and post-test design with two intervention (Form plus more training, Form plus less training) and one comparison group with post-intervention process evaluations.

**SETTING:** 12 nursing homes in central Texas.

**PARTICIPANTS:** Residents who received an antibiotic for a suspected UTI during the 12 month study period (intervention). Nursing home administrators and staff in the study homes (process evaluation).

**MEASUREMENTS:** Rates of antibiotic prescriptions for suspected ASB and odds of a prescription being written for ASB given resident and home characteristics. Data were modeled using mixed-effect models by intent-to-treat and fidelity.

**RESULTS:** Seventy percent of UTI prescriptions were written in the absence of symptoms (suspected ASB). Resident characteristics did not affect the likelihood that a prescription was written for ASB. Implementation was challenging for intervention nursing homes. When implemented, the Form reduced the number of prescriptions written for ASB (OR = 0.35, 95% CI = 0.16–0.76). The effect was not sustained.

**CONCLUSIONS:** The Form significantly reduced antibiotic prescriptions in study homes that implemented it. Although the intervention reduced unnecessary antibiotic use during the study, it did not become embedded in the everyday operations of the nursing homes and the favorable impact on antibiotic stewardship was not sustained. Without a consistent reason to use the Form, such as a staff champion, nursing home policies, or state regulations, the homes that implemented the Form did not continue to use it.

#### **LB27. The Research and Analysis of Sleep Quality and Influences of Senile Population in Wuhan Area**

**Ling-Yun Wu**, Renmin Hospital of Wuhan University; **Xu Xu**, Renmin Hospital of Wuhan University; **Hong-Mei Ma**, Renmin Hospital of Wuhan University

[Objective] To research about sleep quality of senile population in Wuhan area and analyze the influencing factors. In this research, we may provide some evidences for nursing intervention and health education for the improvement of sleep quality among senile population. [Methods] Using cluster sampling method, we sampled 138 senile individuals to complete the PSQI scale. [Results] The PSQI score of Wuhan senile sample is  $8.78 \pm 4.61$ , in which, 55.80% of the sample ( $n=77$ ) has poor sleep quality. Factors that are significant in affecting the sleep quality include dreams, major life events, medical expanses, etc ( $P < 0.05$ ). [Conclusions] The total state of sleep quality among senile individuals in Wuhan area is low. nurse should intervene on physical and mental health, unhealthy habits in order to promote the target population's sleep quality.

#### **LB28. The Significance of Ethnicity in Saving for Retirement**

**Roberta Adami**, Westminster Business School; **Andrea Carosi**, Bologna University; **Orla Gough**, Westminster Business School; **Anita Sharma**, Westminster Business School

This article investigates savings over the life-cycle of ethnic minorities in the UK. Using data from the Family Resources Survey (FRS) for 1994-2008, the paper analyses the saving profiles of ethnic minorities by gender and age cohorts, starting from the age of 16. A number of socio-economic variables, such as education, income and employment status, are used to better understand saving patterns of ethnic minorities.

When we apply the life-cycle model to the different ethnic groups we find significant heterogeneity between and within groups in terms of socio-economic characteristics and saving accumulation during the working life as well as in retirement. While Indian respondents show socio-economic characteristics and saving patterns similar to our control group (the white population), Bangladeshi and Pakistani respondents are experiencing a significant disadvantage in terms of employment and ability to save.

Gender and ethnicity are important determinants of financial well-being. Asian women, particularly Bangladeshi, exhibit the greatest financial difficulties amongst all groups examined, these are often consequences of low full time employment rates and low incomes.

We find that, for all ethnic groups and both genders, education is a crucial factor in determining saving behaviour. We find evidence that generational differences and demographic factors play a crucial role in ethnic minorities' economic conditions and saving profiles.

The importance of our results lies in determining whether the risk of poverty in retirement is significantly higher for those of ethnic minority background and in assessing specific socio-economic and cultural reasons leading to poverty in later life.

#### **LB29. Trends in Full- and Part-Time Work in Adults 60 and Older**

**Sandra Reynolds**, University of South Florida School of Aging Studies

In light of increasing financial uncertainty, policymakers and financial planners need to have an appreciation for trends in the labor force participation of older workers. In this study, we use 17 years of the Current Population Surveys (1994-2011) to examine trends in both full- and part-time work among adults age 60 and older. Time trends are used to indicate the average annual change ( $n=17$ ) in the proportion of working for men, women, and specific sub-populations (race/ethnicity, education, and income). Individual level analysis, which controls for change in the population composition, is conducted to estimate the probability of working full-time or part-time, compared to not working ( $n=334,844$ ). Results indicate that the proportion of men and women working full-time has significantly increased over the period; significant increases in working part-time are largely found in women age 65 and older. There are similar trends in working full-time for all subgroups, although the trends are strongest in those with high income, and high education; subpopulation trends in working part-time are less consistent than those for working full-time. Individual level analysis confirms that the probability of working full- or part-time increases over time and decreases with age; it also suggests that older Hispanics and adults with high education or high income are the most likely to be working full- or part-time. These findings suggest that retirement policies and retirement planning should both acknowledge and support the desire and, in many cases, need for older adults to stay in the labor force.

#### **LB30. Where Does Self-Efficacy Weigh in?: Diabetes Self-Management and BMI in Middle-Aged and Older Adults**

**Tomorrow Wilson**, West Virginia University; **Julie Hicks Patrick**, West Virginia University

Up to 70% of adults 60 years and older in the United States are considered overweight or obese — an important risk factor for type 2 diabetes (T2D). Given the increase in fat mass, redistribution of body fat, and height shrinkage with older age, middle-aged and older adults are at an increased risk for development of T2D and diabetes complications (Biggs et al., 2010). It has been well established that self-efficacy is positively associated with self-management of T2D. Middle-aged and older adults ( $N = 53$ ) aged 40-66 ( $M = 51$ ,  $SD = 6.7$ ) with T2D were recruited to examine factors related to self-management of

T2D in middle-aged and older adults. Of the sample 24.6% ( $n = 16$ ) were considered overweight and 20% ( $n = 13$ ) were found to be moderately obese. Additionally, results revealed that BMI was associated with self-efficacy ( $r = -.35$ ) and diabetes self-management ( $r = -.41$ ). Lastly, it was found that self-efficacy mediated the relation between BMI and diabetes self-management as confirmed by a Sobel test [ $z = -1.92$ ,  $p = .05$ ]. Results suggest that those with a higher BMI may have lower self-efficacy to manage their diabetes due to perceived inability to maintain a healthy diet or exercise regimen; thus, lower perceived ability and motivation may result in poorer self-management in the future (Bandura, 1982; 2005). Conversely, lower self-efficacy may lead to poorer diabetes self-management and in turn results in higher BMI. Understanding the relation between self-efficacy and BMI has important implications for diabetes self-management interventions.

**Thursday, November 15**

***Biological Sciences Section***

**LB1. A Murine Model of Acute Pancreatitis Exhibiting Age-dependent Mortality, Inflammation and Thrombosis**

**Hiroshi Saito**, University of Kentucky; **Marlene Starr**, University of Kentucky; **Eun Lee**, University of Kentucky; **Arnold Stromberg**, University of Kentucky; **B. Mark Evers**, University of Kentucky; **Daiki Okamura**, University of Kentucky

Acute pancreatitis is a common inflammatory disease affecting >200,000 people annually in the US.

Although the severity and mortality rates of AP are significantly elevated in the elderly population, the underlying mechanisms for this age-dependent vulnerability is largely unknown mainly due to a lack of appropriate animal models. In the present study, we used a murine model of AP and identified pathophysiologies that are distinctive of the aged with AP. AP was induced in young (4-5 months), middle-aged (12-13 months), and aged (23-25 months) C57BL/6 mice by repeated injection of caerulein, a homologue of the gastrointestinal hormone cholecystokinin. Approximately 10% of aged mice died during AP while young and middle-aged mice showed no mortality. Although both young and aged mice exhibited early signs of edema and inflammation in the pancreas, kidney, and lung, young mice showed signs of recovery within 24 h while aged mice exhibited increasingly severe tissue damage and cell death. There was a significant age-dependent increase in pancreatic neutrophil activation and systemic inflammation as assessed by pancreatic myeloperoxidase and plasma interleukin-6 concentration, respectively. Importantly, aged but not young mice with AP showed significantly elevated thrombosis in the lung and kidney as well as a marked increase in plasma concentration of plasminogen activator inhibitor-1, a primary inhibitor of the fibrinolytic system. These results demonstrate that aging is associated with increased severity of AP characterized by augmented and prolonged pancreatic inflammation and also increased cell death and thrombosis in multiple extra-pancreatic organs.

**LB2. Acetaminophen Induced Hepatotoxicity in Male Fischer 344 Rats: The Effect of Aging on Inflammation and Death Associated Proteins**

**John Mach**, University of Sydney and Kolling Institute of Medical Research; **Aniko Huizer-Pajkos**, Royal North Shore Hospital and Kolling Institute of Medical Research; **Alice Kane**, University of Sydney and Kolling Institute of Medical Research; **Brett Jones**, Royal North Shore Hospital, University of Sydney and Kolling Institute of Medical Research; **Victoria Cogger**, Centre for Education and Research on Ageing, University of Sydney and Anzac Research Institute; **David Le Couteur**, Centre for Education and Research on Ageing, Anzac Research Institute, Concord Hospital and University of Sydney; **Sarah Hilmer**, Royal North Shore Hospital, University of Sydney and Kolling Institute of Medical Research

Acetaminophen (APAP)-induced hepatotoxicity is associated with inflammation and opening of mitochondrial membrane permeability transition pores through the intrinsic cell death pathway. We assessed effects of old age on these responses to APAP toxicity. Young (6±1 months) and old (26±2



months) adult male Fisher 344 rats were treated with 800mg/kg APAP (young n=9, old n=9) or saline (young n=8, old n=5) intraperitoneally four hours before euthanasia. Serum alanine aminotransferase (ALT) indicated degree of hepatotoxicity. Serum inflammatory markers (RANTES, IL-6, IL-10, TNF-alpha, MIP1-alpha, GRO-KC, INF-gamma, IL-1b, IL-4, GM-CSF) were measured using Multiplex assays. Kupffer cells were counted on liver sections, and phagocytic activity assessed by recovery of 500nm microspheres after single pass hepatic perfusion. Hepatic expression of intrinsic cell death pathway proteins (BAX, BID) was assessed by immunoblot. Amongst APAP treated rats, despite higher serum APAP concentrations, serum ALT was significantly lower in old than young ( $p < 0.05$ ). Increased hepatocyte survival after APAP toxicity in old age was confirmed in primary hepatocyte culture (young  $54 \pm 12\%$ , old  $83 \pm 3\%$ ). Compared with other groups, APAP treated old rats had higher serum IL-10 ( $p < 0.005$ ). Kupffer cell numbers were higher in old than young controls, but did not differ with treatment. No difference in phagocytic function was observed with age or treatment. Cytosolic BAX and BID were  $>2$  times lower in old than young rats regardless of treatment ( $p < 0.005$ ). Preliminary results suggest that compared to young rats, older rats have decreased susceptibility to APAP-induced hepatotoxicity, a greater anti-inflammatory response and reduced expression of the intrinsic cell death pathway.

### **LB3. CuZnSOD Gene Deletion Targeted to Skeletal Muscle Leads to Loss of Contractile Force But Does Not Cause Muscle Atrophy in Adult Mice.**

**Yiqiang Zhang**, Barshop Institute, The University of Texas Health Science Center at San Antonio; **Susan Brooks**, Institute of Gerontology, The University of Michigan; **Carol Davis**, The University of Michigan; **Anna Kayani**, University of Liverpool; **Yun Shi**, The University of Texas HSC at San Antonio; **Arunabh Bhattacharya**, The University of Texas HSC at San Antonio; **Arlan Richardson**, The University of Texas HSC at San Antonio; **Holly Van Remmen**, The University of Texas HSC at San Antonio

Previous studies from our group have shown that loss of the superoxide scavenger CuZnSOD in mice leads to accelerated loss of muscle mass and contractile force with aging that is associated with elevated oxidative stress, mitochondrial dysfunction, degeneration of the neuromuscular junction and loss of innervation. To dissect the relative role of muscle and neurons in this process, we established a skeletal muscle specific Sod1 knockout (mKO) mouse model with a nearly complete ablation of CuZnSOD protein expression and enzymatic activity restricted solely to skeletal muscle. Although mice lacking Sod1<sup>-/-</sup> in all tissues show significant muscle loss as early as 3 months of age, the mKO mice did not exhibit any muscle loss up to 8 months of age. However, the muscle of mKO mice shows abnormal fiber morphology, with a significant increase in the number of muscle fibers with centrally located nuclei, suggesting increased fiber regeneration. Although there is no muscle loss, muscle function was significantly reduced in the mKO mice as indicated by a decrease in maximum isometric specific force and a reduction in treadmill endurance. Surprisingly, the mKO mice did not have increases in global measures of oxidative stress, elevated ROS production, or induction of adaptive stress responses as reported for muscles of Sod1<sup>-/-</sup> mice. In summary, our data show that lack of CuZnSOD restricted to skeletal muscle does not lead to muscle atrophy, but does significantly impair muscle function in young adult mice. In addition, our data suggest loss of CuZnSOD may potentiate muscle regenerative pathways.

#### **LB4. Impaired Myelin Proteostasis in Diabetes, a Potential Oxidative Stress-Dependent Mechanism of Demyelination**

**Ryan Hamilton**, University of Texas Health Science Center at San Antonio, Departments of Cellular and Structural Biology, Sam and Ann Barshop Institute for Longevity and Aging Studies; **Mike Walsh**, University of Texas Health Science Center at San Antonio, Departments of Cellular and Structural Biology, Sam and Ann Barshop Institute for Longevity and Aging Studies; **Yun Shi**, University of Texas Health Science Center at San Antonio, Departments of Cellular and Structural Biology, Sam and Ann Barshop Institute for Longevity and Aging Studies; **Rochelle Wei**, University of Texas Health Science Center at San Antonio, Departments of Cellular and Structural Biology, Sam and Ann Barshop Institute for Longevity and Aging Studies; **Yiqiang Zhang**, University of Texas Health Science Center at San Antonio, Departments of Cellular and Structural Biology, Sam and Ann Barshop Institute for Longevity and Aging Studies; **Karl Rodriguez**, University of Texas Health Science Center at San Antonio, Sam and Ann Barshop Institute for Longevity and Aging Studies, Departments of Physiology; **Arunabh Bhattacharya**, University of Texas Health Science Center at San Antonio, Departments of Cellular and Structural Biology, Sam and Ann Barshop Institute for Longevity and Aging Studies; **Holly VanRemmen**, University of Texas Health Science Center at San Antonio, Departments of Cellular and Structural Biology, Sam and Ann Barshop Institute for Longevity and Aging Studies, Physiology, Geriatric Research Education and Clinical Center, South Texas Veterans Hea

Diabetic peripheral polyneuropathy is associated with demyelination, reduced nerve conduction velocity and muscle atrophy. Oxidative stress is considered an important contributor to diabetic neuropathy, however, the mechanisms leading to diabetic demyelination are poorly understood. We hypothesize that imbalanced protein homeostasis (elevated protein oxidation and misfolding, impairment of protein degradation, and aberrant aggregation of key myelin proteins) is linked to impaired myelin structure and function in diabetic neuropathy. To test this, we used diabetic leptin receptor deficient mice (dbdb) that display significant decrements in motor/sensory nerve conduction and myelin structure as well as the superoxide dismutase 1 knockout (Sod1<sup>-/-</sup>) mouse model of in vivo oxidative stress. We measured protein carbonyl levels, exposed hydrophobic pockets, aggregated proteins and proteasome/autophagy mediated degradation in sciatic nerves. Both animal models exhibited significant global increases in protein carbonyls and alteration in surface hydrophobic domain exposure in proteins. Also two critical myelination proteins, myelin basic protein (MBP) and peripheral myelinating protein 22 (PMP22) demonstrated elevation of protein carbonyl and formation of higher order aggregates. Sequence-driven hydropathy plot analysis and an in vitro oxidation of PMP22 and MBP support this differential propensity for aggregation and insolubility in dbdb mice. Compromised autophagy and ubiquitin-proteasome pathways likely contribute to this accrual of protein damage and aggregated protein complexes. Taken together, these data strongly suggest that imbalanced maintenance of protein quality control might play a causative role in the impairment of myelin structure and nerve conduction in diabetic peripheral polyneuropathy.

## **LB5. Lower Physical Function is Associated with Brain Network Fragmentation in Older Adults.**

**Christina Hugenschmidt**, Wake Forest School of Medicine, Section on Gerontology & Geriatric Medicine; **Paul Laurienti**, Wake Forest School of Medicine, Department of Radiology; **Satoru Hayasaka**, Wake Forest School of Medicine, Department of Biostatistical Sciences; **Stephen Kritchevsky**, Wake Forest School of Medicine, Section on Gerontology & Geriatric Medicine; **Jeff Williamson**, Wake Forest School of Medicine, Section on Gerontology & Geriatric Medicine; **Chris Wyatt**, Virginia Tech – Wake Forest University, Department of Electrical and Computer Engineering; **Jonathan Burdette**, Wake Forest School of Medicine, Department of Radiology; ,

Older adults with better physical function tend to have better cognitive function as well. However, the neural basis for this relationship is not known. The neurobiology of mobility is highly integrative; regions of the brain involved in planning, movement, and multiple different senses are all involved. Using network science to examine the relationship between physical function and cognition has great promise, as this novel technique provides unique insights into the functional architecture of brain networks. In this analysis, older (n = 48, age ≥ 65) and younger adults (n=26, ages 18-35) from two studies of physical function and cognition completed the Short Physical Performance Battery (SPPB). Older adults were stratified into high (SPPB score: 11-12) and low (SPPB score: 7-9) performers. A modularity analysis was performed on resting functional magnetic resonance imaging data to analyze communities of highly connected brain areas in each group. Two communities were examined: a somatosensory/motor module, important for physical movement, and default mode network module, important for cognitive function. For both modules, it is clear that younger adults exhibit a highly reliable network. Overall, the same network observed in younger adults is evident in high-scoring older adults. However, older adults with low SPPB scores show fragmentation of networks important for both cognition and movement. In addition, maps of network hubs and Global Efficiency (long-range connectivity) were consistently altered in older adults with lower physical function. Network analysis is a new imaging tool with promise to elucidate shifts in functional network architecture associated with physical decline.

## **LB6. Polygenic Risk for Obesity and Early Mortality: A Possible Molecular Signature for Predisposition to Accelerated Aging**

**Daniel Belsky**, Duke University

**BACKGROUND:** Rates of physical decline in aging are highly variable within birth cohorts. Family studies show that these differences are heritable, i.e. influenced by genetics, but molecular genetic signatures of accelerated aging remain elusive. In a life-course developmental perspective, an accelerated aging phenotype emerges early in life as rapid growth during childhood leading to early reproductive maturity; continues in middle life with the early onset of age-related disease; and culminates in later life with early mortality. Adiposity is a critical mediator of these developmental phenotypes, and we have previously shown that a GWAS-derived genetic profile of risk for adult obesity also predicts rapid childhood growth. Therefore, we here investigate this genetic profile as a possible molecular signature of predisposition to accelerated aging.

**OBJECTIVE:** To test whether genetic risks for obesity predict accelerated aging across the life course.

**METHOD:** Atherosclerosis Risk in Communities Cohort (n=15,792) data were used to test genetic associations with timing of reproductive maturity, development of heart disease and diabetes, and early mortality.

**RESULTS:** Cohort members at higher genetic risk exhibited developmental phenotypes of accelerated aging. Women at higher genetic risk reached menarche earlier in adolescence and reached natural menopause earlier in middle life. Cohort-wide, individuals at higher genetic risk more often developed heart disease and diabetes and experienced early mortality. Associations were only partially accounted for by adiposity phenotypes.

**CONCLUSIONS:** We report preliminary evidence for a genetic risk profile derived from GWAS of obesity phenotypes as a molecular signature of predisposition to accelerated aging.

### **LB7. Proposed Wild Blueberry Health Study 7-Tier Protocol to Delay Aging and Alzheimer's**

**Rolf Martin**, MMT Corporation

**BACKGROUND:** The National Institute on Aging Interventions Testing Program now has a number of longevity-extending “hits” in mice that appear ready for evaluation in human trials, including several widely prescribed medicines that have long safety records when administered by personal physicians. Many other published reports of short-term reversals suggest other interventions that appear ready for human trials, with appropriate precautions. Concurrent interventions aimed at seven hierarchic levels appear especially promising.

**METHODS:** Several hundred machine learning algorithms will be used to merge physicians and scientists insight with metabolomics, proteomics and other OMICs data sets and personal cognitive performance results before and after blueberry consumption [cf. patents 6,712,615 and 8,095,480]. With these informatics methods we can vigorously pursue at least some of the health objectives selected by participants and their personal physicians. Our primary 2012-2013 goals are to maximize short- and long-term benefits provided by high polyphenol, high-antioxidant wild blueberries by evaluating different daily amounts and consumption schedules. Following the evaluation of blueberries and positive control interventions (oranges and vitamin C), concurrent interventions to be tested will address changes in (i) key signaling and redox-active ions, (ii) biochemical metabolites (e.g., those related to redox balance, energy metabolism, macromolecular damage and repair), (iii) misfolded hypoactive and also hyperactive and aggregated proteins (by increasing turnover and consuming vitamins and other cofactors to snap at least some proteins back into their active catalytic conformations), (iv) maintenance of organelle functional regions such as lipid rafts, possibly with medium chain length lipids, (iv) damaged organelles (via increased autophagy), (v) the activity of batteries of protective and repair genes (e.g. Nrf2), (vi) the prevalence of senescent cells that by hypothesis drain resources and damage their neighbors, and (vii) inter-organ communication (to optimize circadian rhythms and reduce damaging metabolic pathways e.g. via melatonin, amylin, acarbose).

**RESULTS:** Results to date are those obtained by 2002-2012 Wild Blueberry Health Study participants whose decision speed and memory scores increased significantly (see reports at BlueberryStudy.com). High-intensity cognitive measurements and collection of saliva and serum samples for OMICs analysis has started with a new set of participants who are maintaining power standards set since we began in 2002. Initial funding has been provided by our wild blueberry study budget and donations.

**CONCLUSIONS:** It is now possible at relatively low cost to merge many different OMICs data sets with physicians and scientists insight and to employ megadimensional artificial intelligence methods to achieve personal health goals. Physicians, scientists, businesses and new study participants are invited to contact BlueberryStudy@gmail.com.

#### **LB8. Quantification of Frailty Using Frailty Indices Based On Clinical and Behavioural Data in Ageing Mice: Comparisons with the Frailty Index in Humans**

**Susan Howlett**, Dalhousie University Departments of Pharmacology and Medicine; **Jocelyne Whitehead**, Dalhousie University, Department of Pharmacology; **Barbara Hildebrand**, Dalhousie University, Carleton Animal Care Facility; **Michael Rockwood**, Dalhousie University, Department of Medicine (Geriatric Medicine); **Kenneth Rockwood**, Dalhousie University, Department of Medicine (Geriatric Medicine)

Frailty can be quantified in humans with a frailty index (FI), in which an individual's deficits in health are counted and divided by the total number of items measured. Our objectives were to: 1) develop a novel FI based on the clinical assessment of deficits in ageing mice and compare it with our earlier FI and; 2) compare the relationship between the FI and age in mice and humans. Frailty was quantified in C57Bl/6J mice (6-28 mos) with a behavioural FI (open-field activity levels) and a clinical FI (assessment of 31 physical signs, symptoms and diseases). Both the behavioural and clinical FIs increased markedly with age. Values for the mean clinical FI score increased from  $0.02 \pm 0.02$  in 6 month-old mice to  $0.33 \pm 0.05$  in 28 month-old mice ( $n=10/\text{group}$ ). Similar results were obtained with the behavioural FI ( $0.07 \pm 0.04$  at 6 mos vs.  $0.27 \pm 0.09$  at 28 mos;  $n=10/\text{group}$ ). Human FI scores, calculated from 70 self-report items in the Survey of Health, Ageing and Retirement in Europe were plotted as function of age ( $n=30,025$  people). We normalized age as a percentage of maximum lifespan and plotted FI (natural logarithm) vs. age to quantify the rate of deficit accumulation. The slopes of these lines were virtually identical ( $0.034$  in mice,  $r^2=0.80$  vs.  $0.033$  in humans,  $r^2=0.97$ ). Thus an FI based on clinical measures can be used to quantify frailty in ageing mice. This novel clinical FI exhibits key features of the FI established for use in humans.

#### **LB9. Smaller Myonuclear Domain in Aged Muscle is Associated with Elevated RNA Degradation**

**Esther Dupont-Versteegden**, Div. Physical Therapy, Dept. Rehabilitation Sciences, College of Health Sciences, University of Kentucky; **Aman Shah**, College of Arts and Sciences, University of Kentucky; **Jena Richards-White**, Dept. Rehabilitation Sciences, College of Health Sciences, University of Kentucky; **Amy Confides**, Dept. Rehabilitation Sciences, College of Health Sciences, University of Kentucky

Skeletal muscle mass is decreased with age and with disuse. It is currently unknown whether RNA degradation and changes in nuclear number are associated with muscle atrophy in general, but

particularly in the aged. Therefore, the goal of our study was to investigate whether changes in nuclear number in muscle of aged rats were associated with differences in RNA degradation rates under ambulatory and disuse conditions. Soleus and gastrocnemius muscles of ambulatory and hind limb suspended (disuse) Fisher344/Brown Norway rats, 6 or 32 months, were used to determine nuclear number and RNA degradation rates. Nuclear number was determined by counting nuclei on muscle cross sections, as well as single fibers of soleus; RNA degradation was measured in vitro using the cytosolic fraction of gastrocnemius muscles on RNA from tibialis anterior. Results showed that nuclear number was elevated in aged muscle and did not change with disuse despite a decrease in cross sectional area, resulting in a smaller myonuclear domain in aged as well as disused muscle. Simultaneously, total RNA decay rate was elevated 1.9-fold and total RNA half life was decreased by 49% in muscle of aged rats, while atrophy induced by disuse did not affect RNA degradation rate. These data indicate that a higher nuclear number is associated with an increase in RNA degradation in aged muscle, but not with disuse. Therefore, in aged, but not acutely atrophied, muscle a smaller myonuclear domain may be driven by increased rates of RNA degradation. Supported by APS undergraduate fellowship and AG028925.

#### **LB10. The Transcription Factor Sp1 Is A Master Regulator For The Senescence-associated Functional Nuclear Barrier**

**Sung Young Kim**, Lee Gil Ya Cancer and Diabetes Institute, Gachon University

Hyporesponsiveness to external signals such as growth factors and apoptotic stimuli is one of the cardinal features of the cellular senescence. For which, we have previously reported that aging dependent vast reduction of the nucleocytoplasmic trafficking related (NCT) genes could be responsible. In search of the mechanism, we identified the transcription factor Sp1 as one of the common regulators for control of NCT genes, including various nucleoporins, importins, exportins and Ran GTPase cycle-related genes. The role of Sp1 in control of those genes has been illustrated by reduction of those genes through its knockdown in young human diploid fibroblast cells (HDF), and also by induction of those genes through its overexpression in senescent cells. In addition, the nuclear translocation of p-ERK1/2 as well as Elk-1 phosphorylation on epidermal growth factor stimulation was severely impaired by Sp1 depletion in young HDFs, while Sp1 overexpression restored the nuclear translocation of p-ERK1/2 in senescent HDFs. Furthermore, we observed that Sp1 protein levels were decreased in senescent cells and the treatment of H<sub>2</sub>O<sub>2</sub> decreased Sp1 levels in a proteasome-dependent manner. In addition, O-GlcNAcylation of Sp1 was decreased in senescent cells as well as in H<sub>2</sub>O<sub>2</sub>-treated cells. Taken together, these results suggest that Sp1 could be a key regulator for control of NCT genes and that reactive oxygen species-mediated alteration in Sp1 stability would be responsible for the generalized repression of those genes, leading to formation of the senescence-dependent functional nuclear barrier, resulting in the subsequent hyporesponsiveness to external signals.

## **Health Sciences Section**

### **LB11. Alterations in Gait Patterns in the Frail Elderly During Multitasking**

**Pooja Rajguru**, University of Arizona/Undergraduate Student; **Michael Schwenk**, University of Arizona; **Karen D'Huyvetter**, University of Arizona/AZ Center on Aging; **Jane Mohler**, University of Arizona, AZ Center on Aging; **Maria Garcia**, University of Arizona; **Daniel Badillo**, University of Arizona; **David Armstrong**, University of Arizona/Department of Surgery; **Bijan Najafi**, University of Arizona/Department of Surgery

Background: Gait alterations are associated with frailty and increased fall risk. Body-worn-sensor technology advances gait assessment from extensive laboratory equipment to portable, every day evaluation. Dual-task conditions amplify gait changes and may be useful in frailty screening. This pilot study aimed to detect gait changes related to Fried frailty phenotype, Mini-Mental State Examination (MMSE) and activities of daily living (ADL) functional status.

Methods: Three elderly subjects(ages  $86 \pm 5$  years) were assessed within the patient's homes using validated wearable sensor technology (LEGSys™) during single and dual task conditions. Based on Fried criteria, MMSE, and ADL Barthel Index, subjects were ranked as subject 1: frail, low ADL/MMSE, subject 2: frail, moderate ADL/MMSE, subject 3: pre-frail.

Results: Results show steps for gait initiation (GI), stride velocity (SV), and stride length (SL) as three most important of ten tested gait parameters. GI increased by 300% for subject 1 during dual task. Other parameters showed similar tendency with lower effect size for dual task. GI increased on average 85.7%, SV decreased 21.7%, and SL decreased 8.4% between single and dual task.

Conclusion: Dual task conditions amplify changes in gait, especially within the novel parameter of gait initiation steps. The dramatic dual-task related increase in gait initiation steps might be due to difficulties establishing balance, and/or cognitive deficits associated with frailty. A larger study incorporating patients across frailty, cognitive and functional conditions should be conducted to validate these preliminary findings.

### **LB12. Alzheimer's Patients' and Caregivers' Needs and Preferences for Decision Support Interventions**

**Aubri Hoffman**, Dartmouth Centers for Health and Aging; **Daniel Bateman**, Dartmouth Centers for Health and Aging; **Stephen Bartels**, Dartmouth Centers for Health and Aging; **Robert Santulli**, Dartmouth Centers for Health and Aging; **Kesstan Blandin**, Alzheimer's Association, Massachusetts/New Hampshire Chapter; **Hannah Lee**, Dartmouth Centers for Health and Aging; **Emma Tang**, Dartmouth Centers for Health and Aging

BACKGROUND: Over 5.4 million individuals with Alzheimer's disease and their 14.9 million unpaid caregivers face a series of challenging decisions. These decisions must incorporate both short- and long-term needs; clinical and community services; and personal and familial preferences. As cognition declines, caregivers state that uncertainty about decisions is one of their primary burdens, increasing their anxiety, distress, and depressive symptoms. In over 100 randomized controlled trials, patients'

decision aids have been shown to improve informed decision making and communication. However, few decision aids have been developed for the unique challenges of Alzheimer's families. Therefore, this project sought to survey the needs and preferences of Alzheimer's patients and caregivers across the early, mid, and late stages of disease. **METHODS:** We administered a 14-item questionnaire to 60 care providers, 10 early-stage patients, and 40 caregivers across all stages. Data analyses tabulated the distribution of responses in terms of which decisions are the most difficult at each stage, preferred venue, preferred medium, and preferred resources. **RESULTS:** Patients and caregivers stated that decisions about screening and long term care were most difficult, while providers focused on decisions about end-of-life. Patients preferred brochures and worksheets available at the clinic, while caregivers preferred worksheets and websites that were at home and the senior centers. **CONCLUSIONS:** Differences were observed in the stated needs and preferences of patients and caregivers, suggesting that decision support interventions should be tailored and person-centered.

### **LB13. Do Physical Exposures in Work-life Affect Hand-Grip Strength in Late Midlife?**

**Anne Moeller**, Department of Occupational Medicine, Køge Sygehus. Research Unit for General Practice, Copenhagen. The National Research Centre for the Working Environment

**Aim:** Hand-grip strength (HGS) predicts survival in older populations. Little is known about the influence of physical exposures in work-life on HGS. Some studies have shown a strengthening effect and others a deteriorating effect of manual work on muscle strength. The aim is to study associations between physical exposures in work-life and HGS in late midlife. **Methods:** A population-based retrospective cohort study (The Copenhagen Aging and Midlife Biobank) includes information about job histories and a cross-sectional measurement of HGS in 3843 Danes. Individual job histories were assigned physical exposures from a job exposure matrix containing expert judgments of hours of standing, kilos of lifting and numbers of heavy lifts per day in specific job-groups. Linear regression models were used to examine the effect of a summation of years of exposure (standing-years, ton-years and lifting-years) on late midlife HGS. Relevant confounders (age, height, weight, education, social class, psychosocial work environment, physical activity, alcohol consumption, and smoking) were included in multiple regression models. **Results:** Mean age was 58.91 years (53-64) and 79.2% were males. Handgrip strength was 49.19 kg (SD 8.42) in men and 30.61 kg (SD 5.49) in women. In women no association between physical exposures in work-life and HGS was seen. In men lifting-years were associated with lower HGS but after adjusting for height this association disappeared. In multivariate analyses there were no associations between a summation of physical exposures and HGS. **Conclusion:** This study did not provide evidence that manual work affects hand-grip strength in late midlife.

### **LB14. Educational Interventions to Increase Osteoporosis Knowledge, Health Beliefs, Self-efficacy, Dietary Calcium and Vitamin D Intakes for Prevention.**

**Alexa Evenson**, North Dakota State University; **Jennifer Erickson**, College of Saint Benedict

**Participants:** Undergraduate adults (n=154) ages 18-35, enrolled in an introductory nutrition course participated in the study.



Methods: A Quasi-experimental, pre-post survey design to assess osteoporosis knowledge, health beliefs and self-efficacy was conducted. Three day food diaries were collected to assess dietary calcium and vitamin D intakes.

Analysis: Descriptive statistics, regression analysis and a 3 X 2 repeated measures analysis of variance (ANOVA) were used to analyze the data.

Results: Mean osteoporosis knowledge total scores increased from 56% to 72% in both treatment groups. Increases in osteoporosis related knowledge [ $F(1,149)=110.05$ ,  $p<.000$ ] and health beliefs [ $F(1,149)=11.71$ ,  $p<.001$ ] were significant. Self-efficacy was not significantly different [ $F(1,149)=1.47$ ,  $p<.227$ ]; [ $F(2,149)=2.87$ ,  $p>0.06$ ]. Average dietary calcium and vitamin D intakes were approximately 1060 mg per day and 225 IUs per day.

Osteoporosis health beliefs were a significant predictor of dietary calcium intake ( $p<.044$ ) and vitamin D intake ( $p<.047$ ) which accounted for approximately 11.2% and 10.1% respectively. Self-efficacy was a significant predictor of vitamin D intake ( $p<.01$ ) which accounted for the approximately 7.3% of the variance, however it was not a significant predictor of calcium intake ( $p>.187$ ).

Conclusion: The interventions increased knowledge overall. Both interventions increased osteoporosis health beliefs but did not increase self-efficacy. Current or future nutrition, nursing or health classes that focus on osteoporosis prevention can incorporate either delivery method. Educators can also prepare or enhance prevention programs with either delivery method. Both interventions did not alter behavior significantly perhaps due to calcium requirements already being met and the limited availability of vitamin D containing foods.

#### **LB15. Factors Related to Gerotranscendence in Community-Dwelling Japanese Older Adults: Is Gerotranscendence the Normal Aging Process?**

**Yukie Masui**, Tokyo Metropolitan Institute of Gerontology; **Yasuyuki Gondo**, Osaka University; **Takeshi Nakagawa**, Osaka University; **Madoka Ogawa**, Tokyo Metropolitan Institute of Gerontology; **Yoshiko Ishioka**, Osaka University; **Yukiko Tatsuhira**, Osaka University; **Megumi Tabuchi**, Kwansei Gakuin University; **Hiroki Inagaki**, Tokyo Metropolitan Institute of Gerontology

The theory of gerotranscendence proposes that gerotranscendence is a shift in meta perspective from a materialistic and rational view of the world to a more cosmic and transcendent one that occurs in old age. It is hypothesized that gerotranscendence may be developed by the experience of life crises; however, individuals may experience the development towards gerotranscendence fundamentally in the normal aging process. This study examines whether age or crises in old age, such as deterioration of physical function and contracting diseases, are related to the higher degree of gerotranscendence. A questionnaire survey was administered to assess gerotranscendence using the Japanese Gerotranscendence Scale (JGS) to 1,000 septuagenarians and 973 octogenarians living in Japan. We included the presence of four major chronic diseases, instrumental activities of daily living (IADL), grip strength, and walking speed as physical functioning variables. Regression analysis was conducted using the eight subordinate factors of the JGS as objective variables, and age and the four physical functioning

variables as explanatory variables, while controlling for gender, living situation, socioeconomic status, and interactions with friends and neighbors. The results revealed that age was significantly associated with all the subordinate factors. In six out of eight subordinate factors, age had the most significant impact than any other variables. The impact of the factors related to physical functioning was observed only in limited subordinate factors. These findings are consistent with hypothesis that the development towards gerotranscendence is promoted by the normal aging process, rather than incident impact factors such as diseases and crises.

#### **LB16. Occupational History and Markers of Inflammation in Postmenopausal Women**

**Jolene Lee Masters Pedersen**, University of Copenhagen; **Yuko You**, UCLA; **Igor Burstyn**, Drexel University, **Candyce Kroenke**, Kaiser Permanente Division of Research; **Lorena Garcia**, UC Davis; **Anneclaire J. DeRoos**, Fred Hutchinson Cancer Research Center; **Simin Liu**, UCLA; **Yvonne Michael**, Drexel University

Background: Some studies suggest that unfavorable work conditions are associated with adverse health outcomes; however the mechanisms are not well understood, particularly in women.

Aim: This study explored the relation between types of occupation and markers of inflammation in women aged 50-79 years.

Methods: We analyzed data from the controls in a nested case-control study of the Women's Health Initiative. Five markers of inflammation, C-reactive protein (CRP), interleukin-6 (IL-6), tumor necrosis factor (TNF- $\alpha$ ), soluble intercellular adhesion molecule-1 (sICAM-1), and vascular cell adhesion molecule-1 (VCAM-1) were measured in 2,198 randomly selected women free from diabetes and CVD.

Multivariable linear regression was used to test the association of occupation in four categories (managers/professionals, technical/sales/administration, service/labor, homemaker) with inflammatory markers adjusting for age, marital status and education.

Results: We found that occupations in tech/sales/administration (28%), service/labor (20%), and homemaking (11%) were associated with higher markers of inflammation compared with the manager/professional group (42%) however this was most pronounced among homemakers. Not having paid employment outside the home was significantly and adversely associated with TNF- $\alpha$  ( $p=0.02$ ), sICAM-1 ( $p=0.01$ ) and VCAM-1 ( $p=0.05$ ) but the associations with IL-6 and CRP were insignificant.

Conclusion: Primary occupation as a homemaker was associated with higher levels of TNF- $\alpha$ , sICAM-1 and VCAM-1. While this may suggest that healthy women are selected into the labor force it may also indicate that being a homemaker is associated with exposure to health hazards due to psychosocial or physical demands. The possibility that inflammation mediates unfavorable work conditions and adverse health outcomes merits further investigation.

### **LB17. Relationship of Depressive Symptoms to Aspects of Sexual Health in Older Adults: Impact of Age and Gender**

**Vicki Wang**, Department of Psychiatry, University of California, San Diego and San Diego, Veterans Medical Research Foundation; **Jennifer Ceglowski**, Department of Psychiatry, University of California, San Diego; **Colin Depp**, Department of Psychiatry, University of California, San Diego; San Diego, Veterans Administration Health Care System; **Dilip Jeste**, Department of Psychiatry, University of California, San Diego; San Diego, Veterans Administration Health Care System

**Background:** Many older adults are sexually active and regard sexual activity as an important aspect of life. Depressive symptoms negatively impact sexual health including associations with activity, satisfaction, and dysfunction. Nonetheless, it is unclear which aspects of sexual health are most affected by depressive symptoms and if these associations differ by gender or age.

**Methods:** The Successful Aging Evaluation study of 1,006 community-dwelling adults aged 50-99 included a mail-in survey, with measures of sexual health from the Quality of Sexual Life Questionnaire (QLSQ) and depressive symptoms from the Patient Health Questionnaire. Based on these data, we examined the relationship of sexual health and depression among participants who endorsed having a current partner.

**Results:** A total of 606 participants reported having a current partner. Mean age was 75.1 years (12.2). Severity of depressive symptoms was related to all QLSQ items; strongest associations were with poor relationship quality, low desire, and rejecting overtures. Older, compared to younger, individuals showed lower desire, frequency, and less discussion of sex. Women reported lower desire and higher frequency of rejecting sexual overtures than men. The relationship of depression and sexual health did not generally differ by age or gender, except that depression was more related to rejection of sexual overtures among men ( $r(357)=0.16$ ) than women ( $r(129)=0.06$ ).

**Conclusion:** Sexual health was strongly and broadly related to depressive symptoms, and these associations were largely consistent across ages and gender. Depression was most associated with poor relationship quality, low desire, and rejecting overtures, the latter particularly among men.

### **LB18. Talking about Childhood: Past Patterns of Discourse Predict Current Coping Strategies & Weight**

**Anne Bichteler**, Department of Human Development & Family Sciences, The University of Texas at Austin; **Deborah Jacobvitz**, Professor and Chair, Department of Human Development & Family Sciences, The University of Texas at Austin

This study analyzed whether features of adults' speech describing their childhood experiences predicted current health behaviors and outcomes 18 years later. We hypothesized that people who tended to minimize past painful experiences by discounting their importance, idealizing their parents, and claiming highly independent and normal childhoods (i.e. dismissing speakers) would endorse using approach-type coping strategies because of a tendency to emphasize personal strength but would show worse health effects and overweight across their lifespan because of a propensity to avoid their stressors.

The 47 primarily white, middle-class women are currently aged 39-62, and part of the eighth wave of an ongoing longitudinal study of 104 first-time parents begun in 1994, when their speech was assessed using the semi-structured Adult Attachment Interview (Main, Goldwyn, & Hesse, 2003). The current follow-up survey includes self-reported coping strategies on the Brief C.O.P.E (Carver, 1997), height, weight, waist circumference, and hip circumference. The weight outcome was the product of subjects' waist-to-hip ratio and BMI (WHO, 2008).

As expected, active coping ( $b=-1.74, p<.05$ ) and acceptance coping ( $b=-1.65, p<.01$ ) are associated with decreased weight. Unexpected was the finding that dismissing speakers (vs. secure speakers) do not endorse these approach-type strategies ( $b=-.87, p<.05$  and  $b=-1.70, p<.001$ , respectively). In fact, they endorse less coping overall ( $b=-10.45, p<.01$ ). When the dismissing classification is interacted with total stressful life events, the variation in weight explained is large ( $b=1.2, p<.05, r^2=.43$ ). We theorize that dismissing adults do not have an expectation that problem-focused coping is effective. Rather, when bad things happen, they turn to food.

#### **LB19. Trajectories of Fatigue – the Predictive Value for Ischemic Heart Disease in Older Adults**

**Anette Ekman**, Section of Social Medicine, Department of Public Health, University of Copenhagen, Denmark Danish Aging Research Centre (DARC), University of Aarhus, Odense and Copenhagen, Denmark; **Minna Mänty**, Section of Social Medicine, Department of Public Health, University of Copenhagen, Denmark Centre for Healthy Aging (CESA), Faculty of Health and Medical Sciences, University of Copenhagen, Denmark; **Kaare Christensen**, Danish Aging Research Centre (DARC), University of Aarhus, Odense and Copenhagen, Denmark Unit of Epidemiology, The Danish Twin Registry, University of Southern Denmark, Odense, Denmark Department of Clinical Genetics, Odense University Hospital, Odense C; **Kirsten Avlund**, Section of Social Medicine, Department of Public Health, University of Copenhagen, Denmark Danish Aging Research Centre (DARC), University of Aarhus, Odense and Copenhagen, Denmark Centre for Healthy Aging (CESA), Faculty of Health and Medical Sciences, U

Fatigue measured at one point in time has been shown predictive of ischemic heart disease (IHD) in healthy middle-aged men and older adults. The purpose of this study was to study the predictive value of both intermittent and sustained fatigue for IHD in older adults.

In total 1681 older adults aged 70+ years, who at intake had no indication of heart diseases and mobility disabilities were followed for 10-16 years. Depending on loss to follow-up, fatigue was measured at 1-3 successive study waves. Following the last study wave of participation, incident IHD was tracked through registers. Cox Proportional Hazard Models were used to estimate the predictive value of fatigue for IHD in groups who participated in one or two study waves. Within the group attending all three study waves the predictive value of both intermittent and sustained fatigue for IHD was estimated.

Both intermittent and sustained fatigue was predictive of IHD among participants who attended all three study waves with indication of sustained fatigue being a stronger predictor of IHD than intermittent fatigue (HR=2.24 95%CI: 1.11-4.51 and HR=1.40 95%CI: 0.97-2.02, respectively). Fatigue predicted IHD in participants attending two study waves (HR=2.20 95%CI: 1.09-4.46), however, fatigue did not predict IHD among participants who only attended one study wave (HR=1.19 95%CI: 0.59-2.41).

It is suggested that both intermittent and sustained fatigue is predictive of subsequent IHD and may be a useful screening tool for identification of individuals at risk of ischemic heart disease.

#### **LB20. Using EMG Frequency Analysis and fNIRS to Assess the Cortical Demand of Walking In Older Adults**

**David Clark**, Malcom Randall VA Medical Center and University of Florida; **Evangelos Christou**, University of Florida

Control of coordinated motor tasks, including walking, becomes less automatic with old age. There is increased use of cortical processing resources, which may threaten the safety of walking due to competition between the demands of motor tasks and the demands of other information processing tasks. This is particularly true during community ambulation in which walking conditions are often challenging. We use two approaches to quantify cortical demand during walking: frequency-based analysis of surface electromyography (EMG) and functional near infrared spectroscopy (fNIRS). With EMG, synchronous activity in the 30-60Hz frequency band is indicative of the corticospinal contribution to muscle activation. With fNIRS, modulation of oxygenated hemoglobin is associated with cortical activation. Seventeen healthy older adults participated in our study. Each individual performed four different walking tasks: normal walking, fast walking, cognitive dual-task walking, and walking plus taking occasional longer steps. EMG was recorded from soleus and gastrocnemius. In a subset of participants, fNIRS was recorded over the left and right pre-frontal cortex. EMG synchrony revealed that corticospinal drive was reduced during dual-tasking, unchanged during fast walking and increased when walking with long steps. fNIRS revealed that pre-frontal cortical activity was heightened during dual-task walking but unchanged during fast and long step walking. The results of this study demonstrate the utility of non-invasive recordings of physiological signals to assess the cortical demands of different walking tasks in older adults. Our future research will assess how cortical demand during challenging walking tasks affects community ambulatory function with aging.

#### ***Research, Education, and Practice Committee***

#### **LB21. A Profile of Successful Aging, Brain Health Knowledge, Depression and Social Support in Assisted Living Residents**

**Meredith Troutman-Jordan**, University of North Carolina, Charlotte; **Mary Nies**, Idaho State University

Impaired functionality, decreased independence, and multiple medical problems, place older adults in assisted living communities (ALCs) at risk for decreased participation in health promotion activities, poorer social support and unsuccessful aging. Little research exists exploring successful aging in ALC residents. This study examined features of well-being-successful aging, brain health knowledge, depressive symptoms, and social support among residents of eight ALCs. Participants completed a demographic form, the Brain Health Questionnaire, the Centers for Epidemiologic Studies Depression Scale, the Successful Aging Inventory, and the Lubben Social Network Scale. Brain Health Questionnaire scores ranged 0 to 17 ( $\mu=13.07$ ,  $SD=2.22$ ). CESD scores ranged from 0 to 48 ( $\mu 12.02$ ,  $SD = 8.84$ ). Brain health knowledge findings revealed a difference between races exposing a significantly lower ( $p < .019$ )

brain health score in Black participants ( $\mu=12.38$ ,  $SD=2.95$ ) compared to their Whites ( $\mu= 13.29$ ,  $SD=1.92$ ). Scores for depressive symptoms in White participants was 11.89 ( $SD=11.89$ ), and for Black, 12.43 ( $SD= 8.10$ ). There was no significant difference in income levels ( $p\leq .626$ ), education ( $p< 0.897$ ), or depressive symptoms ( $p < 0.732$ ) between races. The mean SAI score was 64.05 (s.d.10.79), and SAI scores ranged from 30-80. There were no significant racial SAI differences. The mean LSNS-R score for all participants was 30.44 with no significant differences observed among subgroups classified by age, race, gender, or health status. Higher levels of social support were positively correlated with higher levels of successful aging. The sample tended to have high scores on successful aging, low scores on depression (few depressive symptoms).

### **LB22. An Interdisciplinary Educational Approach to Oral Health Care in the Geriatric Population Improves Knowledge and Leads to Change in Patient Care.**

**Patricia Bonwell**, Virginia Commonwealth University School of Dentistry Dental Hygiene Program, Department of Oral Health Promotion and Community Outreach; **Pam Parsons**, Virginia Commonwealth University, School of Medicine, Department of Internal Medicine; **Al Best**, Virginia Commonwealth University, School of Dentistry, Faculty Research Development; **Sabrina Hise**, Virginia Commonwealth University, School of Dentistry, Dental Hygiene Program, Department of Oral Health Promotion and Community Outreach

Five in-service training sessions and one half-day seminar, yielded results that support the use of an interdisciplinary educational approach to oral health care in the geriatric population. The target population consisted of students and professionals from: nursing, occupational therapy, medicine, dietitians, dentistry, pharmacy and nursing home administration.

At the five in-service training sessions and the half-day educational seminar, 5 speakers presented: 1) Periodontist focused on the basic concepts of the oral-systemic relationship, 2) Oral pathologist covered basics of what and how to look for unusual oral pathology, 3) Dentist with a pharmacology background addressed the basics of the oral health-pharmacological link, 4) Dietitian addressed the oral health-dietary link, and 5) Occupational therapist provided instruction on the provision of proper oral hygiene care and how to practice proper oral hygiene techniques.

From the five in-service sessions, t-test results revealed a significant improvement in post-test scores for all sessions except the session presented by the Occupational Therapist. Eighty-eight percent of the participants indicated that they would make a change in their practice.

From the half-day seminar, t-test results revealed a significant improvement in post-test scores. Seventy-nine percent of the participants indicated that they would make a change in their practice. Participants in the live-webinar of the half-day seminar revealed a higher post-test score average.

Results indicate that the in-service training sessions and in-person seminar/live webinar supported development of the geriatric work force by utilizing a multidisciplinary approach which will assist in meeting the oral health care needs of the geriatric population.

### **LB23. Cognitive function among elderly of West Bengal, India**

**Moumita Maity**, Calcutta University, Ph.D. student; **Barun Mukhopadhyay**, Indian Statistical Institute, Kolkata. Professor

A substantial proportion of the world's elderly population resides in the developing countries. It is noted that there has been an increase in longevity for these elderly and as a consequence their health profiles have changed, including higher prevalence of age related neurological disorder like dementia. In India, community based studies on cognitive impairment and associated lifestyle factors are very few and such studies in the eastern part of the country is virtually lacking.

In view of the above, a comparative profile of cognitive function between urban and rural elderly of West Bengal, India, has been reported in the present study. The study has also been purported to identify the role of socio-demographic factors on cognitive function.

Mini Mental State Examination (MMSE) was canvassed for collection of data on cognitive function from a sample of urban and a rural elderly population. The study sample includes 381 elderly of both sexes, taken from both urban (176) and rural (205) settings in the Indian State of West Bengal with an age range of 65 to 79 years (mean age 70.6 years).

Results of the study indicate that the cognitive impairment is significantly higher among the rural elderly than their urban counterparts, irrespective of sex. The results also demonstrate that more adversities in cognitive function occur in female gender, irrespective of area of residence. Logistic regression model reveal that sex, family size, family earning, total number of children and occupation are the significant predictors of cognitive impairment in the study population.

### **LB24. Disclosure of Depression Diagnosis among Latino Older Adults**

**Dahlia Fuentes**, School of Social Work, University of Southern California; **Maria Aranda**, School of Social Work, University of Southern California

Although the disclosure of mental illness to family or friends is positively related to social support, self esteem, and quality of life, nondisclosure (concealment) is prevalent. Stigma has long been attributed to concealment of mental illness. However, not all mentally ill persons internalize stigma. Thus decisions to conceal or disclose may be influenced by other factors. This study aims to: (1) identify what influences older Latinos' decision to disclose or conceal their depression diagnosis; and (2) examine their process of disclosure. Semi-structured interviews were conducted with 35 older Latinos (60+ years) participating in a randomized behavioral trial to treat severe depression. Participants were asked to identify what influenced their decision to disclose or conceal their depression to individuals that provide them with social support, and to describe how they disclosed their depression. Recordings and transcripts were analyzed using grounded theory approach. The fear of burdening or worrying others emerged as a prominent reason for depression concealment, and stigma was described primarily by male participants. Disclosure occurred to help others going through similar experiences (altruism), to feel desahogo (relief, catharsis), and to garner support. The disclosure of depression involved direct and indirect processes.

Depression was primarily disclosed through description of symptoms and round-about conversations about doctor visits and depression medications. Some relied on communication between members of their support network. Research incorporating the emic perspective can inform the development of culturally-sensitive strategies, which can be used in various care settings to support older Latinos faced with the dilemma of depression disclosure.

#### **LB25. Exploring the Experience of Nostalgia at a Miami Cuban American Event**

**Rose M. Perez**, Fordham University

Although the U.S. is a country of immigrants, the experience of leaving a homeland has not been studied extensively. Cuban American exiles began arriving in the U.S. after the 1959 revolution, presumably temporarily until Cuba's unstable political situation settled. Yet, over 50 years later, they remain in exile mourning their lost homeland. The 2011 Cuba Nostalgia annual event in Miami, FL, where thousands of primarily older Cubans congregate to relive aspects of pre-1959 Cuba, served as the setting for a study of the experience of leaving Cuba and of their incessant nostalgia. Using a phenomenological framework, 10 older adults (65+) who left Cuba between 1959 and 1979 were recruited at the event and interviewed for 60+ minutes at the Miami Expo Center, where the event took place, or in their homes, depending on their preference. The exploration of themes about leaving the island and adapting to life in exile reveal ever-present memories of Fidel Castro's betrayal, hardships and pain of a necessary but not desirable departure (e.g. family separation, material and other cultural loss) and a persistent irresolvable longing to recapture countless aspects of an idyllic lost paradise. Although participants showed a generally positive adaptation to U.S. life and gratitude to their host country, they also felt betrayed by the Kennedy Administration during the Bay of Pigs fiasco. This study advances an understanding of enduring nostalgia and reminiscences of a lost homeland that can inform work with other displaced populations. Implications for practice and research based on findings are discussed.

#### **LB26. Gender Satisfaction Among Women Aging With Paralytic Polio**

**Janiece Walker**, The University of Texas at Austin, School of Nursing; **Tracie Harrison**, The University of Texas at Austin, School of Nursing, 2011-12 APSA Health and Aging Policy Fellow

Doing gender is theorized to occur when a person performs to society's role expectations as a male or female. Researchers have shown that satisfaction with gendered outcomes among women improve after age 55. However, chronic disabling conditions may alter women's interpretation of their ability to perform their gender in previously effective ways, which may lessen their satisfaction with their gendered performance. The first step in our investigation of how women perceive the impact of disability on doing gender in the context of older age was to develop a tool to measure the construct.

**Purpose:** The investigators developed and psychometrically tested the Gendered Outcome Scale among older women aging with the effects of paralytic polio.

**Sample:** The sample consisted of 286 women ranging in age from 55-83 years, 76% of the women had children, 86% were never married, and 68% were non-Hispanic White.



Analysis: Descriptive statistics, Pearson's Correlations, and reliability tests were used.

Findings: The Cronbach alpha for the newly developed five-item scale was .89. There was a significant relationship between age and functional limitations with gendered outcomes. The younger women in this sample had higher satisfaction with gendered outcomes

[ $r(284) = -.185, p < .01$ ], however an increase in functional limitations was indicative of less satisfaction with gendered outcomes [ $r(284) = .169, p < .01$ ].

Conclusion: Data suggest that the Gendered Outcome Scale is valid and reliable. The scale performed as hypothesized. Further work is needed to test the model using a diverse aging population of both men and women.

### **LB27. Monitoring Dementia with SCRABBLE: An Autogerontological Experiment**

**Merle Broberg**, Associate Professor, Emeritus, Graduate School of Social Work and Social Research, Bryn Mawr College, Bryn Mawr, PA; **Dolores Broberg, PhD**, University of New England of Osteopathy, Standardized Patient

**PURPOSE:** This self-study explores the use of SCRABBLE (Selchow and Righter, 1948, now a HASBRO Product) to monitor maintenance of cognitive capability in an individual with mixed dementia (vascular and Alzheimer's). **METHODS:** Features of scores chosen, by long play experience, to represent Luck of the Board (wins) and Cognitive Skills (average spread between player scores) were charted and examined. It was posited that Luck of the Board would take random shape and that change in Cognitive Skills would exhibit direction. **RESULTS:** Charted wins fluctuated randomly, as expected. The pattern of spread between player scores seemed influenced by Learning the Game, a Cognitive Skills variable. The charted curve indicated that both players learned. **IMPLICATIONS:** SCRABBLE may provide a longitudinal measure for monitoring cognitive capability in a person with dementia. It may help detect changes, signaling the need to modify medication and/or other support services. Stimulation and empowerment may be additional therapeutic benefits of play. This demonstration of self-study by the author is a sequel to his editorial in THE GERONTOLOGIST suggesting that autogerontology can be a productive activity for aging gerontologists (XXX, 12:3, Autumn, 1972). **Key Words:** Alzheimer's, dementia, autogerontology; monitoring; longitudinal measurement.

### **LB28. Piloting a Usability Evaluation for Healthcare Providers**

**Kimberly Shea**, University of Arizona, College of Nursing

Assistance for older adults is often connected with the use of technology. Well-meaning healthcare providers may recommend this type of assistance, however, physical and/or experiential limitations can cause the older user to become quickly frustrated, discontinue use or experience unintended consequences. A usability evaluation that guides the provider to appraise an interaction between technology and user is an important step in successful goal achievement. Usability evaluations are

commonly performed on prototypes prior to manufacturing or marketing. Unfortunately the evaluation does not include all types and ages of users so many items are put on the market and approved that may be incompetent or even deleterious for certain users. This presentation will display a piloted 6-step usability evaluation for healthcare providers that are based on principles used by design engineers with additional incorporation of healthcare and geriatric individualization knowledge. Use of the evaluation affords the healthcare provider a basis for determining if the technical application will be usable in its present form, need adaptation, or not work for the older adult to obtain a desirable goal. Pilot results from 40 entry-level nursing students (9 groups) at the University of Arizona, College of Nursing find that a medication administration device designed to assist older adults is not only unusable but potentially dangerous with certain limitations. Pilot results, recommendations and clinical uses will be discussed.

### **LB29. Prevalence Rates of Quantitative Measures: A Content Analysis of Trends in Social Gerontological Research**

**Melinda Heinz**, Iowa State University; **Peter Martin**, Iowa State University

This study assessed which quantitative measures were most popular in gerontology research published in the *Journal of Gerontology, Social Sciences* by conducting a content analysis over a five year period (2007-2011). A total of 183 articles were analyzed and 635 quantitative measures were used in those articles. The most popular measurement categories included older adult functional status and health. Surprisingly, many measures were self-constructed by the authors and were not well established measures in the field. However, two “gold standard” measures did emerge from this study and were used most frequently in their respective domains. The Center for Epidemiologic Depression Scale (CES-D, Radloff, 1977) emerged as a “gold standard” in the depression domain and the Personal Mastery Scale (Pearlin & Schooler, 1978) emerged in the psychological well-being domain. Future research should assess other published gerontology research in order to understand whether or not these findings are an accurate representation of popular quantitative research measures.

### **LB30. Self-Esteem Mediates the Relationship between Volunteering and Depression for African American Caregivers**

**Huei-Wern Shen**, School of Social Work, University of Missouri - St. Louis; **Joseph Pickard**, School of Social Work, University of Missouri - St. Louis; **Sharon D. Johnson**, School of Social Work, University of Missouri - St. Louis

**Background:** Previous research on caregivers of older people indicates that volunteering can serve as a buffer for depression. However, it is unclear if this relationship holds for African American caregivers. This study is guided by Role Accumulation Theory, and we hypothesize that for African American caregivers there will be 1) a negative relationship between volunteering and depression, and 2) that self-esteem mediates the relationship between volunteering and depression.

**Methods:** Data are from the 2002 Black Rural and Urban Caregivers Mental Health and Functioning study, a cross-sectional study of 521 mid-western African American female family caregivers. Using scores on the 20-item Center for Epidemiologic Studies Depression scale (CES-D) as the dependent

variable, we perform a series of OLS multiple regressions to determine if volunteering has a direct effect on depression and whether self-esteem mediates the relationship of volunteering to depression.

Results: Regression results indicate that those who volunteer have significantly less depressive symptoms ( $p=.05$ ), and volunteering is associated with self-esteem ( $p=.006$ ). However, the relationship of volunteering to depression is not significant when self-esteem is added to the model ( $p=0.33$ ) signifying that self-esteem may mediate the relationship between volunteering and depression.

Discussion: Both hypotheses are supported, adding clarity to the relationships among volunteering, self-esteem, and depression for African American female caregivers. Increasing caregivers' self-esteem through volunteering could be helpful for reducing depression. In addition to the support services that are already available for care providers, policy makers are encouraged to consider the role of volunteering in efforts to further promote mental well-being.

### **LB31. The Predictive Relationship of Emotional Intelligence to Late Life Depression in the Independent Community Living Elderly**

**Patricia Inglese**, Walden University

Depression is a leading contributor to global disability and a significant public health concern. While the hallmark symptom of depression is sadness, depression in older adults, called late life depression (LLD), frequently presents without sadness. The distinct symptomology, in addition to the common challenges of aging, hinder identification and treatment of LLD. Emotional Intelligence (EI) refers to the capacity to identify, use, understand and manage emotional information to enhance life outcomes. While research suggests that lower EI is related to higher levels of depression, the elderly are significantly underrepresented in these studies. Based on a theoretical framework consisting of emotional intelligence theories, and cognitive theories of depression, it was hypothesized that EI would significantly predict LLD. A sample of 106 independent community living Americans from 65 to 90 years old completed the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT), the Trait Emotional Intelligence Questionnaire – Short Form (TEIQue), ability and trait EI measures, and the Geriatric Depression Scale (GDS). Pearson correlations revealed significant relationships between trait and ability EI, medical comorbidity, age and depression. Regression analysis indicated that EI significantly predicted LLD beyond age and medical comorbidity, with the TEIQue accounting for an additional 12% of sample variance and the Emotional Reasoning area of the MSCEIT (MSCEIT-RA) accounting for an additional 5% of sample variance. EI can help in identifying elderly at risk for LLD and provide the foundation for a non-pharmacological treatment option for LLD, which could help stem the burgeoning healthcare crisis due to the aging baby boomers generation.

**Friday, November 16**

***Biological Sciences Section***

**LB1. Aging-induced Changes in Angiotensin II: Induced vasomotor responses and AT1 -receptor expression**

**Zoltan Vamos**, Department of Pathophysiology and Gerontology, University of Pecs; **Peter Cseplo**, Department of Pathophysiology and Gerontology, University of Pecs; **Ivan Ivic**, Department of Pathophysiology and Gerontology, University of Pecs; **Peter Toth**, Reynolds Oklahoma Center on Aging, Department of Geriatric Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, OK; **Zoltan Ungvari**, Reynolds Oklahoma Center on Aging, Department of Geriatric Medicine, University of Oklahoma Health Sciences Center, ; **Akos Koller**, Department of Pathophysiology and Gerontology, University of Pecs, Departemtn of Physiology, New York Medical College

Angiotensin II (Ang II) plays an important role in the regulation of vascular resistance and blood pressure, yet aged-dependent changes of the vascular renin-angiotensin system are less clear. We hypothesized that aging augments the constrictor responses to Ang II due to increased AT1 receptor signaling.

Contraction of carotid arteries isolated from newborn (8 days: 8d), young (12 month: 12m) and old (30m) rats were measured to administration of Ang II. Administration of Ang II was repeated to characterize tachyphylaxis (decreasing magnitude) of the vasomotor response. To assess the expression of AT1 receptors mRNA level was determined by real time RT-PCR.

The Ang II-induced constriction increased ( $p < 0.05$ ) from 8d to 12m, than it decreased to 30m. The second administration of Ang II showed similar pattern. Compared to the first administration, the constriction to 2nd administration of Ang II decreased as a function of age. In line with the functional observations, AT1-receptor expression increased from 8d to 12m than it decreased to 30m. Ang II-induced vasomotor responses showed age-dependent changes, exhibiting an inverse "U shape": constriction increased in young, then decreased in vessels of old animals. Tachyphylaxis of vasomotor responses to Ang II increased with age.

Thus we propose that these functional changes are in part, due to age-dependent changes of AT1-receptor expression.

Supported: Hungarian National Science Research Fund-OTKA T-048376, American Heart Association Founders Aff., 0555897T and Hungarian Society of Hypertension 2010/2011.

**LB2. Chaperone-facilitated Protection Of Proteasome Function In The Long-lived Naked Mole-rat**

**Karl Rodriguez**, Sam and Ann Barshop Institute for Longevity and Aging Studies/University of Texas Health Science Center, San Antonio; **Anson Pierce**, University of Texas Medical Branch Galveston/Mitchell Center for Neurodegenerative Diseases, Department of Biochemistry and Molecular Biology; **Pawel Osmulski**, University of Texas Health Science Center San Antonio/Barshop Institute for

Longevity and Aging Studies, Department of Molecular Medicine; **Maria Gaczynska**, University of Texas Health Science Center San Antonio/Barshop Institute for Longevity and Aging Studies, Department of Molecular Medicine; **Rochelle Buffenstein**, University of Texas Health Science Center San Antonio/Barshop Institute for Longevity and Aging Studies, Department of Cellular and Structural Biology, Department of Physiology

Proteasome-mediated proteolysis in liver homogenates is three-fold higher in the long-lived (32yr) naked mole-rat (NMR). This rodent exhibits a markedly attenuated aging profile and pronounced resistance to endogenous (i.e. ROS) and environmental (i.e. pesticides) stressors when compared to that of short-lived mice. Moreover, the NMR proteasome is also resistant to common proteasome inhibitors, requiring 15 to 20 times higher concentrations than do mouse samples in order to completely ablate chymotrypsin-like activity. These traits may facilitate effective maintenance of protein homeostasis in the longer-lived rodent. We therefore questioned if these observations reflect inherent properties of the NMR proteasome or the cellular microenvironment. After partially purifying both mouse and NMR proteasomes we swapped the supernatant from each species and evaluated proteasome activity and resistance to inhibitors. NMR supernatant conferred inhibition resistance on mouse proteasomes, while mouse supernatant reduced NMR proteasome activity. Furthermore, NMR supernatants had markedly higher protein levels of several heat-shock proteins (HSPs). In particular, HSP70, as part of a high molecular weight complex, was shown to be strongly associated with the inhibition resistance phenotype, possibly binding to the 26S proteasome itself. This elevated HSP profile may contribute to the observed interspecies differences in proteasome function, better protein quality control, and ultimately sustained good health in old age. Molecular chaperone networks likely play a key role in stress resistance and proteins homeostasis of long-lived animals and may contribute to protracted good health and extended longevity.

### **LB3. Effects Of Macronutrient Balance On Cardiovascular Health And Aging**

**Aisling McMahon**, ANZAC Research Institute, University of Sydney, Centre for Education and Research on Ageing, University of Sydney, Charles Perkins Centre, University of Sydney; **Samantha Solon**, ANZAC Research Institute, University of Sydney, Centre for Education and Research on Ageing, University of Sydney, Charles Perkins Centre, University of Sydney, School of Biological Sciences, University of Sydney; **J William Ballard**, School of Biotechnology and Biomolecular Sciences, University of New South Wales, **David Raubenheimer**, Institute of Natural Sciences, Massey University, Albany, New Zealand; **Stephen Simpson**, Charles Perkins Centre, University of Sydney, School of Biological Sciences, University of Sydney; **David Le Couteur**, ANZAC Research Institute, University of Sydney, Centre for Education and Research on Ageing, University of Sydney, Charles Perkins Centre, University of Sydney

Caloric restriction (CR) has been reported to extend lifespan in a number of species. We report here the effects of dietary energy and macronutrient manipulation and show that low energy diets had an adverse effect on lifespan in ad libitum fed mice. Using the 'Geometric Framework', a 3D experimental design, we evaluated the effects of 25 different diets of low (L), medium (M) and high (H) energy densities with fixed protein: carbohydrate: fat (P:C:F) ratios in a large scale longevity study.

Analysis of individual macronutrient intake showed that protein intake was tightly regulated across the groups at ~ 10 kJ/d. Prioritization of protein intake resulted in over- or under-consumption of carbohydrate and fat, regardless of total energy intake. Mice fed low-energy diets displayed a significant increase in systolic blood pressure at age 12 months (L:125±11, M:115±9, H:111±9 mmHg;  $p < 0.0001$ ) and had poor survival at age 24 months, despite consuming 30% less energy than mice receiving H diets and 15% less energy than those receiving M diets. Furthermore, when median lifespan was analyzed according to P:C ratio, it revealed an inverse correlation. This suggests that CR by dietary dilution does not extend lifespan, and that P:C ratio might be a more important determinant of longevity.

Long term CR is not feasible for the majority of humans, however, manipulating the balance of macronutrients without necessitating a reduction in calories may be a more successful strategy to target metabolic syndrome and aging.

#### **LB4. Late-life treatment with rapamycin, but not intermittent feeding (IF), maintains soleus muscle mass in aged rats.**

**Christy Carter**, University of Florida; **Stephanie Wohlgemuth**, University of Florida; **Andrew Judge**, University of Florida; **Christiaan Leeuwenburgh**, University of Florida

Rapamycin treatment is perhaps the most robust longevity-inducing calorie restriction mimetic studied to date; however the impact on health-span is less well understood. The purpose of this pilot study was to assess the timing of IF vs. rapamycin treatment on skeletal muscle mass in adult (10 month) and aged (24 month) rats.

At each age, male Fischer x Brown Norway rats were randomized to receive either IF feeding (ad libitum access to food every other day) or an every other day injection of rapamycin (1 mg/kg, i.p.) for four weeks. Percent change in food intake and body weight were calculated across the experimental timeline. At the end of the study, the extensor digitorum longus (edl) and soleus muscles were dissected and weighed.

There was a treatment x age interaction for % change in body mass ( $p = 0.019$ ). Older animals, whether treated with IF or rapamycin lost a similar amount (11-13%); whereas IF treated adults lost significantly more than those receiving rapamycin (16 vs 11 %, respectively).

We observed a main effect of age such that older animals had larger muscle mass than adult (soleus:  $p = 0.015$ ; edl:  $p = 0.04$ ). There was a main effect of treatment in soleus ( $p = 0.038$ ) but not edl muscle ( $p = 0.28$ ). Specifically, both treated adult groups maintained muscle mass, although the IF animals experienced greater weight loss. In the older animals, IF and rapamycin-treated animals demonstrated equivalent body weight loss yet the rapamycin animals maintained a larger muscle mass relative to IF and controls.

We conclude that IF is more detrimental to skeletal muscle mass loss in older animals and rapamycin is protective in the context of weight loss. Potential metabolic adaptations are discussed.

## **LB5. Life History Of Cognate Antigen Exposure Indicates Skewing Of Mucosal B and T Cell Populations During Aging**

**Samrat Moitra**, School of Biological Sciences, Illinois State University; **Byron Heidenreich**, Department of Psychology, Illinois State University; **Laura Vogel**, School of Biological Sciences, Illinois State University

The impact of aging on mucosal immune responses, particularly IgA production, is controversial. Many previous studies have failed to separate the effects of the aged microenvironment (dysfunctional aged T cells or homing molecule expression on lymphoid tissues) from intrinsic B cell defects. We hypothesized that life-history of cognate antigen exposure influences antibody production and distribution of mucosal B cell populations during aging. These studies used immunoglobulin transgenic mice, whose cognate antigen nitrophenyl (NP) is not naturally encountered. Mice were immunized orally with cholera toxin (CT) alone, NP-OVA (a T cell-dependent antigen) or NP-Ficoll (a T cell-independent antigen) every 5 months. Two months after the last injection, intestines were analyzed for relative abundance, size, and cellular composition of Peyer's Patches (PP) and isolated lymphoid follicles (ILF). Whole mount immunohistochemistry and light microscopy results revealed significantly more ILF in the distal region of aged mice (18 months) when compared to young (3 months). Comparing immunized (NP-OVA and NP-Ficoll) and control mice, flow cytometry data reveals significant decrease in percentages of transgenic B-cells for both PP and ILF, CD4 T cells for ILF and CD8 T cells for PP in aged NP-Ficoll immunized mice, however there was significant decrease of transgenic B-cell percentage in only aged NP-OVA immunized mice for both PP and ILF in comparison to their younger counterparts. Hence, preliminary data suggests significant role of cognate antigen exposure in disrupting adaptive response in aged, providing a possible answer behind deterioration of immune response in the elderly

## **LB6. Novel Mice Models of Oxidative Stress for the Study Glutathione Homeostasis and Mitochondrial Biology in Neurodegenerative Diseases**

**Xingjun Fan**, Case Western Reserve University; **Mariana Rosca**, Case Western Reserve University; **Sandra Siedlak**, Case Western Reserve University; **Hyoung-Gon Lee**, Case Western Reserve University; **Pingfu Feng**, Case Western Reserve University; **Vincent Monnier**, Case Western Reserve University

The mammalian brain is much more sensitive to oxidative stress compared to other organs mainly due to its high O<sub>2</sub> consumption. Mitochondria are believed the major source of ROS, and their dysfunction appears to contribute to neurodegeneration and aging. Glutathione (GSH) is the most prevalent and important intracellular non-protein thiol/sulfhydryl compound in mammalian cells. Importantly, mitochondria GSH pool is believed to be playing a key role in maintaining the mitochondrial redox state. GSH has been reported to decline in the aging brain and many neurodegenerative diseases. To test the hypothesis, we created a conditional knockout mouse of glutamate cysteine ligase, catalytic subunit (Gclc) at desired location of CNS. CNS pan-neuronal (NEGSKO) and an inducible forebrain neuronal (FIGSKO) conditional knockout mice models were created by breeding with Thy1-cre and CamKII-Ert2-cre mouse respectively. NEGSKO mice, with 40-65% reduced GSH level in brain and spinal cord develops ALS-like phenotype, i.e. motor neurodegeneration, muscle atrophy, denervation, TDP-43 fragmentation and miss-translocation into cytoplasm that colocalizes with elevated ubiquitination. In FIGSKO mice,

induction of Gclc deletion started with tamoxifen at 6mos triggered hippocampal and cortical neuron degeneration over time. FIGSKO mice demonstrate clear brain atrophy, hippocampal neuron loss 5mos after tamoxifen induction, with cognition impairment and disturbed nesting behaviors. Importantly, further mechanistic characterization indicates that mitochondrial GSH level was significantly reduced (~40% vs. wt), and mitochondrial function was impaired in both NEGSKO and FIGSKO mice. NEGSKO and FIGSKO mice, with impaired GSH synthesis, will serve as novel platform to study the link between aging, oxidation, mitochondrial function and neurodegeneration.

#### **LB7. Pleiotropic Effects of Genes May Explain the Link between Melanoma and Brain Metastases: The Results of Analyses of the LLFS Data**

**Anatoliy Yashin**, Duke University; **Deqing Wu**, Duke University; **Konstantin Arbeev**, Duke University, **Svetlana Ukraintseva**, Duke University; **Eric Stallard**, Duke University; **Alexandr Kulminski**, Duke University; **Ingrid Borecki**, Washington University, School of Medicine; **Kaare Christensen**, University of Southern Denmark

**Background.** Brain metastases develop in nearly half of patients with advanced melanoma and is a major cause of mortality in these patients. It was suggested that factors compromising the permeability of the BBB can promote tumor cell extravasation into the brain. We hypothesize that some germ line mutations increasing the risk of melanoma will also be involved in regulating the BBB permeability.

**Data and Methods.** A number of germ line mutations involved in the development of melanoma and its metastases were previously found in genes located on chromosome 7. This indicates a possibility that there may be other (yet unidentified) genes on this chromosome that influence the risk of this condition. Using the LLFS data, we performed genetic association study of melanoma with tag SNPs located on chromosome 7. Then we reviewed current evidence on the role of detected variants in the BBB permeability.

**Results and Discussion.** We found that a minor allele of the rs208353 SNP located in the intronic area of GNA12 gene is significantly associated with melanoma ( $p < 7.07E-6$ ). This gene plays a critical role in regulating tight junction, an intercellular junction that regulates epithelial and endothelial permeability, and is an essential component of the BBB. The loss of endothelial tight-junction function is an important event in the disruption of BBB and promoting tumor metastases.

**Conclusions.** Our findings indicate that GNA12 is a gene with pleiotropic action which is involved in melanoma development and increases vulnerability to brain metastasizing through a disruption of the BBB permeability.

#### **LB8. Rapamycin Activates a Caloric Restriction Responsive Pathway in Adipose Tissue**

**Porsha Howell**, University of Wisconsin-Madison Department of Nutritional Sciences; **Michael Polewski**, University of Wisconsin-Madison, Department of Medicine; **Karl Miller**, University of Wisconsin-Madison, Department of Nutritional Sciences; **Lauren Willoughby**, University of Wisconsin-Madison; **Sabrina Van Roekel**, University of Michigan; **Richard Miller**, University of Michigan, Nathan Shock



Center in the Biology of Aging; **Rozalyn Anderson**, University of Wisconsin-Madison, Department of Medicine - Institute of Aging

Caloric Restriction (CR), a dietary regimen that extends lifespan in mice, induces a remodeling of white adipose tissue that may be important in its ability to delay the onset of age-associated diseases. Lifespan is also extended by treatment with the mTOR inhibitor rapamycin, but it is unclear whether both interventions share a common mechanism. Here we show that rapamycin treatment activates a CR-responsive pathway involved in the regulation of metabolism. Like CR, rapamycin treatment increases levels of the mitochondrial regulator PGC-1 $\alpha$  in adipose tissue in mice. In addition, inhibitory phosphorylation of GSK3 $\beta$ , a key factor in PGC-1 $\alpha$  turnover, is enhanced. This is confirmed by reduced phosphorylation of mTOR target S6K. We next asked whether the effect of rapamycin on PGC-1 $\alpha$  and GSK3 $\beta$  were due to a change in signaling within adipocytes. We demonstrate that GSK3 $\beta$  and PGC-1 $\alpha$  regulation during differentiation, which is inhibited by rapamycin, is disrupted in rapamycin-treated cells. Our data suggest that inappropriate stabilization of PGC-1 $\alpha$  through GSK3 $\beta$  inhibition prevents fat storage in maturing adipocytes. Consistent with this, impaired fat storage was also observed in adipocytes overexpressing the PGC-1 $\alpha$  gene. In preadipocytes, rapamycin increases PGC-1 $\alpha$  protein levels within hours of treatment. Rapamycin induces changes in PGC1 $\alpha$  dependent processes including mitochondrial membrane potential and cell adhesion. These data confirm that PGC-1 $\alpha$  is a downstream effector in rapamycin mediated mTOR inhibition. We propose that the PGC-1 $\alpha$  pathway is a shared mechanism of enhanced longevity by inhibition of mTOR with rapamycin and CR.

#### **LB9. Synergistic Effect of Muscle and Motor Neuron Sod1 on the Maintenance of Neuromuscular Junction Structure and Function**

**Yun Shi**, University of Texas Health Science Center at San Antonio/Barshop Institute; **Michael Walsh**, University of Texas Health Science Center at San Antonio/Barshop Institute; **Daniel Pulliam**, University of Texas Health Science Center at San Antonio; **Ryan Hamilton**, University of Texas Health Science Center at San Antonio/Barshop Institute; **Yuhong Liu**, University of Texas Health Science Center at San Antonio/Barshop Institute; **Yiqiang Zhang**, University of Texas Health Science Center at San Antonio/Barshop Institute; **Carlos Jaramillo**, University of Texas Health Science Center at San Antonio; **Holly Van Remmen**, University of Texas Health Science Center at San Antonio/Barshop Institute

Electrophysiological studies of the motor nerve in CuZnSOD knockout mice (KO) demonstrate prolonged distal motor latency, reduced sciatic motor conduction velocity and pathological decrement (>10%) in compound muscle action potential (CMAP) amplitude with low frequency (3-10Hz) repetitive nerve stimulation (RNS). These changes are indicative of axonopathy and a reduced safety factor at the NMJ. Additionally acute administration of 3,4-diaminopyridine, a potassium channel blocker was able to lessen the CMAP decrement in KO mice. To test the second aim, we utilized tissue specific knockout and transgenic mice of SOD1. Neuron-specific SOD1 knockout mice (NKO) developed a moderate reduction in muscle mass by 8 month of age, while muscle-specific SOD1 knockout mice (MKO) up to 18 month showed no muscle atrophy. Neither NKO nor MKO mice exhibited alterations in RNS, suggesting that the NMJ deficits seen in whole body KO mice may be a synergistic effect from both cell types. However, MKO mice displayed multiple characteristics of myopathy including denervation potentials (EMG),

central nuclei and increased muscle damage upon exercise. These data suggests that CuZnSOD plays an essential role in maintaining skeletal muscle integrity. Meanwhile, neuronal SOD1 overexpression rescued muscle atrophy and aberrant CMAP parameters in the KO mice. In conclusion, the complete neuromuscular phenotype in KO mice is likely caused by deficiency of CuZnSOD in both muscle and neurons. Our data indicate that muscle atrophy in these mice may be secondary to this neuronal defect rather than an intrinsic muscle CuZnSOD deficiency.

#### **LB10. Whole-Genome DNA Methylation Changes in Human Skeletal Muscle Associated with Aging**

**Artem Zykovich**, Buck Institute for Research on Aging; **Alan Hubbard**, University of California Berkeley; **Brittany Garrett**, Buck Institute for Research on Aging, **Mark Tornopolsky**, McMaster University; **Sean Mooney**, Buck Institute for Research on Aging; **Simon Melov**, Buck Institute for Research on Aging

Aging is accompanied by the reduction of muscle mass and function, and leads to a decrease in mobility (termed sarcopenia). Though numerous different pathways have been found to be linked with sarcopenia, their mechanisms and relative importance are mostly unknown. Several studies have investigated gene expression changes that occur in skeletal muscle during aging. In addition to gene expression, epigenetic methylation of cytosine plays an important role in many processes, including differentiation and cellular senescence. Dysregulation of DNA methylation has also been observed in age-associated disorders such as Alzheimer's Disease and cancer.

Here we report for the first time a genome-wide study of DNA methylation dynamics in skeletal muscle derived from healthy individuals during normal human aging. We predominantly observed hypermethylation with age. Differentially methylated CpG (dmCpG) nucleotides tend to arise inside of genes. Structurally, dmCpG are underrepresented in promoters and are overrepresented in the middle and 3' end of genes. dmCpG are prone to be in CpG islands (CGI) and CGI shores, but only if they are located within a gene body and not overlapping with a promoter, unless the promoter has no CGI and GC skew. We did not observe a correlation between gene expression and methylation changes with age. Finally, we identified over 200 biomarkers that near perfectly predict human biological age.

#### ***Health Sciences Section***

#### **LB11. A Community-Based Model for Recruitment of African Americans Into Alzheimer's Research**

**David Ruvolo**, The Charles F. and Joanne Knight Alzheimer's Disease Research Center, Washington University School of Medicine; **Dorothy Edwards**, Chair & Professor, Department of Kinesiology, University of Madison Wisconsin & Wisconsin Alzheimer's Disease Research Center; **Douglas Brown**, Department of Surgery, Washington University School of Medicine; **Monique Williams**, School of Medicine, Health and Sciences Center, Texas Tech University

African Americans are at increased risk for developing Alzheimer's disease (AD), and yet, recruitment of African Americans continues to be a tremendous hurdle in AD research. Underrepresentation of African Americans is attributed to many barriers such as health disparities, fear, lack of trust, and mistreatment. Focus group transcripts from Williams et al., (2010; n=70), which documented African-American

participants' attitudes and perceptions towards research participation, were analyzed in accordance with Grounded Theory. Using Open Coding analysis, participant responses yielded four core aspects of community-based recruitment. Participants stated researchers must (a) display Community Focus by demonstrating cultural competency, (b) develop accessible Education programs about AD research, (c) create Methodology that is ethnically sensitive, and (d) emphasize Altruism by establishing how volunteerism benefits the entire community. Axial Coding led to the formation of a community-based recruitment model and suggests that a systematic approach for implementing strategies aligned with the four core aspects would be most effective. Community-based recruitment strategies are designed to tackle logistical elements (e.g., assessing community needs, developing community-specific materials, etc.) and potential barriers (e.g., skepticism, fear, mistrust, etc.). Results suggest that researchers must implement these strategies in order to form a strong partnership between the research center and the community. The model would help researchers establish trust within the community, develop effective recruitment strategies, and increase retention rates. Future studies will utilize a mixed methods design to examine the effectiveness of this model for recruiting older African Americans at risk for AD.

#### **LB12. A Home-Based Functional Exercise Program Extended the Benefits of Hip Fracture Rehabilitation**

**Nancy Latham**, Boston University School of Public Health; **Bette Ann Harris**, MGH Institute of Health Professions; **Jonathan Bean**, Spaulding Cambridge Rehabilitation Center; **Tim Heeren**, Department of Biostatistics, Boston University School of Public Health; **Christine Goodyear**, Health and Disability Research Institute, Boston University School of Public Health; **Diane Heislein**, College of Health and Rehabilitation Sciences: Sargent College, Boston University; **Jabed Mustafa**, Health and Disability Research Institute, Boston University School of Public Health; **Alan Jette**, Health and Disability Research Institute, Boston University School of Public Health

**Background:** For many older people, long-term functional limitations persist after formal hip fracture rehabilitation has ended. Intensive, highly supervised exercise programs have been shown to extend the benefits of hip fracture rehabilitation; however, the efficacy of a home exercise program with minimal supervision has not been established. The Aim of this randomized controlled trial was to determine the efficacy of a 6-month home exercise program to improve function after formal hip fracture rehabilitation ended. **Methods:** 232 functionally limited older adults with recent hip fracture were randomized to exercise or attention control. Functionally-oriented exercises were taught in 3-4 home visits by a physical therapist and performed independently over 6 months. Exercise intensity was progressed using therabands, weighted vests and steps of varying height. Physical function was assessed at baseline and 6 months by blinded assessors using the Short Physical Performance Battery (SPPB) and Activity Measure for Post-Acute Care (AMPAC). All analyses were by intention-to-treat. **Results:** There were no significant between-group baseline differences or adverse events related to the intervention. Loss to follow-up was 15.9%. As hypothesized, the exercise group showed significant improvement relative to the control group in functional mobility and daily activity functioning at 6 months for all primary endpoints (adjusted analyses (for age, gender and baseline scores): SPPB,  $P < 0.001$ ; AM-PAC Mobility Function  $P = 0.03$ ; AMPAC Daily Activity Function  $P = 0.026$ ). SPPB and AMPAC Daily Activity function scores exceeded minimum clinically important differences. **Conclusion:** Home-based

functionally-oriented exercises successfully extended the functional recovery of older adults who had completed their hip fracture rehabilitation.

### **LB13. Emergency Department Use By Oldest-old Patients Between 2005 And 2010 In A Swiss University Hospital**

**Hélène Jaccard Ruedin**, Service of Geriatric Medicine and Geriatric Rehabilitation, Department of Medicine, University of Lausanne Medical Center (CHUV); **Sarah Vilpert**, Swiss Health Observatory; **Lionel Trueb**, Department of Medicine, University of Lausanne Medical Center (CHUV), **Stefanie Monod-Zorzi**, Service of Geriatric Medicine and Geriatric Rehabilitation, Department of Medicine, University of Lausanne Medical Center (CHUV); **Yersin Bertrand**, Department of Medicine, University of Lausanne Medical Center (CHUV); **Christophe Büla**, Service of Geriatric Medicine and Geriatric Rehabilitation, Department of Medicine, University of Lausanne Medical Center (CHUV)

**Introduction:** Population ageing challenges Emergency Departments (ED) with a population shift toward higher age groups. Patients aged 85+, represent the fastest growing segment, leading to more prevalent complex situations within ED.

**Method:** Retrospective analysis of 56'162 ED visits of patients at the University of Lausanne Medical Center (CHUV), from 2005 to 2010.

**Results:** ED visits of 65+ patients increased from 8'228 to 10'390/year, representing 6 patients/day more (+26%). 85+ Patients increased by +46% vs +20% for the 65-84 (+20% ED visits of people 18-64y). Median age of the 65+ ED patients increased from 78.7 to 79.3 years. 85+ patients were more likely than 65-84y patients to come from a NH setting (13% vs 4%) and to be hospitalised (70% vs 59%). Median length of stay difference between both age groups extended from 2 hours 08 min in 2005 to 2 hours 45 min in 2010.

**First reason to visit ED** was fall/injury for 85+ patients (27%; 65-84: 18%) and a cardiovascular disorder for patients aged 65-84y (18%; 85+: 16%). Part of high degree of emergency cases (42%) and readmission to ED within 30 days (8%) were similar for both age classes (similar proportions in 2005 and 2010 for these 3 issues).

**Conclusion:** Patients aged 85+ are the fastest growing group admitted to ED. Compared to younger counterparts, they use more ED resources and the differences are increasing overtime. ED addressing specific needs of geriatric patients would improve their care and lead to a better use of available resources.

### **LB14. Health-Related Quality of Life in Older US Adults: A Regional Comparison**

**Diana Kachan**, University of Miami Miller School of Medicine; **Laura McClure**, University of Miami Miller School of Medicine; **William G. LeBlanc**, University of Miami Miller School of Medicine, **Tainya C. Clarke**, University of Miami Miller School of Medicine; **Stacey Tannenbaum**, University of Miami Miller School of Medicine; **Jenelle Lin**, University of Miami Miller School of Medicine; **Cristina Fernandez**, University of Miami Miller School of Medicine; **David J. Lee**, University of Miami Miller School of Medicine

Objective: Compare the health-related quality of life (HRQL) among adults aged 65+ across states and geographical regions of the US using the Health and Activities Limitation utility index (HALex).

Methods: We analyzed pooled, survey-weighted data from the 1997-2010 National Health Interview Survey participants aged 65+. HALex scores were calculated combining information about an individual's perceived health and activity limitations, with scores ranging from 0.00-1.00 (lower scores reflect poorer HRQL). We ranked US states by mean HALex, and performed multivariable logistic regression analyses comparing low HALex scores (defined as HALex  $\leq$  0.2) in Florida to the other US regions (i.e., Rest of South, West, Midwest, Northeast), with adjustment for sociodemographic variables, health behaviors, and survey design.

Results: Older residents of Alaska, Alabama, West Virginia, Mississippi, and Arkansas had the lowest mean HRQL scores (range: 0.62-0.68), whereas residents of Vermont, Wisconsin, Delaware, Nevada, and New Hampshire ranked the highest (range: 0.78-0.79). Floridians were less likely to have a low HRQL than residents of other Southern states (OR= 0.79; [95% Confidence Interval =0.67-0.94]), but more likely than residents of the Northeast (1.25; [1.02-1.52]) and the Midwest (1.28; [1.06-1.55]). When stratified by place of birth, US-born Floridians were less likely to have a low HRQL than US-born residents in all other states combined (0.66; [0.46-0.94]).

Conclusions: Significant regional differences exist in the HRQL of older individuals within the US. Future research examining the factors accounting for regional differences in HRQL levels could provide policy-makers with pertinent information on methods for improving the quality of life of older Americans.

#### **LB15. Improvements in Insulin Resistance and Glucose Homeostasis are Dependent on Changes in Body Composition Mediated Through High Intensity Progressive Resistance Training in Older Adults With Type 2 Diabetes. Interim Results From the GREAT2DO study.**

**Yorgi Mavros**, Exercise Health and Performance Faculty Research Group, Faculty of Health Sciences, University of Sydney; **Shelley Kay**, Exercise Health and Performance Faculty Research Group, Faculty of Health Sciences, University of Sydney; **Kylie Anderberg**, Exercise Health and Performance Faculty Research Group, Faculty of Health Sciences, University of Sydney; **Yi Wang**, Department of Medicine and the Diabetes Center, University of California; **Michael Baker**, School of Exercise and Health Science, Edith Cowan University; **Jacinda Meiklejohn**, Exercise Health and Performance Faculty Research Group, Faculty of Health Sciences, University of Sydney; **Kieron Rooney**, Exercise Health and Performance Faculty Research Group, Faculty of Health Sciences, University of Sydney; **Maria Fiatarone Singh**, Exercise Health and Performance Faculty Research Group, Faculty of Health Sciences, University of Sydney

Objective: To determine the relationship between changes in body composition, and improvements in insulin resistance and glucose homeostasis in a randomized sham-exercise controlled trial of progressive resistance training in older adults with type 2 diabetes.

Methods: 103 older adults (67.9 $\pm$ 5.5 years) with type 2 diabetes were recruited for this study. Participants were randomized into either a progressive resistance training group (PRT), or a sham-

exercise control group (SHAM), for 12 months. Insulin resistance was assessed via the Homeostatic Model of Assessment 2 index (HOMA2-IR); glycosylated hemoglobin was used for glucose homeostasis. Skeletal muscle mass and fat mass were estimated using bioelectrical impedance assessment, while mid-thigh intramyocellular lipid was quantified using computed tomography.

Results: No group x time interaction was seen for changes in HOMA2-IR, HbA1c, skeletal muscle mass, total fat mass ( $p>0.05$ ), while significant reductions in intramyocellular lipid were present the PRT group vs. the control group ( $p<0.05$ ). Univariate regression analyses showed that changes in HOMA2-IR were directly related to reductions in total fat mass ( $r^2=0.17$ ,  $p=0.02$ ), and inversely related to increases in skeletal muscle mass ( $r^2=0.14$ ,  $p=0.04$ ) in the PRT group only. These relationships were not present in the SHAM group ( $p>0.05$ ). Furthermore, changes in HbA1c were directly related to changes in intramyocellular lipid ( $r^2=0.33$ ,  $p<0.0001$ ) in the PRT group only.

Conclusion: Increases in skeletal muscle mass, or reductions in total fat mass or intramyocellular lipid achieved through high intensity PRT improved insulin resistance and glucose homeostasis in a cohort of older adults with type 2 diabetes.

#### **LB16. Influence of Diagnostic Criteria on the Prevalence of Mild Cognitive Impairment (MCI) in the Berlin Aging Study II**

**Nina Bucholtz**, Charité - Research Group Geriatrics; **Christina Tegeler**, Charité - Research Group Geriatrics; **Ilja Demuth**, Charité - Research Group Geriatrics; **Elisabeth Steinhagen-Thiessen**, Charité - Research Group Geriatrics

The consideration of Mild Cognitive Impairment (MCI), that can be a prodromal stage of dementia, has become one main focus in neuropsychological research. However, this transitional stage between normal cognitive ageing and dementia is a heterogeneous syndrome that has been described distinctly in various concepts. Accordingly, studies regarding the epidemiology of MCI have shown great variability in prevalence. Thus, Winblad et al. (2004) have introduced a model that describes four subtypes of MCI: They distinguish a) amnestic (aMCI) and nonamnestic subtypes (naMCI) and b) if cognitive capacity is impaired in one or multiple domains. Even so, there is still no consensus in how to operationalize cognitive impairment. Especially neuropsychological aspects as the choice of tests and cut-offs are insufficiently defined. Therefore, the aim of this study is to demonstrate the impact of neuropsychological criteria on prevalence rates of MCI.

725 participants of the Berlin Ageing Study II were assessed using the test battery of Consortium to Establish a Registry for Alzheimer's Disease. Based on different cut-off criteria (1.0/1.5 standard deviations below norm) and number of test parameters indicating an impairment in a domain (one vs. two or more parameters), prevalence of MCI varies from 1.7% to 84.1%, whereas the amnestic subtypes vary from 1.7% to 14.9% (single aMCI) and 0.0% to 44.6% (multiple aMCI) respectively.

The results confirm that neuropsychological operationalization has a significant influence on obtained prevalence rates of MCI. Therefore, the analysis and definition of neuropsychological criteria is crucial for further studies regarding epidemiology and etiology of MCI.

### **LB17. Life Space, Mobility Performance, Total Daily Activity and Cognitive Decline**

**Bryan James**, Rush Alzheimer's Disease Center; **Aron Buchman**, Rush Alzheimer's Disease Center; **David Bennett**, Rush Alzheimer's Disease Center

In a series of papers, our group has shown that motor impairments, lower total daily activity, and constriction of life space—the extent of movement through the environment beyond the home—all precede declines in cognitive abilities. In this longitudinal analysis, we examined the independent associations of each of these mobility-related constructs with cognitive function and decline in 912 participants of the Memory and Aging Project. Life space (ranging from home to out of town) in the previous week was measured through self-report. A composite mobility performance score was based on four performance tasks including an 8 foot walk. Total daily activity was measured through an actigraphy device worn continuously on the wrist for 10 days. Composite scores for global cognitive function and 5 separate cognitive domains were derived from a battery of 19 cognitive tests. In mixed regression models adjusted for age, sex, and education, better mobility performance and higher total daily activity were associated with higher levels of cognitive function and less cognitive decline; a larger life space was associated with less cognitive decline. In a combined model, larger life space ( $\beta=0.012$ ,  $SE=0.003$ ,  $p<0.001$ ) and better mobility performance ( $\beta=0.052$ ,  $SE=0.016$ ,  $p=0.001$ ) were independently associated with a lower rate of cognitive decline. In summary, multiple indicators of late-life mobility were independently associated with subsequent decline in cognition in community-based older adults.

### **LB18. Marital History and Bone Mineral Density: Findings from The Midlife in the U.S. Study**

**Dana Miller-Martinez**, Division of Geriatrics, David Geffen School of Medicine at University of California, Los Angeles; **Arun Karlamangla**, Division of Geriatrics, David Geffen School of Medicine at University of California, Los Angeles; **Teresa Seeman**, Division of Geriatrics, David Geffen School of Medicine at University of California, Los Angeles; **Neil Binkley**, University of Wisconsin-Madison Osteoporosis Clinical Center and Research Program; **Carolyn Crandall**, Division of General Internal Medicine, David Geffen School of Medicine at University of California, Los Angeles

Bone mass in midlife is determined by acquisition in childhood, maintenance in young adulthood, and decline in later years, all of which may be influenced by stressors over the life course. Previous studies have shown associations between socioeconomic conditions in childhood and adult bone mass. Here, we examine the association between marital life history and bone mineral density (BMD), net childhood and adult socioeconomic indicators, and other health and behavioral factors known to influence bone mass. Because marriage and social support appear to have differing effects on health for men versus women in previous studies, we sought evidence for a differential effect of marital life history on adult BMD.

We used data from 729 adult participants in the Midlife in the United States Study, and employed multivariable linear regression, stratified by gender, and adjusted for age, weight, women's menopause

status, medication use, childhood socioeconomic advantage, adult financial advantage, education, physical activity over the lifecourse, lifetime smoking history, and alcohol consumption.

Marital life history was independently associated with lumbar spine BMD only in men, and not in women. Married men, never previously divorced, widowed, or separated had 0.44 SD higher BMD than never-married men. However, early first marriage was associated with lower BMD: Every year decrement in age at first marriage (under age 25) was associated with 0.08 SD decrement in BMD.

Our findings suggest that while a lasting marriage may be protective, early age of first marriage (possibly because of associated financial stresses) may be deleterious to bone health in men.

#### **LB19. Personality and Risk of Alzheimer's Disease: New Data and Meta-Analysis**

**Antonio Terracciano**, College of Medicine, Florida State University; **Angelina R Sutin**, College of Medicine, Florida State University; **Yang An**, NIA; **Richard J O'Brien**, Department of Neurology, Johns Hopkins University; **Luigi Ferrucci**, National Institute on Aging, National Institutes of Health; **Alan B Zonderman**, National Institute on Aging, National Institutes of Health; **Susan M Resnick**, National Institute on Aging, National Institutes of Health

**Background:** We examine whether broad factors and specific facets of personality are associated with increased risk of incident Alzheimer's disease (AD) in a long-run longitudinal study and perform a meta-analysis of published studies.

**Methods:** Participants from the Baltimore Longitudinal Study of Aging (N = 1671; incident AD = 90) were followed for up to 22 years from a baseline personality assessment. The meta-analysis pooled results from up to 5 prospective studies (N = 5054; incident AD = 607).

**Results:** In Cox-regression analyses adjusting for age, sex, education, and ethnicity, those with scores in the top quartile of neuroticism (HR = 3.1; 95%CI = 1.6-6.0) or the lowest quartile of conscientiousness (HR = 3.3; 95%CI = 1.4-7.4) had a three-fold increased risk of incident AD. The estimated population attributable risk was 13% for neuroticism and 11% for conscientiousness. The meta-analysis confirmed the associations of neuroticism ( $p = 2 \times 10^{-9}$ ) and conscientiousness ( $p = 2 \times 10^{-6}$ ), along with weaker effects for openness and agreeableness ( $p < 0.05$ ), with no evidence of heterogeneity from the pooled studies.

**Conclusion:** The current study and meta-analysis indicate that personality traits are associated with increased risk of AD, with effect sizes similar to those of well-established clinical and lifestyle risk factors.

#### **LB20. The Impact of Age on Cancer Survivors' Psycho-social Distress. Results from A 25-item Distress Screening Tool in a Community Sample of Cancer Survivors**

**Christopher Gayer**, Cancer Support Community- Research and Training Institute and University of Kentucky-Graduate Center for Gerontology; **Joanne Buzaglo**, Cancer Support Community- Research and Training Institute; **Anne Morris**, Cancer Support Community- Research and Training Institute; **Melissa**



**Miller**, Cancer Support Community- Research and Training Institute; **Victoria Kennedy**, Cancer Support Community; **Mitch Golant**, Cancer Support Community- Research and Training Institute

Cancer incidence dramatically increases with age, with 61% of diagnoses in individuals over 65 (SEER, 2006). Psychosocial problems created or exacerbated by cancer can decrease quality of life, weaken adherence to treatment regimens, and threaten older patients' ability to maximize recovery (IOM, 2008). Moreover, many older adults have complex comorbidities, impacting quality of life and health outcomes (Hewitt et al., 2003).

While over 40% of cancer patients report significant levels of distress, little is known about how age impacts distress and associated desire for support.

Cancer survivors (n=262) recruited across 10 community-based Cancer Support Community affiliates completed the 25-item web-based distress screener CancerSupportSource™. Participants rated 25 biopsychosocial concerns using a 5-point scale and indicated if they wanted to talk with a team member, receive print information or information online. Participants were grouped by age into categories (45-54, 55-64, 65+).

Regression analyses showed that patients aged 45-54 were more likely than those age 65+ to identify: changes to work, school or home life (OR=3.44; p=0.003), feeling sad or depressed (OR=2.70; p=), preparing for a treatment decision (OR=2.93; p=0.030), money worries (OR=3.77; p=0.007), and relationship problems with spouse (OR=3.05; p=0.033) as a problem. Additionally, patients aged 45-54 were more likely to request: overall assistance for distress (OR=3.76; p=0.020), online assistance (OR=2.81; p=0.017), and written assistance (OR=3.24; p=0.010) than those age 65+.

The results suggest age significantly impacts the way cancer patients experience and request assistance for distress and can be used to help tailor interventions to appropriate age groups in the community.

#### **LB21. Under Reporting of Pressure Ulcers During Inpatient Rehabilitation**

**Amit Kumar**, University of Texas Medical Branch Galveston; **Phillip Hoverstadt**, University of Texas Medical Branch; **Amol Karmarkar**, University of Texas Medical Branch; **James Graham**, Division of Rehabilitation Sciences, University of Texas Medical Branch; **Kenneth Ottenbacher**, Division of Rehabilitation Sciences

University of Texas Medical Branch

**Study Design:** A retrospective secondary analysis was conducted using data from the Centers for Medicare and Medicaid Services. We linked data for this cohort from the Inpatient Rehabilitation Facilities Patient Assessment Instrument (IRF-PAI) to their Medicare Provider Analysis and Review (MEDPAR) records. The revised version of ICD-9 codes was used to construct the algorithm to identify patients with pressure ulcers from both the MEDPAR and IRF-PAI data files. The facility reported pressure ulcers were the number of pressure ulcers identified by the facilities at the time of discharge.

Sample: Patients with both traumatic and non-traumatic SCI and patients with stroke admitted from acute to inpatient rehabilitation facilities in 2008 and 2009, and on Medicare fee-for-service plan were selected.

Result: The final study sample comprised of 102,316 patients with stroke and 22,411 patients with SCI. The number of facility reported pressure ulcers in stroke impairment group were 986 (0.96%) compared to 3,909 (3.82%) identified by our algorithm. Our algorithm detected 3.08 % of pressure ulcers from the comorbidities listed under IRF-PAI file, and 2.68 % from the comorbidities listed under MEDPAR data file in stroke population. In SCI group, the number of facility reported pressure ulcers was 383 (1.7%) compared to 1,771 (7.9%) patients with pressure ulcers listed as comorbidities: 6.4% in IRF-PAI and 5.8% in MedPAR.

Conclusion: The findings from our study demonstrate inconsistency in facility reported pressure ulcers and those identified by our algorithm in both impairment groups.

### ***Research, Education, and Practice Committee***

#### **LB22. A Study of Domestic Violence among Older Couples in Japan: Factors Affecting Continuation of Domestic Violence**

**Asako Katsumata**, Shukutoku University Graduate School of Integrated Human and Social Welfare Studies; **Noriko Tsukada**, Nihon University

Since Japan's enactment of the Elder Abuse Prevention and Caregiver Support Act in 2005, research on elder abuse has grown tremendously; however, little remains known about continuation of domestic violence (DV) among older couples. The main purpose of this study is to explore factors related to the existence of continuation of DV among Japanese older couples. The data used in this study is Japan's first nationwide survey of Certified Social Workers (CSWs) who were assigned to 4,042 Community Comprehensive Support Centers (CCSCs) throughout the country. The survey was conducted in August of 2010. Structured questionnaires were sent to randomly selected 1,282 CCSCs. Respondents were CSWs at each CCSC. A total of 621 responses were obtained (a response rate of 48.4%). Out of the 621 respondents, 379 (61.0%) reported that the most recent case of DV they dealt with was a situation of DV among an older couple. Bivariate analyses revealed that there were statistically significant relationships between the existence of continuation DV among older couples and factors, such as gender, age, degree of care burden, having dementia, nature of abuses, and cause of abuses. That is, victims being female, being younger age, having lower degrees of care burden, not having dementia, and experiencing psychological abuse were more likely to face a situation of continuation of DV in their later life. It was also found that personality issues on both abusers' and victims' sides and relationships between abusers and victims were statistically significantly related to continuation of DV among older couples.

#### **LB23. Baby-boomer Matters: Exploring the issues that draw aging baby-boomers into counseling**

**Deborah O'Connor**, University of British Columbia; **Heather Whiteford**, Family Services of Greater Vancouver; **Elizabeth Kelson**, University of British Columbia

The face of aging is changing as the baby-boomer generation begins to enter old age. What are their service needs? This study compares the needs and experiences of baby-boomers (roughly defined as those between 55 and 65) and those over 65 seeking counseling (individual or group) in a Community Centre. In addition to survey data and an audio-taped, indepth personal interview with the support counselor, telephone interviews were conducted with 23 older adults who sought personal counseling at a local Community Centre. This late-breaking poster offers a look at the emerging findings. Specifically, reasons for seeking intervention for boomers could be collapsed into three main categories: family care issues including care of aging parents and more frequently, difficulties with adult children including recognizing (and naming) situations of abuse; partnering issues including learning to live single and negotiating a changing dating scene; and issues related to body image, sexuality and physical abilities. Given the focus on 'aging well' aspects of aging that limited one's ability to continue live like before, could be interpreted as personal failures. Implications for findings include: the need to develop sexual health programs aimed at this generation; the importance of providing the space for boomers to examine their relationships with adult children as a step toward preventing elder abuse; proactive steps to challenge ageist societal beliefs about personal appearance and the individual level; and the importance of groups for dealing with issues of loss and age-related changes. The importance of offering support in Community Centre rather than specialized mental health clinics was repeatedly identified as important for normalizing help-seeking.

#### **LB24. Changing Perspectives Through Intergenerational Learning: The Experiences of Students and Seniors in a Leisure and Aging Class**

**M. Rebecca Genoe**, University of Regina; **Chloe Lewis**, University of Regina; **Brady Johnson**, University of Regina, **Victoria Sutherland**, University of Regina

This late-breaking research poster will present qualitative data collected and analyzed within the past month from students and senior volunteers regarding their experiences with intergenerational learning in a second year university course focused on leisure and aging. Students and volunteers participated in weekly, 50-minute, student led intergenerational seminars on a variety of topics, including physical activity in later life, recreation in long term care, community based programming, and diversity. Two senior volunteers were assigned to each seminar group to provide their personal perspectives and experiences each week. In order to better understand the experiences and perspectives of participating in intergenerational seminars, we conducted one on one interviews with students (n=6) and senior volunteers (n=6). Data were analyzed using thematic analysis. This presentation will focus on the meaning of intergenerational interactions among both the students and the volunteers. For both groups, intergenerational interactions led to changing perspectives on aging and learning from each other. Through discussion of leisure in later life, students reported changes in attitudes about aging and older adults, while seniors reported feelings of connection to their community as they mentored the students. Objectives: Readers will be able to (1) identify at least three benefits of participating in intergenerational learning seminars for student (2) identify at least three benefits of participating in intergenerational learning seminars for senior volunteers; and (3) identify at least three ways in which discussions about leisure specifically can change ageist stereotypes among university students.

## **LB25. Community-Partnered Health Promotion “On The Move:”**

### **Engaging Media to Improve the Health and Quality of Life of Older Adults**

**Scott Kaiser**, VA Greater Los Angeles Healthcare System / UCLA; **Allan Muir**, LA Cityview Channel 35; **Brenda Vazquez**, Partners in Care Foundation; **Laura Trejo**, City of Los Angeles Department of Aging; **Catherine Sarkisian**, Division of Geriatrics, Department of Medicine David Geffen School of Medicine at UCLA; **Ivy Lee**, Division of Geriatric Medicine, David Geffen School of Medicine at UCLA

**Objective:** To develop a theoretically-grounded broadcast media intervention to improve the health and quality of life of older adults. Specifically, to work in partnership with Los Angeles area community aging services agencies to develop a television series promoting the adoption and maintenance of regular physical activity as a critical element of healthy aging.

**Methods:** A project of the Los Angeles Community Academic Partnership for Research in Aging, UCLA medical investigators joined forces with the City of Los Angeles Department of Aging, Partners in Care Foundation, and LA Cityview 35 to produce a series promoting physical activity in an older adult population.

“On The Move” engages a multi-faceted theoretical approach—grounded in an attributional model of achievement motivation, transtheoretical model, behavioral affective associations model, and social cognitive theory—as formerly sedentary older adults compete to become active. Contestants are exposed to activities included in evidence-based programs and wear Fitbit accelerometer units to track progress.

**Results:** A series of six 30–minute episodes, “On The Move” demonstrates significant transformation in 12 individuals as they increase average daily physical activity to approach or exceed a 10,000 daily step goal. The series was initially broadcast on LA CityView Channel 35 June - August 2012 and is now available online.

**Conclusions:** “On The Move” exists as an innovative approach to utilizing media as a health promotion tool within the context of community-partnered efforts to support healthy aging. Future directions must include a rigorous evaluation of the impact of this programming on specific viewers.

## **LB26. Complicated Grief In Older Adults: A Randomized Controlled Trial Of Complicated Grief Group Therapy**

**Katherine Supiano**, University of Utah-College of Nursing

This randomized controlled trial evaluated the efficacy of complicated grief group therapy (CGGT) in the treatment of older adults meeting clinical criteria for complicated grief (CG) as compared to a sample of older adults receiving modified grief support group-treatment as usual (TAU). The CGGT intervention was an adaptation of complicated grief therapy (Shear, 2003, Liberty Version; Shear, Frank, Houck & Reynolds, 2005) administered as group therapy. Twenty-six participants completed the 16 week intervention; CGGT n = 12, TAU n = 14. Primary outcome measures included the Prolonged Grief

Disorder Scale (PG-13; Prigerson & Maciejewski, 2009), the Brief Grief Questionnaire (BGQ; Shear & Essock, 2002), and the Clinical Global Impressions Scale (CGI; Guy, 1976). Participants in both groups showed improvement, but those receiving CGGT realized significantly greater improvement ( $F = 11.52(3, 22)$ ,  $p < .001$ ,  $d = 1.34$  [95% CI = .483, 2.187]). More importantly, when complicated grief was measured on PG-13, nearly half of CGGT participants realized clinically significant improvement defined as 50% reduction in score. On the BGQ, all 12 of the CGGT completers had follow up scores in the normal range, suggesting a return to a normative grief process. This high level of clinical significance suggests that those in the CGGT group were effectively treated for complicated grief, and supports prior research recommending specialized treatment for persons with complicated grief. CGGT brings the additional advantages of group therapy, addressing the social isolation and disenfranchised status of those whose grief experience is profound.

### **LB27. Courtship and the “Young-Old”**

**Nicole Graves**, South Dakota State University; **Gregory Sanders**, North Dakota State University

As people are enjoying healthier and longer lives, many older adults are seeking meaningful relationships well into their later years. While there are a few studies that have focused on dating and courtship patterns in later life much of what we know about dating preferences is based on samples of young or middle-aged adults. Information about young adult dating cannot be adequately generalized to explain the unique experience of older adults. The current study examined transition to marriage of individuals between ages 55-75 (“young-old”). Eleven individuals (seven females and four males) who had been married five or fewer years participated in semi-structured interviews that were designed to allow the participants to share their stories of re-partnering. Open-ended questions encouraged participants to reflect on four main areas of their current relationship: a) the relationship prior to marriage, (b) factors associated with the decision to marry, (c) influence of others, (d) the marital relationship. The findings shared here focus on the relationship prior to marriage and thus will outline themes that emerged related to courtship. Qualitative analysis of the data resulted in the identification of four courtship themes: importance of compatibility, influence of past relationships, role of age, and role of technology.

### **LB28. Effectiveness of policy change on staff perception and knowledge of restraint use in a general community hospital.**

**Nancy Pearce**, Grand River Hospital; **Susan Edgar**, Grand River Hospital

**Introduction:** While significant effort has been made to decrease restraint use in long-term care, less attention has been paid to this issue in acute care. A 500-bed general community hospital instituted a new “Least Restraints” policy to decrease use of physical restraints.

**Objectives:** To evaluate the impact of the implementation of a “Least Restraint” policy on nursing and therapy staff knowledge and perception of restraint use in a general community hospital.

Method: All in-patient nursing and therapy staff were emailed a link to an on-line survey consisting of the Perception of Restraint Use Questionnaire (Evans & Stumpf, 1986) and the Physical Restraint Questionnaire (Janelli, Stamps & Delles, 2006) pre and post policy implementation.

Results: 227 and 142 respondents respectively completed the pre and post survey. Staff knowledge increased significantly on a number of items post implementation. Staff were more aware of the need for a physician's order ( $p < 0.05$ ), types of restraints ( $p < 0.01$ ); and assessment parameters ( $p = 0.01$ ). Staff reported being more willing to try alternative measures ( $p < 0.05$ ) such as a bed alarm ( $p = 0.001$ ) and to work collaboratively ( $p < 0.01$ ). Fewer staff believed that restraints were an important safety measure to prevent falls ( $p < 0.001$ ) and unsafe ambulation ( $p < 0.05$ ).

Conclusions: The implementation of a "Least Restraints" policy positively affected staff knowledge and perceptions. Further research is needed to determine the effect on practice.

#### **LB29. Neighborhood Effects on the Self-rated Health of Older Adults from Four Racial/Ethnic Groups**

**Jung Eun Ko**, School of Aging Studies, University of South Florida; **Yuri Jang**, School of Social Work, The University of Texas at Austin; **Nan Sook Park**, School of Social Work, University of South Florida; **Sung Han Rhew**, School of Aging Studies, University of South Florida; **David Chiriboga**, Department of Child and Family Studies, University of South Florida

This study of older adults examined the association of self-rated health with neighborhood characteristics using older adult samples of: Whites ( $n = 488$ ), Blacks ( $n = 345$ ), Cubans ( $n = 319$ ), and non-Cuban Latinos ( $n = 230$ ). The census-derived neighborhood characteristics included (1) the proportion of individuals aged 65 and older, (2) the proportion of individuals below poverty rate, and (3) the proportion of individuals from the same racial/ethnic background. The samples were drawn from the 2004-5 Survey of Older Floridians (SOF). Using the reported residential address, each participant was linked to the 2000 Census at block group level to retrieve neighborhood characteristics. Hierarchical linear models estimated self-rated health as a function of individual and neighborhood characteristics. Results indicated that neighborhood poverty rate was consistently associated with poorer health ratings across all groups. The proportion of older adults in the neighborhood was positively associated with self-rated health only among Cubans, and the proportion of individuals from the same racial/ethnic background was associated only among Whites. Findings support the importance of neighborhood context in the health of diverse older populations and suggest intervention strategies. Given that neighborhood characteristics had different implication for the racial/ethnic groups, the race/ethnicity composition of targeted geographic areas should be considered when developing health interventions for older adults.

### **LB30. The contextual specificity of adult age differences in decisions about sunk costs: Time matters more to the old**

**Nipat Pichayayothin**, West Virginia University; **JoNell Strough**, West Virginia University

The sunk-cost fallacy occurs when an irretrievable prior investment (sunk cost) influences a decision even when that investment is irrelevant to the outcome and should be ignored. Prior research demonstrates that older adults are less subject to the sunk-cost fallacy compared to younger adults. This study investigated if age differences depended on the type of prior investment (money or time) and the emotional meaningfulness of decisions. Young ( $M = 19.15$  years,  $N = 52$ ) and older adults ( $M = 76.18$  years,  $N = 53$ ) made decisions about hypothetical sunk costs of money and time that were emotionally meaningful or not (randomly assigned). MANOVA indicated older adults were significantly less likely to demonstrate the fallacy when money had been invested (replicating prior research), but were more likely to demonstrate the fallacy when time had been invested ( $p < .01$ ). Both older and younger adults were more subject to the fallacy when time had been invested in an emotionally meaningful activity (compared to a control group). After controlling for relevant covariates (need for cognition, action orientation, and numeracy), age differences in the fallacy remained significant for money investments, but not for time investments. The importance of features of the decision context (the type of investment and its emotional meaningfulness) for understanding age differences and similarities in decisions is discussed.

**Saturday, November 17**

***Health Sciences Section***

**LB1. A Cross- Sectional Study on Religiosity of Community-Dwelling Chinese Older Adults in Chicago**

**Chengyue Li**, Rush Institute for Health Aging; **E-Shien Chang**, Rush Institute for Healthy Aging; **Esther Wong**, Chinese American Service League; **Melissa Simon**, Feinberg School of Medicine, Northwestern University; **XinQi Dong**, Rush Institute of Healthy Aging

Background: Empirical studies have shown that religious commitment is associated with better mental and physical health. However, the role of religiosity in health and aging among elderly population is understudied. We aimed to examine the participation in religious activities and general religiosity in a US Chinese aging population. Method: This is a cross-sectional study with Chinese older adults over the age of 60 in the greater Chicago area. In the survey interview, we administered a 3-question religious scale to explore the importance of religion in their lives, attendance to organized religious service and attendance to home religious service. Result: Among surveyed participants (N=2,199), the mean age was 73.7 and 62% were women. Concerning self-rated religiosity, 63.7% of the surveyed participants perceived religion as not much important or not at all important, whereas 10% reported religion played a very important role in their lives. Regarding attendance to organized religious services, 76.9% participants reported they have never attended any services, 16.9% stated that they attended at least once every three months. Regarding religious services at home, 36.3% participants attended at least once every three months. Conclusion: Although a large portion of participants did not perceived religion as an important factor in their lives, the findings needs to be examined and interpreted in the unique cultural and historical contexts of Chinese immigrants. Further investigation needs to examine the relationship between religiosity and physical and psychological health and among the Chinese older adults.

**LB2. Cognitive Functioning, Family Support and Depression among Older Adults in Rural China: Comparing Two Age Groups (60-74 & 75+)**

**Yura Lee**, University of Southern California/School of Social Work/PhD student; **Iris Chi**, University of Southern California/School of Social Work/Professor

Background: Depression among older adults is becoming important public health problem. Older adults with limited cognitive functioning and depression are more likely to develop dementia. Additionally, deficit in social support is a great risk factor for depression in late life; family support (compared to friends or others) being considered the most crucial in Asian culture. As older adults live longer, it is time to examine depression in different phases of old age. The purpose of this study is to understand the impact of cognitive functioning and family support on depression among older adults in rural China comparing two age groups.



Method: 1,391 Chinese older adults were recruited in 2003 in Anhui Province, China. Multivariate regression model was conducted controlling for age, gender, income, education, marital status, perceived health status, ADLs, and IADLs.

Results: For age (60-74), cognitive functioning ( $b=-.19$ ,  $p<.05$ ) and emotional support from sons ( $b=-.37$ ,  $p<.001$ ) and daughters ( $b=-.23$ ,  $p<.001$ ) were significantly associated with depression while cognitive functioning ( $b=-.29$ ,  $p<.01$ ) and emotional support only from sons ( $b=-.64$ ,  $p<.001$ ) were significant for age (75+). Financial support was not significantly related with depression for both age groups. Marital status, perceived health, ADLs, and IADLs were significantly related with depression for (60-74) group while gender, perceived health, and ADLs were found significant for (75+) group.

Discussion: The findings have important implications to design age-specific depression intervention for older adults in rural China. Also, early screening for cognitive impairment and provision of auxiliary support for those who lack family support will be necessary.

### **LB3. Education Moderates Genetic and Environmental Influences on Body Mass Index – Findings from the Consortium on Interplay of Genes and Environment across Multiple Studies (IGEMS)**

**Wendy Johnson**, Centre for Cognitive Ageing and Cognitive Epidemiology and Department of Psychology, University of Edinburgh; **Anna Dahl**, Department of Medical Epidemiology and Biostatistics, Karolinska Institutet

Obesity is a world-wide health problem with important consequences for aging. Twin studies have increased our understanding of the origins of obesity by quantifying the overall contributions of genetic and environmental factors to individual differences in body mass index (BMI). Yet rather than being constant, other variables may moderate the magnitudes of genetic and environmental influences on BMI. For example, rates of obesity tend to be higher in those with less education, and in a previous study of Danish adult twins, variance in BMI attributable to genetic and familial and individual-specific environmental influences was moderated by education so that it was greater in those with less education. Using eight twin studies in different age groups (two U.S., four Swedish, and two Danish) in aggregate, including 15,797 individuals (mean age 64 years, range 25-102), we replicated some but not all of these moderating effects. There were differences in average BMI and level of education across studies, age, and sex, as well as differences in degree of association between education and BMI. For example, correlations between education and BMI ranged from  $-.05$  in middle-aged American men to  $-.19$  in middle-aged Danish men and  $-.07$  in younger Swedish women to  $-.18$  in the oldest sample of Swedish women. These differences impacted how education moderated the genetic and environmental influences. Overall, education should be considered in developing strategies to reduce obesity, but appropriateness of specific strategies may vary with local educational and health care conditions as well as with age.

#### **LB4. Environmental and Person Factors Associated with Participant Attrition in the Chronic Disease Self-Management Program**

**Margaret Moran, MPH**, University of Illinois at Chicago; **Thomas Prohaska, PhD**, University of Illinois at Chicago/George Mason University; **Amy Eisenstein, PhD**, University of Illinois at Chicago

Eighty percent of older adults have at least one chronic disease. These diseases contribute to 75% of US health care costs. In order to address this pressing issue, the Chronic Disease Self-Management Program (CDSMP) was developed. Despite its positive impact, participant attrition is a barrier to its success. The purpose of this study was to explore factors related to program attrition, with particular attention to the environmental influences that may be associated with CDSMP participant retention. Data was collected from 2604 participants who completed CDSMP workshops at 201 sites throughout Illinois. Using GIS and statistical analysis, workshop completers were compared to non-completers across variables related to individual, program, and environmental characteristics. 735 participants (28%) completed three or less of the six class sessions. Significant differences between completers and non-completers were seen in age ( $p=.008$ ), class size ( $p=.001$ ), number of chronic conditions ( $p=.002$ ), living arrangement ( $p<.001$ ), income ( $p=.039$ ), and distance traveled to class ( $p=0.16$ ) – greater commutes to CDSMP site were significantly associated with greater likelihood of program completion. Sex, race, rurality, and neighborhood walkability were not significant predictors of completion. These results indicate that person or workshop factors may be more significant to completion than external factors, and participants who sign up for the class are motivated enough to move beyond physical barriers that typically impact access. These findings may be relevant to clinicians when targeting patients for self-management interventions. Further, understanding reasons for attrition can lead to better program design, recruitment strategy, increased participation and retention rates, and increased cost-effectiveness.

#### **LB5. Gambling Behavior and Problems among Community-dwelling Chinese Older Adults—A Cross-Sectional Study**

**E-Shien Chang**, Rush Institute for Healthy Aging; **Melissa Simon**, Feinberg School of Medicine, Northwestern University; **Esther Wong**, Chinese American Service League; **XinQi Dong**, Rush Institute of Healthy Aging

Background: With a rapidly increasing number of older adults participating in gambling, research remains limited regarding the prevalence, risk and protective factors of excessive gambling behavior. Less is known about Chinese older adults' gambling behavior in US. Methods: This is a cross-sectional study with community-dwelling Chinese older adults over the age of 60. A total of 2,199 participants were enrolled in the study through multi-method recruitment. We administered Problem Gambling Severity Index to identify gamblers. We also investigated senior's self-reported gambling frequency and behavior. Results: Among surveyed participants, the mean age was 73.7 yrs old. Sixty-two percent were women. Betting on mah-jong is the most popular gambling activity following by gambling in casino and purchasing state lottery. A total of 16.6% participants played mah-jong at least once per two year, in which 10% played at least once a week. Including all types of gambling, 15.2% have gambled at least

once last year. Among them, 8.6% reported they have been told by others that they had a gambling problem, 6.8% have tried to go back another day to try to win back the money they lost, 4.8 % felt they might have a problem with gambling. Conclusion: Gambling behaviors are common part of Chinese older adult's lives. Future research is needed to explore risk/protective factors as well consequences association with gambling behaviors and gambling disorders.

#### **LB6. Inpatient Rehabilitation Outcomes in Medicare Hip Fracture Patients**

**Michael Cary**, Duke University; **Elizabeth Merwin**, Duke University; **Norman Oliver**, University of Virginia; Center on Health Disparities, **Marianne Baernholdt**, University of Virginia School of Nursing; **Ishan Williams**, University of Virginia School of Nursing

Hip fractures among older adults are associated with significant loss of function, disability and mortality. Little is known about rehabilitation outcomes for older adults with hip fractures, particularly among vulnerable groups including racial and ethnic minorities.

Patients (N=34,984) admitted to Medicare certified Inpatient Rehabilitation Facilities (IRFs N=1112) in 2009 were examined. Hierarchical multiple regression analyses were performed to assess the relationship of motor functioning and functional status at discharge to predisposing, enabling, need and use variables using Andersen's health service use model. A logistic regression was performed to assess the contribution of predisposing, enabling, need, and use variables associated with being discharged home.

The majority (88%) of older adults was non-Hispanic White individuals, and 71% were female. The average age was 81.4 (7.4 SD) years. This study found that individuals who were younger, female, living alone prior to admission, those with higher functional status at admission, fewer comorbidities, and longer lengths of stay had both higher motor functioning and functional status at discharge. Individuals from a minority group had lower motor functioning and functional status at discharge. Individuals who were younger, Black, Asian or Hispanic, female, lived with someone prior to admission, had less need for care, and longer lengths of stay were more likely to be discharged home.

This study highlights several disparities to consider when examining rehabilitation outcomes. As the number of older adults from racial or ethnic minority backgrounds increase, a greater understanding of the sources of these differences may reduce disparities among hip fracture patients.

#### **LB7. Measurement Invariance of the COPE Inventory Across Racially and Ethnically Diverse Older Adults**

**Nicholas Pisca**, University of Southern California; **Bob Knight**, University of Southern California

Although the Coping Orientations to Problems Experienced Inventory (COPE) has been frequently used to assess a broad range of coping responses, its measurement and invariance properties are not well documented in older adults from diverse racial and ethnic backgrounds. We examined these issues using a multi-group confirmatory factor analysis (CFA) framework across groups from an ethnically diverse sample of 446 older adults (range 60-95 years) from the Well Elderly Study.

The active and avoidant coping styles usually identified in younger adults and in caregiving studies, were not a good fit to this data. Our analyses revealed 3 factors that supported previous findings on positive religious coping style in an elderly and predominately White sample (Pargament, Koenig, Tarakeshwar, & Hahn, 2004). Factors included positive religious coping (“I put my trust in God”), positive interpretation and appraisal, (“I tried to see it in a different light, to make it seem more positive”), and acceptance, (“I accepted that this had happened and that it couldn’t be changed”). We then examined the measurement invariance of these factors across Whites (n = 185), Blacks (n = 158), and Latinos (n = 103). Multi-group CFA revealed configural and metric measurement invariance (equivalency) across Whites, Blacks, and Latinos. Results suggest that positive religious coping style characterizes coping styles in this urban sample of community dwelling older adults regardless of race or ethnicity. This highlights the need for further research on religious forms of coping among older adults, as this may be an overlooked method of coping with stress in this population.

#### **LB8. Opioid Use During the Last Year of Life Among Older Adults with Advanced Illnesses**

**Susan Lowey**, University of Rochester; **Joyce Smith**, University of Rochester; **Ying Xue**, University of Rochester; **Bethel Powers**, University of Rochester

Opioids have been found to decrease dyspnea intensity among persons with life-limiting illnesses yet remain infrequently used in older adults with non-cancer illnesses, such as heart failure and chronic obstructive pulmonary disease. Previous research with patients enrolled in hospice care has found better symptom management for dyspnea, which often includes the use of opioids.

In a retrospective cohort study, we examined differences in opioid use among 213,042 Medicare beneficiaries with heart failure, COPD, or lung cancer who died between January 1, 2009 and December 31, 2009 using data obtained from the Chronic Condition Warehouse (CCW). Data was analyzed using SAS 9.2. Descriptive analyses were conducted in addition to Chi square tests for categorical variables that examined opioid and hospice use among the diagnosis groups.

The majority of beneficiaries had heart failure alone (32%) or heart failure and COPD (24%) Thirty-eight percent of beneficiaries had at least one opioid prescription. Patients with lung cancer alone or with another diagnosis were more likely to enroll in hospice care and more likely to use opioids. Patients with lung cancer and COPD, with or without coexisting CHF, were more likely to be given opioids than patients with other diagnoses.

Opioid use was more prevalent among beneficiaries enrolled in hospice, which occurs more in patients with a lung cancer diagnosis. Future research should be aimed at exploring more specific opioids, such as morphine, and respected dosages for management of terminal dyspnea in patients with heart failure and COPD and their relationship to healthcare utilization.

#### **LB9. Positive Self-Perceptions of Aging: Are They Always Beneficial for Older Adults?**

**Julia K. Wolff**, German Centre of Gerontology; **Lisa M. Warner**, Free University of Berlin; **Susanne Wurm**, German Centre of Gerontology

Positive self-perceptions of aging (PSPA) are known to be related to favorable health and well-being outcomes as well as longevity. However, for older adults PSPA might be stretched to their limits when they are too optimistic, especially if one considers less stable well-being characteristics such as affect. For example, underestimating the risks of age-related physical losses may have adverse instead of beneficial effects on negative affect (NA) in face of a serious health event (SHE). Older individuals may overestimate their physical abilities and may be disappointed because they are not reaching their goals. Therefore, we investigated longitudinally if the relationship between PSPA (i.e., the view that aging is associated with only little physical losses) and NA is moderated by the occurrence of a SHE in older adults. 309 persons over 65 participated in two measurement occasions over time and reported their SPA, NA and the occurrence of SHE. Individuals who had more PSPA and a SHE reported more NA six months later ( $b = .46, p = .009$ ). The finding suggests that persons with PSPA might be more likely to set goals that they are not able to reach, resulting in NA. Also, the result could be explainable with an increase in coping effort after a SHE that may be more exhausting (and thereby eliciting NA) in older persons with PSPA. Future research should follow up this idea and investigate if this negative effect of PSPA is only present over a short time-period or if this persists on the long-term.

#### **LB10. Prevalence and correlates of Restless Legs Syndrome (RLS) in an Appalachian Primary Care Population**

**Kim Innes**, West Virginia University; **Terry Selfe**, West Virginia University; **Kathryn Flack**, West Virginia University; **Parul Agarwal**, West Virginia University

**BACKGROUND:** RLS is a distressing sensorimotor disorder, common in older adults. We investigated RLS prevalence, and its association to demographic factors, sleep, and mood disorders, in an Appalachian primary care population.

**METHODS:** Participants of this anonymous sleep survey study were community-dwelling adults ( $\geq 18$  years) visiting one of 4 West Virginia primary care clinics. Data gathered included detailed information on sleep patterns, RLS, demographic characteristics, and health/medical history. Sixty-eight percent of eligible adults completed surveys ( $N=1424/2087$ ). Pregnant women ( $N=65$ ) and those with missing data on key variables ( $N=142$ ) were excluded from the analyses.

**RESULTS:** Of the 1217 participants included in the final analytic sample, 20.6% met the 4 IRLSSG diagnostic criteria and/or reported a physician diagnosis of RLS, with 15% reporting RLS symptoms  $\geq$ once/week and 10.3% indicating  $\geq 3$  times/week. After adjustment for demographic and other factors, prevalence of RLS increased with age ( $p$  for trend=0.03) and those with RLS remained significantly more likely to report: a history of depression (adjusted odds ratio (OR)=1.8 (95% confidence interval=1.3, 2.5) and anxiety (OR=1.7 (1.2, 2.3)), sleep impairment both 4 (OR=2.4 (1.6, 3.7)) and 7 days/week (OR=1.8 (1.4, 2.5)), and a mean sleep duration of  $\leq 5$  hours/night (OR=1.7 (1.3, 2.3)). These associations increased in both strength and magnitude with increasing symptom frequency ( $p$ 's for trend  $\leq 0.004$ ).

**CONCLUSIONS:** Findings of this preliminary survey study suggest that RLS prevalence is high in this Appalachian primary care population and that RLS is associated with age and significant burden in terms of mood and sleep impairment.

## **LB11. Relationship Between Cognitive Function and Positive Health Behaviors in a Sample of Aging Community-Dwelling Veterans**

**Christina Vair**, VISN 2 Center for Integrated Healthcare, Department of Veterans Affairs; **Laura Wray**, VISN 2 Center for Integrated Healthcare, Department of Veterans Affairs

Literature supporting the benefits of regular participation in moderate physical activity and mental and socially stimulating leisure activities has led to encouraging recommendations for older adults in slowing or delaying cognitive decline. The present study examined the relationship between performance on a brief cognitive screen (Blessed Orientation-Memory-Concentration test; BOMC) and recommended levels of engagement in such activities in a sample of community-dwelling older veterans. Veterans 70+ with an upcoming primary care (PC) appointment were identified and screened by telephone for heart and brain health, with those ( $N = 428$ ; age  $M = 82.39$ ,  $SD = 4.92$ ) who scored below the cut-off for probable cognitive impairment (range = 0 to 10,  $M = 3.92$ ,  $SD = 3.37$ ) assessed on positive health behaviors. Less than 23% of the sample met the weekly recommended level of physical activity, while most reported engaging in daily mentally stimulating activity (88%) and social activity (72%) several times per week. Scores on the BOMC were not significantly related to either physical or social activity level independently; there was a significant difference in scores between those engaging in daily mentally stimulating activities ( $M = 3.73$ ,  $SD = 3.28$ ) and those not engaging in daily practice ( $M = 5.40$ ,  $SD = 3.60$ ;  $t(421) = 3.35$ ,  $p = .001$ ). BOMC scores were also significantly correlated with the total overall number of health behavior recommendations met ( $r = .16$ ,  $p < .01$ ). Findings suggest participation in frequent mentally stimulating activities together with regular physical and social engagement supports cognitive function.

## **LB12. Social Status, Leisure Activity, and Health at Midlife and Older Age**

**Po-Ju Chang**, The Department of Recreation, Park and Tourism Management, The Pennsylvania State University; **Linda Wray**, Department of Biobehavioral Health, The Pennsylvania State University

Although links between social status and health outcomes are well-established, few studies have examined the contribution of leisure activities in that link. The objective of this study is to examine how different types of leisure activities influence health in midlife and older age and the role that social status plays. Using the 2006, 2008, and 2010 waves of nationally representative Health and Retirement Study data and path analyses, we examine how four types of leisure activities (mental, social, physical, and productive) are associated with mental health (CESD depressive symptoms) in midlife and older adults, and if the relationships differ by ascribed (age, gender) and achieved (education, marital status), controlling on baseline CESD. Results indicated that all types of leisure activities significantly predicted CESD and that ascribed and achieved social status variables played differing roles. For example, for older adults and women, being involved in mental and physical activities predicted better mental health; and for those who were married/partnered or had more than high school education, being involved in mental and social activities predicted better mental health.

Based on the findings, researchers can design targeted leisure activity interventions for middle-aged and older adults to improve their mental health. The study should be considered late breaking since the

leisure activity data are relatively new in the HRS, so these analyses were previously not possible. In addition, the contribution of leisure for health in middle-aged older adults is getting increasing attention, and this study adds to the literature on that topic.

### **LB13. Statin Use and Clinical Outcomes in Older Men: a Prospective Population-based Study**

**Danijela Gnjdic**, University of Sydney, Centre for Education and Research on Ageing and Royal North Shore Hospital; **David Le Couteur**, Centre for Education and Research on Ageing, University of Sydney, Concord Hospital, Anzac Research Institute; **Fiona Blyth**, Centre for Education and Research on Ageing and University of Sydney; **Tom Trivison**, Boston University; **Kris Rogers**, The Sax Institute; **Vasi Naganathan**, Centre for Education and Research on Ageing, University of Sydney and Concord Hospital; **Robert Cumming**, Centre for Education and Research on Ageing, University of Sydney; **Sarah Hilmer**, Royal North Shore Hospital, University of Sydney and Kolling Institute of Medical Research

**Background:** We aimed to investigate the relationship of statins (HMG-CoA reductase inhibitors) with institutionalization and death in older men living in the community, accounting for frailty.

**Methods:** Men aged 70 years and over (n=1665) enrolled in the Concord Health and Ageing in Men Project, Sydney, Australia were studied. Data were obtained from baseline (2005- 2007) and follow-up (maximum 6.79 years) assessments. Information regarding statin use was captured at baseline. Cox proportional hazards regression analyses were conducted to estimate the risk of institutionalization and death according to statin use (exposure, duration and dose) and frailty status, with adjustment for socio-demographics, medical diagnoses, and other clinically relevant factors. A secondary analysis used propensity score matching to replicate covariate adjustment in regression models.

**Results:** At baseline, 43% of participants reported taking statins. In the adjusted models, current statin use was not statistically associated with increased risk of institutionalization (hazard ratios [HR] =1.60; 95% confidence intervals [CI]: 0.98-2.63) or death (HR=0.88; 95%CI: 0.66-1.18). There was no significant association of duration of use or dose of statins with either outcome. Propensity scoring yielded similar findings. Compared to non-frail participants not prescribed statins, the adjusted HR for institutionalization for non-frail participants prescribed statins was 1.43 (95%CI: 0.81-2.51), for frail participants not prescribed statins was 2.07 (95%CI: 1.11-3.86) and for frail participants prescribed statins was 4.34 (95%CI: 2.02-9.33).

**Conclusions:** These data imply no independent association between statin use and institutionalization or death in community-dwelling older men.

### **LB14. The Effects of Transcranial Magnetic Stimulation on Mobility in an Older Adult with Cerebellar Ataxia: A Case-Study**

**Brad Manor**, Harvard Medical School; **Faranak Farzan**, Harvard Medical School; **Yunfen Wu**, Beth Israel Deaconess Medical Center; **Elana Anastasio**, Beth Israel Deaconess Medical Center; **Vera Novak**, Harvard Medical School; **Alvaro Pascual-Leone**, Harvard Medical School

Spinocerebellar ataxia (SCA) is an age-related degenerative disease characterized by marked muscle coordination and movement disturbances. While there is no definitive treatment or cure, transcranial magnetic stimulation (TMS) can target the dysfunctional brain circuit known to be affected by SCA and therefore, may modulate its function and lead to mobility gains in these patients. The purpose of this case study was to determine the effects of a three-week cerebellar TMS intervention on gait and posture in a 72-year-old female patient with diagnosed Type 3 Sporadic SCA. Repetitive TMS was delivered daily to multiple cerebellar regions at 100% of maximum stimulator output with a 14cm circular coil. Baseline and follow-up assessments included 1) the timed up-and-go test, 2) 4m walk speed, 3) postural control as assessed by center-of-pressure fluctuations while standing on a force plate, and 4) gait kinematics and lower-extremity muscle co-activation during a 90sec walk. The TMS protocol was well-tolerated. Following the intervention, the patient completed the up-and-go test 9% faster and increased 4m walk speed by 45%. Postural control and gait also improved. During standing, average speed and area of center-of-pressure fluctuations decreased by 21% and 31%. The patient covered 15% more distance in the 90sec walk, while producing more rhythmic muscle co-contraction patterns and reducing both stride duration variability and time spent in double support. The results of this study provide first-of-its-kind evidence that chronic modulation of neuronal activity in the cerebellum can result in enhancement of the functional impairments associated with SCA in older adults.

#### **LB15. The Trajectory of Depressive Symptoms Across the Adult Lifespan**

**Angelina Sutin**, Florida State University College of Medicine; **Antonio Terracciano**, Florida State University College of Medicine; **Yuri Milaneschi**, VU University, **Yang An**, National Institute on Aging; **Luigi Ferrucci**, National Institute on Aging; **Alan Zonderman**, National Institute on Aging

Longitudinal studies are needed to delineate the trajectory of depressive symptoms across adulthood and to individuate factors that may contribute to increases in depressive symptoms in older adulthood. The present research uses a long-run longitudinal study to estimate the trajectory of depressive symptoms across adulthood, test demographic moderators of this trajectory, and test whether disease burden, functional limitations, and proximity to death explain the increase in depressive symptoms in old age. Participants were drawn from the Baltimore Longitudinal Study of Aging (N=2,320; 47% female; mean age at baseline=58.10 years, SD=17.05; range 19-95 years). We modeled the trajectory of depressive symptoms from 10,982 assessments (M assessments per participant=4.73, SD=3.63, range=1-21) of the Center for Epidemiological Studies Depression scale and three subscales (depressed affect, somatic complaints, and interpersonal problems). Both the linear ( $\gamma_{10}=.52$ ,  $p<.01$ ) and quadratic ( $\gamma_{20}=.43$ ,  $p<.01$ ) terms were significant, which indicated that depressive symptoms were highest in young adulthood, decreased across middle adulthood, and increased again in older adulthood. The subscales followed a similar pattern. Women reported more depressed affect at younger ages, but an interaction with age suggested that this gap disappeared in old age. Accounting for comorbidity, functional limitations, and impending death slightly reduced, but did not eliminate, the uptick in depressive symptoms in old age. These findings suggest that symptoms of depression follow a U-shaped pattern across adulthood and that the increase in distress in later life is not due solely to declines in physical health or approaching death.



## ***Research, Education, and Practice Committee***

### **LB16. “Mental Illness in Older Adults: Factors that Impact Treatment Trajectories”**

**Samuel Asante**, University of Utah College of Social Work; **Marilyn Luptak**, University of Utah College of Social Work; **Frances Wilby**, University of Utah College of Social Work; **Cherie Brunner**, University of Utah School of Medicine; **Michael Lowry**, University of Utah College of Medicine

Prevalence of mental health problems of older adults is often overlooked in this country. Difficulty in accessing care in the community, disparities in access and utilization of services, and individual and systemic barriers to care exist for this population. This community based participatory research study utilized record reviews, standardized instruments, focus groups and semi-structured interviews to examine the trajectory of 36 older adults discharged from inpatient psychiatric care.

Quantitative measures included the Mini Mental Status Exam, The World Health Organization Quality of Life Survey, and The Medical Outcomes Study Short Form General Health Survey. Qualitative measures included semi-structured interviews with the older adults two month post-discharge and focus groups with providers which were audio taped, transcribed, and entered into the QSR NVivo 9 software program for coding and thematic analysis. Quantitative data was used to further validate the themes and categories developed from the qualitative data. Demographic data included gender, marital status, method of payment, primary diagnosis, co-morbid diagnoses, medications, functional status, employment status, religion, readmission rates, and race.

Qualitative analysis of patient interviews and provider focus group interviews suggest that quality of social support impacts both in-patient treatment outcomes and discharge outcomes. Positive social support is related to quality of insurance coverage and ability of patients to follow-through on discharge referrals. Other results point to problems with assessment and diagnosis related to inadequate physician preparation, stigma associated with mental health diagnoses, and attitudes and beliefs of older adults towards mental illness.

### **LB17. A Hospice Education Program for Students and their Parents.**

**Joseph Budny**, Youngstown State University; **Daniel Van Dussen**, Youngstown State University; **Kathryn Moran**, Youngstown State University

The underutilization of hospice services as an option for end-of-life care within the United States is staggering. One reason for the poor usage of these services is due to the negative stigma that is attached to it. The lack of knowledge by medical doctors to make referrals and within the general public about hospice and the services they offer also contributes to this as well. The main objective of this research project is to find a new and innovative way to educate the general public about hospice care and the services they offer. This intervention used local high school students (n=205) from three northeastern Ohio counties. During the intervention a lesson on hospice care was taught to students within their high school health classes to increase their knowledge of hospice. The second objective was to determine if their parents (n=199) learned more about hospice services through their children using a

social learning approach. The current research was completed over a four-week period and data were collected using paper and pencil pretests, posttests and surveys that the students and their parents took during the project. Data obtained from the project indicated a significant increase of 3.455 points ( $\alpha \leq .000$ ) in the posttest for the students and a 1.473 points ( $\alpha \leq .000$ ) increase in the parental posttest scores (possible range 0-15). The statistically significant increase in test scores indicated a successful intervention aimed at increasing the general knowledge about hospice within both students and their parents.

#### **LB18. Access to Telecommunication Technologies Among Rural Elders**

**Gohar Azhar**, Reynolds Dept of Geriatrics And Institute on Aging University of Arkansas for Medical Sciences; **Hongtu Chen**, Harvard Medical School; **Lucy Lu**, Environment and Health Group; **Sue Levkoff**, College of Social Work University of South Carolina

**Introduction:** Despite the increasingly available information about penetration of telecommunication technologies, little is known about technology access in rural areas. This survey assessed access and usage of major communication technologies among rural elders who visited primary care clinics.

**Methods:** A clinical sample of elderly primary care patients (N = 142, aged 60+) were surveyed at the University of Arkansas Medical School. The survey questionnaire includes a total of 15 forced-choice questions and takes 5-10 minutes to complete. Main questions about technology access are adapted from several existing surveys such as the Internet Use and American Life Project (Pew Research Center, 2010) and the E-Health and the Elderly survey (Kaiser Family Foundation, 2005). The questionnaire has been designed and revised with the input of health service researchers, senior computer class instructors, and geriatric clinicians, to ensure the instrument's face validity, clarity, and ease of use.

**Results:** About 82% elders have a landline phone, 80~88% have a cellphone, and 64-75% of elderly people have a computer at home. Among those who do not have a computer at home, though majority (75%) used to use a computer, less than 10% of them plan on getting one.

Age is reversely correlated with use of telecommunication tools, but still over 81% of elders visit websites and read about health issues on the internet, and 50-95% of rural elders use email. More than half of them check emails everyday. **Conclusion:** Email and cell phone are highly accessible means for communication with rural elders.

#### **LB19. Community Education in Geriatric Palliative Care- Train the trainer program**

**Masil George**, University of Arkansas for Medical Sciences; **Kimberly Curseen**, University of Arkansas for Medical Sciences

**Background:** Geriatric palliative care is specialized medical care for older adults with serious illnesses focusing mainly on providing them with relief from stress and painful symptoms associated with serious illness. Studies have shown that there is a low use of palliative care services and advance care planning in African American and Latino American communities; consequently, resulting in a greater use of aggressive measures at the end of life. One reason may be the lack of knowledge about these services.

**Methods:** Community Education in Geriatric Palliative Care- Train the trainer program is a novel approach as it offers information about palliative care and the importance of advance care planning among community dwelling older adults. The program is offered by partnering with community organizations; recruiting volunteer community dwelling older adults, particularly those among the minority community who can educate their peers, so older adults and their families have the information to help understand the benefits of palliative care, advanced care measures, and hospice services.

**Results:** The program was conducted successfully among community dwelling trainers in May 2012. Thirteen trainees participated in the program. The course content was designed for the lay audience, so that the information was easily understood and shared with the peers by the trainees. The training was divided into two different sessions. The first session covered topics such as advanced directives and advanced care planning including Medicare beneficiaries and the hospice benefits. The second session covered topics such as advanced dementia and caregiver stress. A post-training evaluation showed that over 90% of participants were extremely satisfied with the course content. In the following year, we plan to assess the number of community dwelling older adults these trainees were able to reach out to and train, thereby, further disseminating the educational program.

**Conclusion:** Thirteen community dwelling trainees were certified as Geriatric Palliative Care Community Educators. We anticipate that the program will assist in reaching the community dwelling older adults and empower them with the knowledge regarding palliative care services and advanced care planning. Hence, we anticipate greater utilization of appropriate palliative care services in this segment of the population.

#### **LB20. Factors Associated with 30-Day Hospital Readmission Among Nursing Home Residents.**

**Gotaro Kojima**, The John A. Hartford Foundation Center of Excellence in Geriatrics, Department of Geriatric Medicine, John A. Burns School of Medicine, University of Hawaii; **James Davis**, Department of Complementary and Alternative Medicine and Office of Public Health Studies, John A. Burns School of Medicine, University of Hawaii; **Kamal Masaki**, The John A. Hartford Foundation Center of Excellence in Geriatrics, Department of Geriatric Medicine, John A. Burns School of Medicine, University of Hawaii; **Christina Bell**, The John A. Hartford Foundation Center of Excellence in Geriatrics, Department of Geriatric Medicine, John A. Burns School of Medicine, University of Hawaii

**Background:** Hospital readmissions within 30 days are increasingly targeted as a quality parameter. Frail nursing home patients are at high risk for hospitalization. The purpose of this study was to examine baseline prevalent chronic diseases associated with hospital readmission within 30 days.

**Methods:** We collected data on demographics and prevalent diseases for all patients admitted to one hospital-affiliated nursing home between January 2003 and December 2006, with follow-up data on pneumonia episodes and hospitalizations through June 2011. Multivariable logistic regression models

identified baseline prevalent chronic diseases associated with hospital readmission within 30 days of nursing home admission.

Results: Of 238 patients (mean age 83.4, range 45-103) admitted to the nursing home, 156 (65.5%) originally came from hospitals, 54.6% were female, 92.4% were Asian, 43.6% were on Medicaid, and 76.5% were first admitted for intermediate care and 23.5% for skilled nursing care. Although recent pneumonia was the factor most strongly associated with hospital readmission (OR=14.5,  $p<0.0001$ ), in the model without pneumonia, chronic diseases associated with 30-day hospital readmission included pulmonary disease (OR=2.2, 95%CI=1.1-4.3,  $p=0.019$ ) and congestive heart failure (OR=1.8, 95%CI=1.0-3.4,  $p=0.055$ ). There were no significant associations between hospital readmission and myocardial infarction, stroke, cancer, diabetes, and dementia.

Conclusions: Among nursing home patients, although recent pneumonia was the strongest risk factor for 30-day hospital readmission, those with baseline chronic pulmonary disease and congestive heart failure were at especially high risk for hospital readmission within 30 days of nursing home admission. These patients may benefit from care focused on preventing hospital readmissions.

#### **LB21. Historical and Political Factors Influencing the Development of Options Counseling**

**Sheryl Elliott**, Portland State University Institute on Aging; **Paula Carder, Ph. D.**, Portland State University, Institute on Aging; **Diana White**, Portland State University/Institute on Aging

Options counseling represents a new model of publicly funded long-term planning support available in the United States under the Older American's Act. It is intended to be a person-centered, decision-support process offered through Aging and Disability Resource Centers (ADRC) where consumers and family members can obtain information regarding long-term services and supports (AoA, 2011). Options counselors are trained to respond to the consumer's needs, preferences, values, and individual circumstances (AoA, 2011). This poster reports on the perspectives and experiences of experts (e.g., policymakers, advocates) about the development of options counseling within ADRCs. These are compared and contrasted with experiences and perspectives of Area Agency on Aging supervisors who are making adjustments to the concept to meet the needs of their communities. Fourteen qualitative interviews were conducted and analyzed using grounded theory methods. Analysis situates options counseling in a theoretical, political, and historical context of the relationship between individuals and society, (especially in regard to political and socio-cultural beliefs about individual and societal responsibility). Current research findings on policy successes and failures in person-centered care models are reviewed to determine the standards most likely to serve consumers effectively and efficiently. By examining the foundations upon which options counseling is built, this study seeks to inform research about the effectiveness of existing practice, increase understanding of best practices, and clarify whether this emerging service is accomplishing its original goals.

#### **LB22. International Exchange of a Training Program for End-of-Life Care for Older Adults: Development of the End-of-Life Nursing Education Consortium Japanese Geriatric Training Program (ELNEC-JG)**

**Hiroki Fukahori**, Tokyo Medical and Dental University; **Miyoko Kuwata**, Oume Keiyu Hospital; **Minori Tokui**, Himeji St. Mary's Hospital; **Sachiko Yoshioka**, Matsue City Hospital; **Midori Nishiyama**, Kobe

Kaisei Hospital; **Sanae Takanashi**, Nishi Kobe Medical Center; **Sachiko Matsumoto**, Mastudo Nissei Seirei Clinic; **Kaori Takamichi**, National Center for Geriatrics and Gerontology

Background: Japanese advanced practice registered nurse and nursing researchers developed the End-of-Life Nursing Education Consortium Japanese Geriatric Training Program (ELNEC-JG) in 2011. This program is based on the ELNEC-core training program developed in the US, which promotes enhanced end-of-life/palliative care. The first pilot training course was held in Shimane prefecture, Japan, in August 2012.

Objectives: To evaluate the explicitness/usefulness of and participant satisfaction with the newly developed program

Methods: Questionnaires were distributed to 60 nurses who had participated in the program. Questionnaire items covered the explicitness/usefulness of and overall satisfaction with the program, along with open-ended questions on the positives of the program. The items on explicitness/usefulness and positives were developed with respect to the 9 modules of the ELNEC-JG. Items were scored using 5-point Likert scales. Descriptive statistics were calculated for quantitative data, and content analyses were conducted for qualitative data. The study was approved by an institutional review board and funded by the Sasagawa Memorial Health Foundation.

Results: All participants returned the questionnaires. The modules with high usefulness were “Ensuring Quality EOL Care” and “Communication” (mean satisfaction scores: 4.7 and 4.6, respectively). The modules with high explicitness were “Cultural/Spiritual Considerations in EOL Care” and “Ensuring Quality EOL Care” (mean scores: 4.8 and 4.7, respectively). The overall satisfaction for the program was relatively high (mean score: 4.8), a finding supported by almost all qualitative data.

Conclusion: The ELNEC-JG can aid Japanese nurses in improving the quality of the EOL/palliative care they provide to Japanese older adults.

### **LB23. Late-Breaking Findings from the Canadian Coalition for Seniors' Mental Health Late-Life Suicide Prevention Knowledge Transition Study**

**Marnin Heisel**, The University of Western Ontario; **Jordan Bowman**, The University of Western Ontario; **Sharon Moore**, Athabasca University; **Kimberley Wilson**, The University of Guelph

Older adults have high suicide rates, necessitating enhanced provider education in working with at-risk individuals (Heisel & Duberstein, 2005). We conducted a knowledge translation (KT) study assessing knowledge transfer and attitudinal change among healthcare and social service providers attending half-day late-life suicide prevention training workshops incorporating a set of KT tools developed by the Canadian Coalition for Seniors' Mental Health (CCSMH).

**METHODS:** We developed and validated research scales assessing provider knowledge and attitudes towards working with at-risk older adults, incorporating expert input, a provider focus group, and online data collection with CCSMH members. We have been employing these scales to assess pre-post knowledge and attitudinal change of workshop participants regarding working with at-risk older adults.

**RESULTS:** Psychometric findings of our online study (N=284; 208 women, M=45.1 years, SD=11.3) supported the internal consistency ( $\alpha=.96$ ) of our attitudes scales, the validity of our respective knowledge and attitudes scales compared with existing knowledge (Expanded and Revised Facts on Suicide Quiz;  $r=.59$ ,  $p<.0001$ ) and attitudes measures (Understanding Suicidal Patients Questionnaire;  $r=-.81$ ,  $p<.0001$ ), and divergence from social desirability (Marlowe-Crowne scale;  $r=-.02$ ;  $r=.19$ ).

Preliminary findings from five training workshops demonstrated significant increases in participant knowledge ( $t(df=62)=11.89$ ,  $p<.01$ ) and attitudes, including enhanced perceived competence in working with at-risk older adults.

**CONCLUSIONS:** Findings indicate acceptable psychometric properties for our KT tools and promise for our training workshops. These findings, along with those of our final study workshops, will be presented and discussed in the context of public health imperatives for late-life suicide prevention.

#### **LB24. Life Satisfaction and its Determinants of Older Adults: Evidence from Beijing**

**Lan Liu**, Institute of Population Research, Peking University; **Gong Chen**, Institute of Population Research, Peking University; **Liangshu Qi**, Tsinghua University School of Economics and Management; **Iris Chi**, University of Southern California School of Social Work

**Background and Purpose:** In the process of population aging accompanied by rapid economic growth, urbanization and social transition, the well-being of older adults has become an important policy issue in China, particularly in more developed cities. In this study, we aim to (1) reveal the status of older adults' life satisfaction in Beijing; and (2) explore the determinants of life satisfaction of older adults living in Beijing.

**Method:** The data from "Sampling Survey on Aging Population in Urban and Rural China" conducted by China Research Center on Aging in 2010 was adopted in this study. Life satisfaction was measured with five ordered-categories. Then the descriptive analysis and the ordered-probit model have been used to reveal the status of older adults' life satisfaction and examine relationship between life satisfaction and the independent variables involving individual and family characteristics. In particular, the marginal effects of each category have been estimated. With these results, we might explore the determinants of older adults' life satisfaction.

**Results:** We found that older Beijing people's life satisfaction was significantly and positively affected by education, income, number of children, house property, social pension and medical insurance, whereas the Beijing elders were more likely to report worse life satisfaction if they were not physically independent or needed daily care.

**Conclusions and Implications:** Our findings suggested that individual economic characteristics, structure of family support and social security have played active roles, whereas individual health status has negative roles in determining the life satisfaction of older adults in Beijing.

## **LB25. Online Dating in Later Life: Relational Goals and Expectations**

**Josephine Menkin**, University of California- Los Angeles; **Theodore Robles**, University of California- Los Angeles; **Gian Gonzaga**, eHarmony

Few studies address the growing phenomenon of dating in later life. Online dating sites offer an exciting data collection avenue to explore new relationship formation in mid- and later life. In fact, adults over 50 currently represent the largest demographic using online dating sites. Utilizing data from an eHarmony.com relationship questionnaire completed by all new users, the present research determines whether older and younger users look for different qualities in a new romantic relationship. Additional data collected from undergraduates on their expectations about younger versus older adults' goals were used to investigate age stereotypes. Older users valued characteristics associated with passionate, sexual love less than younger users. While younger female users valued companionate, friendship-based love more than male users, older male and female ratings converged to the mean. Overall, older users valued companionate love compared to passionate love relatively more than younger users. These age differences were small, but robust. Undergraduates' expectations reflect kernels of truth but exaggerate them. For example, they expected much larger declines in passionate love in later life than exist. Strikingly, older users were much less interested in marriage, but undergraduates expected them to be especially marriage-minded. Young people in a position to facilitate new romantic relationships among older adults, such as formal or informal matchmakers, should take into account this shift in relational goals and may need to correct biased assumptions. Future research will examine whether people internalize the asexual age stereotype and whether older adults shift their interests in line with cultural expectations.

## **LB26. Psychometric Properties of the Liebowitz Social Anxiety Scale (LSAS) among Community-Dwelling Older Adults**

**Katie Hackney**, West Virginia University; **Lindsay Gerolimos**, West Virginia University; **Caroline Ciliberti**, West Virginia University; **Barry Edelstein**, West Virginia University

Social anxiety disorder (i.e., social phobia) is one of the most common psychological disorders among older adults, and is characterized by fear and avoidance of social situations. The present study examined the usefulness of the Liebowitz Social Anxiety Scale (LSAS) to assess social anxiety in a sample of community-dwelling older adults. Although no studies have researched the psychometric properties of this measure with older adults, the LSAS may be a valuable tool for use with this population. One-hundred-two community-dwelling older adults (69% female, 87% Caucasian) completed several paper-and-pencil surveys, including the LSAS. Mean age of participants was 72.54 years (SD=8.09, range 60 to 94 years). The mean LSAS total score was 33.85 (SD=24.83). Mean scores for the Fear subscale and Avoidance subscale were 17.69 (SD=12.79) and 16.16 (SD=12.72), respectively. Cronbach's alpha coefficients, as measures of internal consistency for the LSAS total score ( $\alpha = .97$ ), Fear subscale ( $\alpha = .94$ ), and Avoidance subscale ( $\alpha = .93$ ), were excellent. LSAS total scores were strongly correlated with scores on two measures of social anxiety ( $r_s = .74$  and  $.77$ ), providing evidence for construct validity. LSAS total scores were moderately correlated with general anxiety ( $r = .43$ ), depression, ( $r = .55$ ), and

overall mental health ( $r = .43$ ), providing evidence for discriminant validity. LSAS total scores were weakly correlated with physical health ( $r = -.20$ ) and age ( $r = .17$ ), providing additional evidence for discriminant validity. These results suggest that the LSAS may be a useful tool for assessing social anxiety among older adults.

#### **LB27. Retirement Needs of the Baby Boomers: Perspectives of Boomers and Providers**

**Jeff Spears**, University of Utah; **Marilyn Luptak**, University of Utah; **Frances Wilby**, University of Utah

The United States is facing a demographic revolution with 8,000-10,000 baby boomers turning 65 every day. Thus it is imperative to plan carefully for the needs of new retirees so limited budgets can be spent most effectively. Although, it is likely that this population will be relying on government services to meet some of their needs, less than one-half of America's cities have begun to address these needs (Scharlach, 2009).

This qualitative study utilized focus groups to examine the anticipated retirement needs of baby boomers and their families in a metropolitan area in a western state. Focus groups included: English-speaking consumers, Spanish-speaking consumers, members of a coalition of for-profit, nonprofit, public and private agencies that serve older adults, caregivers, key personnel from local Housing and Transportation agencies, Senior Center Advisory Board Members, and staff of the local Area Agency on Aging .

Questions addressed working habits and volunteerism during retirement, where respondents would look for services, the types of services needed, impressions of existing aging services in the community, the impact of the Internet on services, and the challenges of providers in meeting those needs.

Findings reinforce the need to reconceptualize aging policy and services as boomers enter retirement. Focus group participants raised concerns related to medical coverage, financial planning, and end-of-life issues. Boomers and providers both raised concerns with transportation, visitability within senior housing, and the burden of meeting the needs of the "tsunami" of boomers entering retirement.

#### **LB28. Teams and Quality of Care in Nursing Homes**

**Anders Kvale Havig**, Norwegian Social Research; **Anders Skogstad**, Faculty of Psychology, University of Bergen; **Marijke Veenstra**, Norwegian Social Research; **Tor Inge Romomren**, Centre for Care Research, Gjøvik University College

Background: Use of teams has shown to be an important factor for organizational performance. Despite this support for teams, however, we have not been able to find any European studies that have investigated the relationship between team presence and quality of care in nursing homes.

Methods: Five sources of data were utilised to test our research question: self-report questionnaires to 444 employees, interviews with and questionnaires to 40 ward managers, telephone interviews with 378 relatives and 900 hours of field observations in 40 nursing home wards. Team presence was



assessed by field observations and by interviews with ward managers, and quality of care was assessed by relatives, staff and field observations. Multilevel analysis was used to assess the relationships.

Results: The analyses showed that team presence was significantly positively related to quality of care when controlled for ward size, days of sick leave and care level. Explained variance was 34%, 25% and 44% in the models with quality of care assessed by relatives, staff and field observations, respectively.

Conclusion: The results suggest that team presence is important for quality of care in nursing homes, and we propose that nursing homes should strive for building teams within their wards. However, the study shows that there is a substantial difference between real teams and quasi teams, the latter having a significantly lower effect on quality of care. Hence, nursing home managers and directors should be emphasizing to lay the groundwork for, direct and support the development of real teams.

### **LB29. Yoga Offers Similar Functional Benefits As Stretching-Strengthening Exercises: A Pilot RCT**

**Neha Gothe**, University of Illinois at Urbana Champaign; **Edward McAuley**, University of Illinois at Urbana Champaign

Despite yoga's popularity, few clinical trials have employed rigorous methodology to systematically explore and compare its functional benefits with more established forms of exercise. The objective of this study was to compare the functional benefits of yoga with stretching-strengthening exercises for adults as recommended by the CDC. Sedentary healthy adults ( $n=27$ ;  $Mage=61.81$ ) participated in an 8 week (3x/week for 1 hour) pilot-RCT which consisted of a Hatha yoga group ( $n=13$ ) and a stretching-strengthening exercise group ( $n=14$ ). Functional fitness tests assessing balance, strength, flexibility and mobility were administered at baseline and post-intervention. A repeated measures MANOVA showed a significant time effect for balance [ $F(3,18)=4.88$ ,  $p<.01$ , partial  $\eta^2 =.45$ ], strength [ $F(2,19)=15.37$ ,  $p<.001$ , partial  $\eta^2 =.62$ ], flexibility [ $F(4,17)=8.86$ ,  $p<.001$ , partial  $\eta^2 =.68$ ] and mobility [ $F(2,19)=8.54$ ,  $p<.002$ , partial  $\eta^2 =.47$ ]. Both groups showed significant improvements on measures of balance (left-right leg, four square step test); strength (chair stands, arm-curls); flexibility (back-scratch, sit and reach) and mobility (gait speed, 8-feet up and go) with partial  $\eta^2$  ranging from .12 to .54. These data suggest that regular yoga practice is just as effective as stretching-strengthening exercises in improving functional fitness. To our knowledge this is the first study to examine functional benefits of yoga in a sedentary but healthy community dwelling adults. These findings could have clinical implications as yoga is a more amenable form of exercise than strengthening exercises. It requires minimal equipment, can be adapted for individuals with lower levels of functioning and disabilities and is being increasingly integrated in rehabilitation programs for clinical populations.



**GSA SIXTY-FIFTH ANNUAL SCIENTIFIC MEETING** NOVEMBER 14-18, 2012  
SAN DIEGO, CALIFORNIA

**2012 Late Breaker Poster Sessions:  
Aging, the Central Nervous System,  
and Mobility in Older Adults**

**Wednesday, November 14, 2012  
6:00-8:00 p.m.**



#### 204. **Cognitive Status and Mobility in Low and Middle-Income Countries: Evidence from the Study on Ageing and Adult Health (SAGE)**

**Benjamin Capistrant**, Carolina Population Center, University of North Carolina; **M. Maria Glymour**, Department of Society, Human Development, and Health, Harvard School of Public Health

Background Associations between cognitive and physical function have been studied almost exclusively in high income countries. It is not known if similar relations also prevail in low and middle-income countries (LMICs).

Methods Cross-sectional data from Study of Ageing and Adult Health (SAGE) respondents aged 50+ were used to assess the relation of an immediate 10-word list recall (WR) and verbal fluency (VF) measure with mobility (walking speed, normal paced 4-meter walk) in China, India, Russia, South Africa, Ghana, and Mexico (total n=32,281). Cognitive measures were standardized with the country mean. Walking speed was regressed on cognitive function in linear models, adjusted for height, demographics, socioeconomic status, and CVD risk factors. Cross-country differences were estimated with an f-test (chi-square, 5 df).

Results Better WR was positively associated with gait speed, independent of covariates. The magnitude of association differed between countries (f-test,  $p < 0.05$ ), ranging from  $b = 0.02\text{m/s}$  in Mexico and Ghana ( $p > 0.05$ ) to  $b = 0.18\text{m/s}$  in South Africa ( $p < 0.001$ ) associated with a 1-SD difference in WR. These differences in magnitude across countries were statistically significant. There were similar patterns in magnitude and significance for VF, including cross-country differences ( $p < 0.001$ ). The model fit (adjusted r-squared) was similar for both cognitive measures.

Conclusions The size of the cognition-mobility association varied significantly across six LMICs and the estimated magnitude of associations in India, China, Russia and South Africa were much larger than those typical in U.S. populations. Cross-national comparisons of cognition-mobility associations are needed to assess the universality of patterns observed in high income settings.

#### 205. **The Association Between Aggregate Cardiovascular Risk And Regional Brain Volume Changes In Older Adults**

**Yi-Fang Chuang**, Department of Mental Health, Johns Hopkins Bloomberg School of Public Health; **Vijay Varma**, Department of Mental Health, Johns Hopkins Bloomberg School of Public Health; **Greg Harris**, The Johns Hopkins Center on Aging and Health; **Marylin Albert**, Department of Neurology, Johns Hopkins University School of Medicine; **Linda P. Fried**, Mailman School of Public Health, Columbia University; **George Rebok**, Department of Mental Health, Johns Hopkins Bloomberg School of Public Health; **Qian-Li Xue**, The Johns Hopkins Center on Aging and Health; **Michelle C. Carlson**, The Johns Hopkins Center on Aging and Health

Background: Individual cardiovascular (CV) risk factor such as hypertension, diabetes, hyperlipidemia and obesity has been associated with cognitive decline and dementia in older adults. However, cardiovascular risk factors rarely exist alone in older adults and probably exert additive or synergistic effect on the development of cognitive impairment, dementia and brain changes.

**Methods:** Seventy-five older adults from the Brain Health Study (BHS), a nested study in Baltimore Experience Corps® Trial, underwent T1-weighted MRI images at baseline and 1-year follow-up. Cortical and subcortical regional brain volumes were obtained using Freesurfer (v5.1). Aggregate cardiovascular risk was measured by the Framingham General Cardiovascular Risk Profile (FGCRP). The relationship between aggregate CV risk and regional brain volumes and 1-year atrophy rate were examined. The correlations between individual components of the FGCRP (age, cholesterol, blood pressure, smoking status, and type 2 diabetes) and regional brain volume changes were also examined.

**Results:** Participants were mostly African American (92%) and the majority of them were female (70.7%). The mean FGCRP was  $20 \pm 12.2$ . Individual components of the FGCRP were not associated with changes of any brain volume measures. Higher overall FGCRP was associated with decreased volumes of lateral temporal lobe, medial temporal lobe and central region (precentral, postcentral and paracentral cortex) cross-sectionally. Longitudinally, higher baseline FGCRP predicted greater atrophy in the thalamus and pallium.

**Conclusions:** Aggregate CV risk, but not individual CV risk, is associated with decreased brain volume in regions which are more susceptible to cerebral hypoperfusion. These results suggest that interventions should target multiple CV risk factors.

## 206. **Fabp Expression Rescues Amyloid-beta Induced Sleep Fragmentation in Drosophila**

**Jason Gerstner**, University of Pennsylvania; **May Chan**, University of Pennsylvania; **Cory Pfeiffenberger**, University of Pennsylvania; **Olivia Lenz**, University of Pennsylvania; **Allan Pack**, University of Pennsylvania

Sleep amount and quality are known to decline with age. This effect is even more pronounced in Alzheimer's disease (AD), and is a major contributing factor for institutionalization. Amyloid-beta ( $A\beta$ ) aggregation increases during AD, and is associated with disruption of sleep. Sleep/wake disturbances may also accelerate the neurodegenerative process. Therefore, identifying changes in sleep prior to clinical onset may serve as a prodromal marker to facilitate interventions that delay AD progression. Molecular mechanisms which contribute to disturbed sleep in AD are not known and therefore present a challenge for development of therapeutic strategies. Fatty-acid binding proteins (Fabp) are small chaperones that shuttle long-chain fatty-acids such as docosahexaenoic acid, a lipid known to reduce  $A\beta$  plaque burden and restore cognitive deficits in AD mouse models. Fabp expression cycles based on time-of-day, has been implicated sleep and memory processes, and is reduced at synapses following aging. Here, we were interested in characterizing the effects of Fabp expression on sleep in a Drosophila AD model. Transgenic flies which express  $A\beta$  are syndromal to human AD, and have progressive cognitive deficits,  $A\beta$  accumulation and neurodegeneration. We observed  $A\beta$  flies have significantly reduced sleep in both daytime and night-time at ages which precede memory loss and neurodegeneration. The reduction in sleep observed in  $A\beta$  flies is rescued with a Drosophila Fabp transgene. These data suggest that sleep can serve as a prodromal marker in an AD animal model, and that Fabp may be a novel therapeutic target for the treatment of AD symptoms.

## 207. Virtual Reality - An Objective and Safe Tool For Early Diagnosis Of Peripheral Neuropathy

**Gurtej Grewal**, University of Arizona, Department of Surgery, iCAMP; **Rashad Sayeed**, Rosalind Franklin University of Medicine & Science. CLEAR; **Manish Bharara**, University of Arizona, Department of Surgery, SALSA; **Talal Talal**, Hamad Medical Corporation; **Robert Menzies**, Hamad Medical Corporation; **Jane Mohler**, University of Arizona, Arizona Center on Aging; **David Armstrong**, University of Arizona College of Medicine; **Bijan Najafi**, University of Arizona, Department of Surgery, iCAMP

**Background:** Peripheral neuropathy (PN) is one of the most common complications among older patients in particular with diabetes. PN patients experience high incidence of fall and injuries during walking. Impaired judgment of joint position, mainly due to diminishing proprioceptive feedback can cause obstacle collision. Subtle, early findings that are indicative of postural instability are difficult to accurately assess from a clinical examination. Also the available gait laboratory assessments are not feasible; therefore, many patients go undiagnosed.

**Methods:** An innovative virtual-reality obstacle crossing (VOC) paradigm using wearable sensors was developed in attempts to detect lower extremity nerve damage from PN. Sixty-eight participants including diabetes with varying severity of neuropathy and age-matched healthy controls were recruited. Severity of neuropathy was quantified using vibration perception threshold (VPT). Perception of lower extremity was quantified by obstacle crossing success rate (OCS), reaction time (TR), and toe-obstacle clearance for different obstacle heights.

**Results:** The finding suggests that VOC test allows separating between groups. All proposed parameters significantly deteriorated with increase in neuropathy severity ( $p < 0.05$ ). A significant correlation between TR and VPT score ( $r = 0.5$ ,  $p < 10^{-5}$ ). Additionally, significant deterioration in balance due to diabetes, irrespective of neuropathy severity ( $p < 0.05$ ) was also observed.

**Conclusions:** The results propose the benefit of VOC as an objective tool for detecting peripheral neuropathy at an early stage based on the reasoning that lower extremity proprioception decreases with increasing nerve damage. The proposed VOC tool offers a feasible and safe alternative compared to paradigms using real obstacles.

## 208. The Impact of Cerebral Vasoreactivity on Gait Speed in Older Adults With and Without Type 2 Diabetes Mellitus

**Azizah Jor'dan**, Harvard Medical School/Beth Israel Deaconess Medical Center; **Bradley Manor**, Harvard Medical School/Beth Israel Deaconess Medical Center; **Vera Noval**, Harvard Medical School/Beth Israel Deaconess Medical Center

Gait speed is an important predictor of health that is negatively affected by cognitive decline and brain atrophy in older adults, particularly those suffering from type 2 diabetes mellitus (DM). In these populations, both cognitive impairment and brain atrophy have been linked to altered regulation of cerebral blood flow in response to stressors. We therefore hypothesized that cerebral vasoreactivity is an important predictor of gait speed in older adults. To test this hypothesis, we studied 31 healthy older adults ( $68 \pm 8$  years) and 34 DM patients ( $66 \pm 8$  years). Gait speed was calculated during a 75m walk at

preferred speed. Regional cerebral vasoreactivity was quantified using an established CO<sub>2</sub> rebreathing protocol during Continuous Arterial Spin Labeling MRI. Our results indicated that gait speed did not differ between groups. DM participants had exaggerated cerebral vasoreactivity within the cerebellum ( $p < 0.01$ ), but no other brain region. Linear models revealed that in DM patients, but not in healthy controls, those with better cerebral vasoreactivity within the frontal lobe had faster preferred walking speed ( $p = 0.036$ ). This relationship was independent of age and other important confounders of cerebral perfusion (i.e., hematocrit concentration). No other significant relationships were observed between regional vasoreactivity and gait speed. These results indicate that preferred gait speed is not mediated by regional cerebral vasoreactivity in healthy older adults. The observed link between gait speed and frontal lobe vasoreactivity in DM patients, however, suggests that in this population, functional outcomes may be dependent upon the capacity to regulate blood flow within the brain.

### **209. Visual-Somatosensory Integration in Aging: Linking RT Facilitation to Balance.**

**Jeannette Mahoney**, Albert Einstein College of Medicine, Department of Neurology; **Roe Holtzer**, Albert Einstein College of Medicine, Department of Neurology; **Joe Verghese**, Albert Einstein College of Medicine, Department of Neurology

Individuals are constantly bombarded by sensory stimuli that must be integrated efficiently. There is a paucity of research detailing multisensory integration (MSI) in aging; however, we have demonstrated that older adults reveal the greatest reaction time (RT) benefit when presented with simultaneous visual-somatosensory (VS) stimuli. However, to our knowledge, the relationship between VS integration (VSI) and balance has not been well-established in the elderly. 43 older adults (M=74 years; 25 female) with normal gait participated in the current study. Participants were determined to be non-demented and without any medical or psychiatric conditions that may affect their performance. Participants received three randomly presented conditions (unisensory visual, unisensory somatosensory, and multisensory VS) using E-prime software and were instructed to make speeded foot-pedal responses as soon as they detected any stimulation. Balance control was assessed using maximum unipedal stance time. Results revealed that RTs to the VS multisensory condition were significantly faster than those elicited by the constituent unisensory conditions ( $p < 0.005$ ). Probability models showed that RT facilitation across the multisensory condition could not be accounted for by simple probability summation alone. Results from linear regression revealed that VS RT facilitation was associated with unipedal stance time ( $p < 0.05$ ); suggesting that people requiring less VSI (i.e., those behaving more like young adults) maintain better balance control. The relationship between VSI and balance was further moderated by age ( $p < 0.05$ ). Results from this study provide confirmatory evidence for significant VSI in aging, while also demonstrating a significant association between VSI and balance in the elderly.

### **210. Gait Velocity and Cognitive Function in Older Hispanic Americans and Adults in Vietnam: A Cross-Cultural Study**

**Ha Nguyen**, Department of Family and Community Medicine Wake Forest School of Medicine; **Steven Zarit**, Pennsylvania State University; **Chuong Hoang**, The National Technical College of Medicine No II, **Thomas Arcury**, Department of Family and Community Medicine Wake Forest School of Medicine

As life expectancy across countries continues to rise, poor cognitive function and dementia have become a major health and social issue. It has been reported that slowing of gait may precede development of cognitive impairment. However, the link between gait and cognitive function in other racial/ethnic groups is not established. The goal of this study is to determine the relationship of gait velocity with cognitive function in non-demented older Hispanic Americans and elderly adults living in Vietnam. This study includes 300 individuals from the Hispanic Aging Survey (HAS) and 600 participants from the Vietnam Aging Survey (VAS). The two studies were designed to overlap to identify factors that affect health and disability across cultures. The mean age for the HAS sample was 67.6, and 70.3 for VAS. Walking speed was assessed at participants' self-selected walking pace using a 3-Meter Walk Test. The Mini-Mental State Examination (MMSE) was used as the primary cognitive measure. Separate multiple linear regressions were run for HAS and VAS samples to confirm results. Results of both analyses showed that slower walking speed was associated with poorer cognitive function ( $p < .001$ ), adjusted for age, gender, education, body mass index, depressive symptoms, self-reported diabetes, heart disease, stroke, lung disease, and hypertension. Our study suggests a close relationship between gait and cognition in ageing that is generally consistent across geographic regions and in different racial/ethnic groups. These findings may have important implications for understanding motoric manifestations of early dementia stages.

### 211. Sensor-Derived Physical Activity Parameters Predict Future Falls In Individuals With Dementia

**Michael Schwenk**, University of Arizona, interdisciplinary Consortium for Advanced Motion Performance (iCAMP), Department of Surgery.; **Klaus Hauer**, Bethanien-Hospital/ Geriatric Center of the University of Heidelberg.; **Tania Zieschang**, Bethanien-Hospital/ Geriatric Center of the University of Heidelberg., **Jane Mohler**, University of Arizona, Arizona Center on Aging; **Bijan Najafi**, University of Arizona, interdisciplinary Consortium on Advanced Motion Performance (iCAMP), Department of Surgery, University of Arizona

**Background:** Individuals with dementia have a 3-fold risk of falling compared to cognitively intact subjects. When falling, they have a 3 to 4-fold risk of severe fall-related injuries. To our knowledge, there is no method based on body-worn-sensors which predicts falls in this high risk population. The aim of this study was to discriminate between fallers and non-fallers by using objective physical activity (PA) parameters as well as performance-based measures.

**Methods:** In 76 patients with confirmed dementia PA was quantified by a motion-sensor during a 24-hours period. PA parameters (percentage of walking, standing, sitting, lying; number and duration of postural transitions; step number; duration of single walking and standing episodes; step velocity; step variability) were extracted by specific algorithms. Functional performance was measured by the Timed-Up-and-Go, Performance-Oriented-Mobility-Assessment, and 5-chair-stand. Descriptive variables (age, ADL-status, depression, comorbidities) were obtained by standardized assessment. Falls were quantified prospectively by calendars during a 3-month period. Discriminative validity of each independent parameter was obtained by analysis of variance.

**Results:** Surprisingly, fallers and non-falls did not differ in descriptive variables, level of cognitive impairment, and functional tests ( $p = .349-.910$ ). Interestingly, several PA parameters (duration of single

walking and standing episodes, duration of longest walking episodes, maximum continuous step number) were significantly different between groups ( $p=.001-.027$ ).

Discussion: Results demonstrate for the first time that sensor-derived PA parameters are more sensitive to discriminate between fallers and no-fallers compared to established performance based tests. Our findings highlight the potential of telemonitoring/mHealth technology for estimating future fall risk in subjects with dementia.

## **212. Overweight in Adolescence is Associated with Later Life Functional Limitations**

**Sarinnapha Vasunilashorn**, Princeton University; **Melissa Martinson**, University of Washington

Early life conditions have been associated with a number of later life health outcomes. A growing body of evidence has reported on the relationship between childhood obesity with outcomes and indicators of the cardiovascular and metabolic systems; however, the functional consequences of adolescent body weight have received less attention. We use the Wisconsin Longitudinal Study to characterize the relationship of standardized relative body mass ascertained from high school photograph portraits in 1957 to self-reported functional limitations in 2004. Compared to individuals with normal body mass, those who were overweight in high school had poorer later life physical function, with observed gender differences. Women with normal adolescent body mass had better functioning in older adulthood than their low body mass counterpart. This relationship, however, was not found among men. These findings suggest the long-term influence of being overweight earlier in life on the disadvantages conferred relative to late life functional limitations.

## **213. Animal Frolics: Acceptability and Benefits In a US Sample**

**Lan Yao**, College of Nursing Michigan State University; **Jann Nestell**, C. Weaver Physical Therapy, Inc.

Tai Chi is a well-known slow and gentle exercise that is suitable for older adults with chronic illness. Animal Frolics is the exercise from which Tai Chi evolved. It is one of the National Fitness Programs recommended by the General Administration of Sport in China. Somewhat different from the Tai Chi form, Animal Frolics movements are fun to play and more intuitive. However, the acceptability and utility of Animal Frolics among older adults in the US are under studied. This poster reported questionnaire data from 13 adults (mean age=58.2  $\pm$ 8.0, range 46-72, female=10) who attended a full-day (9am-5pm) community-based Animal Frolics workshop provided by a Physical Therapist who is a certified Tai Chi and Qigong instructor. Sixty-two percent of the participants had chronic illness, including fibromyalgia (n=3), arthritis (n=4), and dyslexia (n=1). Participants feedback showed that Animal Frolics was fun (100%), easy to follow (69%), and was better than other types of exercises that they had previously performed (54%). One-hundred percent of the participants reported that they planned to continue to practice Animal Frolics after the workshop ended. Additional health benefits of the Animal Frolics movements and narrative feedback on those which were the most difficult or the easiest to practice were reported. Animal movements are easier to memorize, due partially to the familiarity with and natural bonding between human and animals. It may be a promising adjunct activity option for older adults, including those with physical or cognitive impairment.